

The Role of Subsidy Policies in Triggering the Uprising in Syria

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DOI: [10.36347/sjebm.2019.v06i10.002](https://doi.org/10.36347/sjebm.2019.v06i10.002)

| Received: 17.10.2019 | Accepted: 26.10.2019 | Published: 30.10.2019

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Abstract

Original Research Article

The debate over the triggering factors of the Syrian crisis in 2011 has not yet been resolved. The literature dealt with possible natural, economic, institutional, demographic, social and political causes. Most of these references have quickly stated the economic reform in the last decade in the country, but no one has deeply discussed the decisive economic factor led to collapse the agriculture in the country. The Syrian government has seen rapid economic openness, part of them was careless and arbitrary and it has taken some selective steps and decisions in order to adapt to globalization. The subsidy cut was the turning point in the economic reform. This study aims to highlight the consequences of diesel subsidy cut, in particular on the economic sectors and living standards and to evaluate its influential role in triggering the Syrian crisis in 2011. The results show that the new diesel price policy in May 2008, has radically affected the whole national economy. The sudden increase of the diesel price (about 257%) led in the agriculture to increase production costs of crops by more than 50% which caused a huge decline in gross margins and pushed the farmers in the irrigated region to leave their villages and migrated from the north-eastern region to the cities searching for new jobs. The diesel subsidy cut led to shutting down hundreds of private factories, domestic and foreign trade dramatically declined, and the inflation rate reached 15%. These fluctuations led to an increase in unemployment and poverty rates across the country. The loss of support, incomes, and jobs resulted in the decline of living standards and widespread poverty. These socio-economic outcomes lastly created a public resentment against the government and represented a blatant appeal to unite the people in opposition.

Keywords: Economic reform, diesel subsidy, rural migration, conflict, Syria.

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INTRODUCTION

The conflict in Syria has turned into one of the most severe humanitarian crises in recent history. Therefore, it is important to understand the origins of this crisis so as to better understand how such crises can be prevented in the future. Many studies have appeared on the causes of the conflict, but there is no agreement on the role that these different factors have played. There are many studies that focused on the climatic change and drought as triggers of the crisis and many studies referred the causes to demographic, institutional, social, economic, or political factors. Definitely, identifying the causes of the crisis is still the focus of the debate in the studies and each researcher explores the causes from his specialty and field.

Since the 21st century, the Syrian government instituted several economic and legislative changes to enhance its integration in the international economy, facilitate membership of the World Trade Organisation (WTO), and sign a partnership with the European Union [1]. Accordingly, the related ministries have

been assessing the current situation and proposing options for further changes. Because of the importance of agriculture in the Syrian economy, the Ministry of Agriculture has established a commission to review agricultural policies and the structure of the ministry [2]. Unfortunately, the government faced several difficulties instituting the economic reform, in particular, the consequences of removing the subsidies on diesel. In addition, the drought and low precipitation led to a decline in productivity of local products and farm incomes. Furthermore, the lack of food supply in global markets and rising food prices during the global food crisis in 2008 have made things partially worse.

In developing countries, the agricultural sector has a central role not only in food production but also in protecting natural resources, stabilizing the environment, balancing the rural and urban social harmony, and protecting cultural legacy [3]. In Syria, the agricultural sector employs about 20% of the labor force and it is a major source of income for more than 46% of the population [4]. In addition, it is driver for

other sectors such as the transport, industry, and domestic and international trade. Therefore, any new agricultural policy will heavily affect the sector and the economy of the country as a whole.

The research presents a review and evaluation of the Syrian legislation and procedures in the framework of the economic reform, especially of the radical changes of the state subsidy program in the agricultural and overlapping sectors.

The question of how subsidy decision can reduce political conflicts or intensify them is the central theme of the current study. This question will be answered by reviewing studies and articles written on the Syrian crisis, discussing the economic policy during the last decade, identifying the state's reasons leading to cut subsidy, and assessing the impact of diesel price liberalization on the Syrian economy including employment and poverty rates. Ultimately, the study will conclude by sharing the Syrian experience of subsidy policies without any strategic vision and economic alternatives that prevent any social turmoil and how a domestic economic decision can have devastating effects at the national and global levels in the form of armed conflicts and a massive global migration wave.

METHOD AND MATERIAL

The research is carried out to add something of value to the existing literature on the topic of the discussed reasons leading to enormous social conflicts and national instability. It aims to analyse the effect of policy changes on the economy and living standards and how this changes could later lead to the large outbreak of the crisis in the country.

We carried out a comprehensive synthesis of the rapidly growing literature on drought, climate change, and conflicts and focused on quantitative and qualitative studies that can reliably infer causal associations between economic changes and conflict outcomes. This paper has been adopted to review local and international publications issued in Arabic and English dealing with the Syrian crisis. In order to achieve the research goal, scientific articles published in international journals, reports issued by the Syrian Ministry of Agriculture and Agrarian Reform (MAAR), Central Bureau of Statistics (CBS), the National Agricultural Policy Center (NAPC), the World Bank, and the United Nations were used. The database of CBS and the MAAR in Damascus and World Bank and Food and Agricultural Organization (FAO) have been used to draw for the tables, graphics, and diagrams.

LITERATURE REVIEW

The first spark of the Syrian crisis was launched in the southern province Dara'a in March 2011. After a few months of demonstrations, it turned into an armed conflict between the demonstrators and

the army and the violence has spread to reach most of the governorates in early 2013.

This section will discuss research studies and international publications issued in Arabic and English that addressed the climatic, economic, institutional and demographic roots of the Syrian crisis.

Climate Change and Drought

Based on the UN reports, Arabic Newspaper (Aljazeera), publications of the World Bank, and news agencies like, British broadcasting corporation (BBC) started the debate about hazards of the drought and consequences on agriculture and rural displacement in 2008 many publications began to write about the role of climate change on triggering the Syrian uprising later in 2011. The debate started on whether the drought is the main reason behind rural migration and if it was a triggering factor for the crisis.

Schutter [5] cited by Worth [6] and ACSAD/UNDP 2011, cited by Bazza *et al.*, [7] stated that sheep herders in north-eastern Syria have lost 85% of their livestock and at least 1.3 million people have been affected by the drought in 2008. Thousands of farming families have migrated from rural areas, and up to 70 percent of the population, including whole families, have gone to the cities in search of alternative work after several years of drought and failed crops. Mohtadi [8], argues that the complex and subtle role of climate change has played in affecting the stability and longevity of the state. The previous studies concluded that the 4-year drought, which started in 2006, led to mass migration from rural areas in the northeast to the cities and the rural migrants are thought to be a significant contributor to the overwhelming problems Syria is now facing.

In the line with previous studies, Kelley *et al.*, [9], Gleick [10] and Lund [11] concluded that the drought in 2008 was the worst on record history, causing widespread crop failure and a mass migration of farming families to urban and it led later to the conflict in the country. Similarly, Voski [12] confirmed the correlation between climate change and wars in developing countries using evidence from Syria. The author claimed that there is a real possibility that Syria's ongoing civil war could be originally started as an environmental and humanitarian crisis rather than armed conflict. However, Johnstone & Mazo [13] said that while climate change did not cause conflict or unrest on its own, but it played a significant role as a 'threat multiplier'.

However, De Châtel [14] and Bazza *et al.*, [7] pointed out that the drought is an integral part of Syria's semi-arid climate and is not an exceptional phenomenon the droughts are a regular feature in the Middle East and North Africa (MENA) and the severe drought in 1998-2001 was worse than in 2008. In

agreement with former studies, Fröhlich [15] and Selby *et al.*, [16] disagreed with the assumed role of drought in triggering the crisis in the country and they claimed there is no reliable evidence that anthropogenic climate change was a factor in north-eastern Syria's 2006/2009 drought and the rural migration was not on the scale claimed in the existing literature; thus, it is more probable that economic factors triggered the crisis than drought, according to Fröhlich [15]. Shorto [17] also rejected the unproven assumptions on the role of drought and migrants in the turmoil in Syria. Furthermore, Selby *et al.*, [16] see no clear evidence of migration contribution to civil war, and they merely confirmed that policymakers, commentators and scholars alike should exercise far greater caution when drawing such linkages or when securitizing climate change.

From this historical review, it can be confirmed that drought is a common phenomenon in the region and there no obvious linkage between the drought, mass rural migration in 2008, and the violent conflict in 2011. Certainly, the impact of this drought of last decade was bigger compared to previous decades due to the huge increase in irrigated agriculture, especially in the north-eastern region of the country but not to the extent that forced the rural families to leave their villages and emigrate to southern cities. In conclusion, there wasn't a consensus that the usual phenomenon of drought is a determining factor of the migration and the crisis in Syria later.

Indeed, by focusing on climate change, the complex and interrelated causes of the conflict are reduced to a single point. Furthermore, the evidence supporting the drought-crisis linkage is questionable, and this conclusion could lead to ignoring elements of economic policies that were very influential in creating the conditions for the conflict as well as helping to sustain it. Even if the drought did not occur in 2008, it is very likely that migration from the north-eastern region and the civil crisis would have taken place as a result of the economic policy change which is the focus of the current study.

Economic Factors

Johnstone & Mazo [13] asked a very important question; whether the food prices could lead to social unrest. The authors argue that the agricultural sector is the main source of food and most of the Arab countries are very sensitive to food issues and make them a priority; the people who have been at the forefront in the protests are not starving but the food is pushing them to the streets. In addition, Bush [18] and Sarah [19] pointed out that rising food prices and poverty could trigger protests in 25 countries around the world 2007-2008 and the Arabic revolutions, including the one in Syria. Bellemare [20] also sees a strong linkage between food price levels and social unrest. However, the World Bank President Robert Zoellick has

described food prices as an 'aggravating factor' in the recent turmoil rather than the principal cause, according Elliot [21] cited by Johnstone & Mazo [13].

Selby *et al.*, [16] and Selby [22] mentioned that the economic liberalization policies took place during 2007-2010 led to huge internal rural-urban migration and De Châtel [14] wrote that the Syrian government removed a number of economic subsidies, which multiplied the price of diesel and fertilizer for the agriculture. Indeed, farmers in Syria use diesel to extract groundwater for irrigation, to pump surface water, and to transport their products to market. The subsidy cuts increased the transportation cost of agricultural products and forced many farmers in the north-east and in whole country to stop irrigated agriculture. Nest sections will discuss this points in more details.

Hinnebusch [23] talked about the government's failure to open Syria's economy to the world market through a progressive transition from a centrally planned economy to a 'social market economy'. In line with Hinnebusch, a report said the trade and market liberalisation in the countries like Tunis, Egypt, and Syria based on the recommendations of annual consultations of the International Monetary Fund (IMF) could be a smoothing element of conditions for the Arab spring in [24]. Additionally, Rocchi *et al.*, [25] showed that if the liberalisation didn't take place during the global economic shocks in 2008, the overall impact of food price spikes and global recession would be less negative, while eliminating food security measures would make their impacts worse in Syria., Finally, Azmeh [26] argued that the economic liberalization program completely failed to address the structural challenges the economy was facing and had negative socioeconomic effects on the Syrian society.

Actually, all previous studies agreed that the liberalization and economic policy changes have a negative impact on the Syrian national economy. Nevertheless, these studies did not exactly specify which of the economic measures during the period of the economic reform that broke the 40-years stable country's back.

Institutional Factors

Nasser *et al.*, [27] see that the institutional bottlenecks and the low equilibrium were the main roots of the crisis. Where the authors argued that the poor institutional performance was manifested in the lack of political participation and accountability, low government effectiveness and regulatory quality, and an ineffective rule of law and corruption control. These were partially reflected in mismanaged public funds, complicated judiciary procedures, and the lack of transparent public policies. Consequently, political institutions have failed to address the need of a broad-based and empowerment-led development with strong

monitoring and evaluation system of development results. Also, those institutions have failed to create a strict system of accountability to effectively address poverty and social injustice.

During the last decade, Syria's economic performance has shown mixed results. On one hand, the average annual GDP growth rate was relatively high at 4.45%; on the other hand, unemployment and poverty rates increased, according Nasser *et al.*, [27]. Daher [28] discussed the institutional corruption and the growing social inequality and how institutional failures prepared the ground for popular insurrection. Equally, De Châtel [14] argued that the government's failure to respond to the ensuing humanitarian crisis in the north-eastern region was one of the triggers of the uprising, feeding the discontent that had long been simmering in rural areas. In addition, Lund [11] underlined some institutional causes of the March 2011 uprising in Syria, such as the depletion of natural resources and corruption. Finally, Syrian Centre for policy research [29] defined the absence of the social justice in social policies under an unspecified development model that focuses on balanced at low-level growth without effective and accountable institutions, which exacerbated the marginalization and exclusion of large segments of the population, including the youth.

Demographic Factors

The sociologists see that that demography is a very significant factor in triggering the conflicts in any country. Goulden [30] saw that the subsequent housing crisis was a 'time bomb' waiting to go off. While vast amounts of money are being invested in luxury properties for a newly visible, ultra-wealthy elite, the lack of affordable, decent housing is increasingly seen as a major socioeconomic crisis. Similarly, SCPR [29] confirmed that social policies have not adopted any initiative to respect a human person and the rights of citizenship, which has negative effects on both social harmony, cultural capital, and intellectual creativity.

From previous studies, it can be concluded that the drought and climate change, as well as economic, institutional and demographic factors, played an essential role in preparing the requisite environment for the conflict but it still needs a tiny spark to eruption which will be highlight in the next sections of the current study.

POTENTIAL POLICY- INDUCED ECONOMIC CAUSES OF THE CRISIS

The next sections will discuss the close relation between the oil sector and other sectors in the Syrian economy like; agriculture, trade, industries and household.

Energy and oil resources

This section delivers an outline of Syria's energy production and development during the years before the outbreak of the Syrian crisis and discusses the leading causes of the fuel subsidy cut during the economic reform steps in the country between 2000-2010.

Background of Production and Consumption

The oil sector is the main energy source in the country and is one of the most complex sectors in Syria as well as in the world. The conflicting accounts about it by the official departments are due to the non-inclusion of oil in the Syrian state budget, reliance on oil for military expenses, and oil supporting the Syrian pound within the exchange markets [31]. The Syrian crude oil production during 1996-2011 is presented in Figure-1. The oil production has dramatically declined between 2000 and 2007. The reduced oil export resulted in a trading balance deficit starting in 2004 and the deficit [32]. Due the economic openness the consumption has increased from 37% to 80% of domestic production during the same period [33].

In this context, the researchers only have the official source for any information on the oil sector. In addition, annual definitive figures are transmitted to the official press. Since oil sector revenues were not fully reflected in the general budgets until to 2011, the level of transparency with respect to the oil sector was always at the lowest level and there have been strategic and political motivations for states and companies to release numbers that do not correspond to reality [33].

Although not a large oil producer or exporter in the world market, the Syrian oil sector is one of the most important sectors in the Syrian economy. Oil exports accounted for 30% of the Syrian revenues in 2010 [34]. Most of Syria's oil wells are in Deir al-Zour and Hassakeh, namely in the north-eastern region. Over the years, Syria built a self-sufficient economy in energy and cereal and cotton production; this, in turn, allowed Syria to maintain a balanced international trade and have no external debt [35].

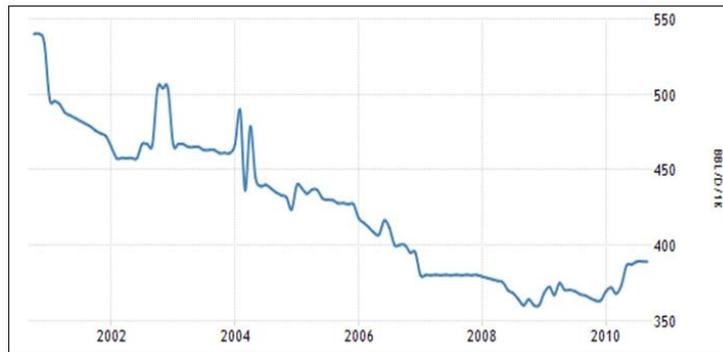


Fig-1: Domestic crude oil production
Source: tradingeconomics.com

Diesel represents the major operation input in the country. Figure-2 displays the diesel price development in Syria, bordering countries, and the world from 1998 to 2012. Diesel Price in Syria have been steadily lower than neighbouring countries' and the world price, which have encouraged smuggling of subsidised fuel to Lebanon and Turkey, in particular [1]. Which led to declining revenues from export, and the Syrian government struggled to pay the subsidy bills [36]. It is worth to mention that the local price wasn't affected by the fluctuation of the world oil price at all for 40 years ago.

The fuel price remained constant until Syria's 40-year-old policy of subsidy reached a breaking point and the government removed subsidy overnight in May

2008. The price rose from 7 to 25 Syrian pound (SYP) (an increase of 257%). To mitigate the abrupt change, the government distributed vouchers to every Syrian family, including the distribution of 1,000 litres per family for the subsidised price of 9 SYP. However, all diesel distribution policies didn't succeed because of widespread corruption and the absence of serious distribution control [36]. The government's diesel distribution to Syrian families was focused on covering the heating cost during the winter; however, it might not take into consideration that the diesel price hike will lead to an increase in other costs such as food, services, and transport. Actually, the Syrian government seems to underestimate the consequences of subsidies cut on the whole national economy and living standards.

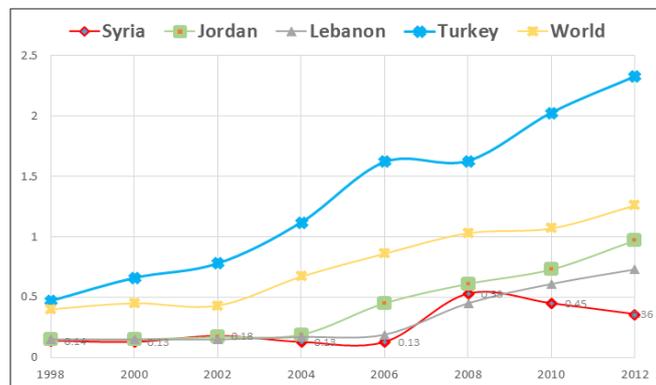


Fig-2: Development of diesel price in Syria and in the world (\$/litre)
Data source: Database of world bank

Official Opinions on Subsidy

Actually, the government's economic team was divided into pros and cons regarding the subsidy issue. The economically liberal team replaced the leftist in the Planning Commission and the latter had voiced concerns about rising inequality as well as the marginalization of the farmers and urban workers, those who belonged to the middle-income class [37]. An economist, who was the chief architect of Syria's 10th five-year plan, the blueprint for economic policy to 2010, said that "In the current political and social situation, the elimination of subsidies is difficult and there is a risk of uncontrolled and spontaneous protests"

[36]. On the other side, the deputy prime minister for economic affairs said: "If the prevailing situation remains through next years, subsidies will reach 19 percent of GDP" [38]. In addition, one of the main reform challenges is Syria's subsidies policy around 25% of it is being smuggled out of the country [1]. The previous industry minister, who sought to reform the public sector rather than to privatize it, warned in a press interview that the Syrian economy was at risk [23]. He had doubts about the economic reform in Syria, which was focusing on real estate investment instead of the more productive sectors such as agriculture or industry that are main drivers of the

economy. The minister commented that this type of reforms would not create jobs and would not lead to increased production or improved living conditions [39]. He also mentioned covered corruption at high government levels which he called the peafowl war. In this regard, the Corruption Perceptions Index (CPI) was 3.4 (2003-2005) and 2.1 (2006-2009) [40]. The closer the CPI is to 0, the more corrupt the public sector is perceived. Rankings reached a record low of 66 in 2003 and increased from 138 in 2007 to 147 in 2008 [41]. A national study also showed that Syria has occupied a very late position (19) between the Arab countries (22 countries) regarding the anti-corruption index [42].

Motives for the Subsidy Cut

The global financial and food crisis in 2008 has not directly affected the prices of food and energy in Syria as the country is self-sufficient of them. Nevertheless, the global crisis has affected import prices which appeared in the form of a trade balance deficit with reduction of oil exports. In addition, the value of fuel imports has increased due to the rise in international oil price to 94 \$/barrel in 2008 [43]. The deficit of the general budget still did not reach 5% of GDP, which is an acceptable limit and it didn't represent a real danger in the economy [44]. Meanwhile, the role of external pressures cannot be downplayed in Syria's adoption of neoliberal policies as the main condition for international assistance and access to export markets; the West pressures developing countries to integrate into the so-called "globalization project" [45, 46]. Last but not least, several scientific studies and consultations recommended raising the price of agricultural inputs in order to increase the efficiency of agricultural resources use, particularly water [47]. Furthermore, the World Bank warned that Syria needs to recognize that achieving short-term food security with respect to wheat and other cereals as well as encouraging water-intensive cotton production appear to be undermining Syria's long-term security by depleting available groundwater resources; with energy and water heavily subsidized by the state, farmers are further encouraged to increase production rather than

set sustainable goals, resulting in an inefficient use of irrigation water [48].

As a result of the complexity of all the above-mentioned factors in addition to the budget deficit the Syrian government considered fuel subsidy in agriculture to distort free trade; as a result, the government decided to cut fuel subsidy overnight in March 2008 before 2 months for harvesting which is a very sensitive period for the agriculture.

Agriculture and Reform Policies

This section provides an overview of the agricultural policies and changes that have been implemented to manage the agricultural sector over the past reform decade.

Features of Agricultural Policy

Syria (Figure-3) has a high level of social and economic dependence on agriculture and agriculture's share of GDP (Figure-4) is about 25% and agriculture is a major source of income for more than 46% of the population [4]. Since the 1970s, the agricultural policy has aimed at achieving sustainable agricultural development and food security at the household, regional and national level, maintaining the stability of farm product and input price, keeping a balance between farm and non-farm incomes, protecting producers and consumers from a monopoly, and alleviating poverty. To achieve these goals, the country followed a central planning approach, applying 5-year plans to increase irrigated area and productivity of land and animal as well as to provide food and raw materials such as cotton, sugar beets, and tobacco for the industry [49]. During the central planning stage, Syria implemented many agricultural policies: subsidizing inputs and output prices, intervening in the production plan, implementing tariffs and quotas on imports competing with domestic products, and instituting multiple exchange rates for exports and imports. For these reasons, the main feature of the economy had been characterized by a high degree of government intervention [50].

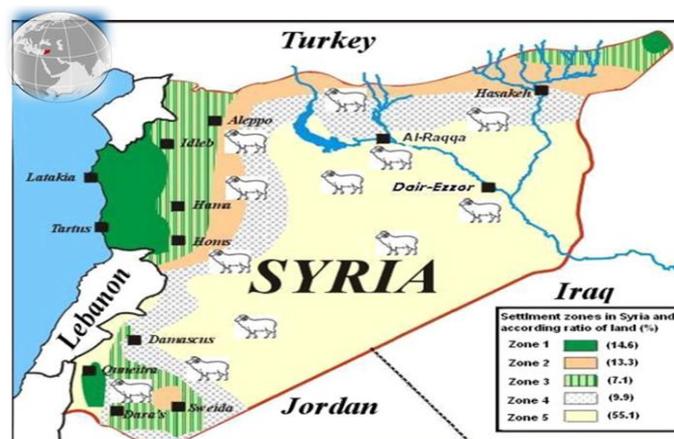


Fig-3: Map of Syria

Source: Hijazi *et al.*, 2013 [51]

To support poor rural farmers and to achieve macroeconomic goals, the government selected seven key irrigated and rainfed crops (wheat, cotton, sugar beet, tobacco, barley, lentils, and chickpeas), subsidizing feed, fertiliser, and diesel while setting higher prices for them than the market value [52].

In 1986, Syria changed its agricultural policy tools and started to reform its economy by controlling the production means and favoring a market-oriented policy that widened wealth inequality. Since then, direct subsidies have been completely eliminated, although

little direct subsidy is still provided for irrigation fees, fuels, and oils, as well as financial assistance for rural farmers [50]. Irrigation farming, developed from irrigation water and diesel subsidies in the 1990s, allowed the country to reach self-sufficiency in several crops such as wheat and cotton. The irrigated area reached its high by 30% of the total cultivated area and wheat and cotton production amounted to 4.93 and 0.36 million tonne, respectively [32]. This developments led to rise the agricultural subsidy bell which has reached ca. 4% of the GDP, out of which diesel subsidy for agriculture accounted for 2.6% of the GDP [53].

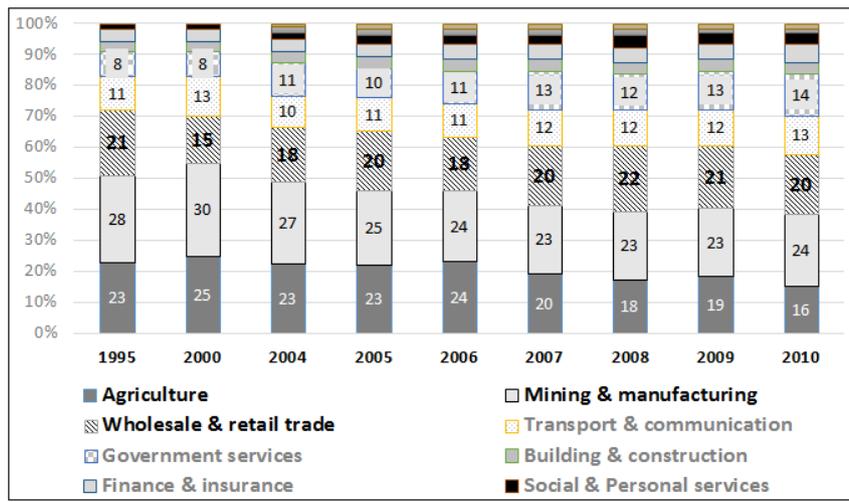


Fig-4: Contributions in GDP
 Data source: CBS, statistic books from 2000 to 2010

Qualitative and Quantitative Change of Agricultural Policies

In the past four decades, the Syrian government prioritized massive public investments and support for agricultural producers through guaranteed purchases, subsidies, and tax exemptions [52, 46]. It is therefore not surprising that Syria had found itself among the countries with the highest rates of energy and agriculture subsidies in the Middle East and North Africa [26]. At the beginning of 2000, the Syrian government tried to change its policy regarding subsidies and it introduced a intensively new package of economic reforms in order to enhance its integration in the international economy. In this regard, the ministry of agriclture and agricrtural reform (MAAR) established a commission to review Syrian agricultural policies [2]. The country opened up to international trade and reduced the import tariff and liberalised the exchange

rate. In 2005, deeper reforms were envisaged in the 10th five-year plan with institutional reforms being the core theme of the plan. The agricultural sector has completely been affected by economic changes like other sectors.

Figure-5 provides information about economic and natural variations during the last decade. In the first half of this decade, there was a relatively stablewheat production due to the subsidy, price policies, and irrigated area expansion. Starting from 2004, the national income has been steadily growing, which was reflected in a stable increase in real salary. In order to meet the wage requirement for the European partnership and to mitigate the effects of inflation from increased imports, the government increased wages and salaries of public sector workers [54].

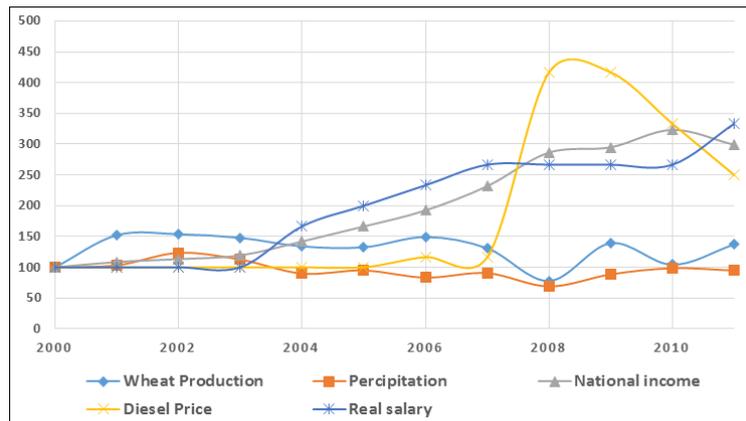


Fig-5: Changes in economic indicators and precipitation level (% , based on year 2000)

Data source: MAAR, CBS, and World Bank

Year 2008 was a crucial point for the agriculture. The agricultural sector faced a number of challenges such as the global food crisis, increased imported input prices, drought, several economic and legislative changes to meet the requirements of the World Trade Organisation (WTO), and cutting diesel subsidy. The local market was opened for agricultural products from Arabic countries like Jordan and Egypt after the Arab Free Trade Agreement. At this point of time, the local agricultural products still continued to enjoy a comparative advantage against the imported products.

Removing the fuel subsidy in May 2008 raised the diesel price overnight by 257%. The agricultural and other economic sectors in the up- and downstream immediately responded to this huge jump of diesel price and new features formed out in the agricultural sector. Due to diesel is the main input for the irrigation, the irrigated area reduced by 12%, wheat and cotton production dropped by 50% and 34%, respectively, and the sheep number reduced by 32% [55, 32]. Now, the government sensed the social risk of the new diesel price and attempted later to discontinue the social and economic shocks by reducing the price in 2009 (Figure-5).

Unfortunately, and diesel subsidy cut combined with the low precipitation led to reduction of the agricultural production in the main irrigation zones in north-eastern region. The Syrian farmers suffered two types of challenges; the drought and diesel policy change, which raised the irrigation cost to a level the farmers were no longer able to pay for. As a result, the

farmers were left with two options: switching to rainfed farming system or leaving land fallow. It is worth mention there that the total fallow land rose from 16% to 28% between 2007-2008 [32]. Furthermore, the Legislative Decree 61 in 2009 dramatically ended the government's import monopoly and the government liberalized the agricultural trade by lowering or removing export duties and freed up agricultural and industrial input prices [37]. In this point of time the domestic agricultural crops, became no longer able to compete with foreign products in terms of price and quality.

The north-eastern provinces of Hassakeh, Deir al-Zour, and Raqqa (Aljazeera region), which was the focus of many international studies, are located in the third farming system according to Wattenbach's classification. This farming system produced around 75% and 90% of the irrigated wheat and cotton, respectively (Wattenbach, 2006). This two crops are most subsidised crops, in term of inputs and product prices. Therefore, any change in the agricultural policy will directly affect this country's largest farming system [56]. In addition, about 40% and 50% of the rural population in this farming system were classified as poor and middle-income families. From the above, it can be said that the farming families in this agricultural system was heavily affected by the new diesel price due to the importance of subsidised agriculture as the main source of income. This price policy change forced many rural families in this region to migrate to southern regions seeking for new jobs, better living conditions, and poverty reduction and Nasser *et al.*, [27] talked about 300 thousand families.

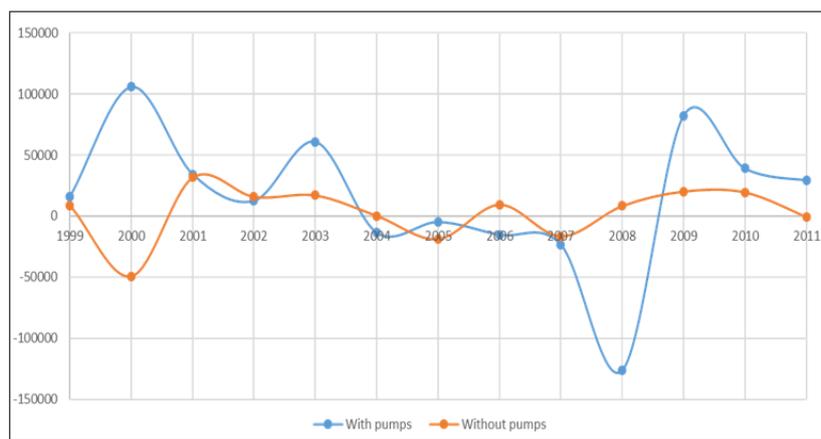


Fig-6: Fluctuations of irrigated areas over time
Data source: MAAR, statistic books from 2000 to 2011

Agriculture and New Price Policy

In order to have a clear view about the importance of diesel in Syrian agriculture, Figure 6 shows the expansion of the with- without diesel pump irrigated areas. In fact, diesel are the main sources of energy for the Syrian agriculture and it is basically used to operate irrigation pumps. About 75% of existing wells use diesel [57] and it is used for tractors and other vehicles as well. In 2003, the agricultural sector represented 15% of the total energy demand in Syria [58]. As Figure-6 shows there was a huge decline in with-pump irrigated areas due to the new diesel price in 2008, in particular and drought and many farmers shifted mainly to rainfed farming or stoped cropping without any compensation.

In the onther hand, the high irrigation costs significantly led to decline the gross margins of the

irrigated crops like wheat, cotton and vegetables [59]. Whereas, the share of diesel cost constituted more than 95% of the total irrigation costs while the remaining costs were used for maintenance and lubrication of the water pumps [60].

The development of the cropping costs of some irrigated crops before and after the subsidy cut are represented in Table-1. The changes in total costs are obviously higher than changes in sell prices and the new diesel price affected directly the production and marketing costs. However, wheat production seemed to be in a better situation than other crops and rainfed wheat was more economical. The wheat price has been alwyas subsidized by the govenement and the domestic price is much higher than the international price.

Table-1: Increase of cropping costs and development of sell prices between years 2007-2009 (%)

%	Cotton	Irrigated Wheat	Rainfed Wheat	Sugar beet	Patato	Tomato	Apples	Organge
Operation cost	41	57	56	82	65	42	25	61
Input cost	88	63	0.30	60	71	28	95	56
Total costs	58	52	26	88	156	34	52	57
Output price	36	85	85	39	14	26	20	48

Data source: MAAR, annual statistics books 2007 and 2009 [55].

According to prior publications and studies it was very likely that any price policy change will heavily affect the agricultural sector and the whole population as well. The policy options could, in theory, deliver economic efficiency gains but would harm sections of the population and an example would include removing energy subsidies [53]. Simylary, Rocchi *et al.*, [25] argued that impacts of liberalization policies are very different: while reforms aiming at reducing agricultural market distortions could generally have a positive effect on growth and the food security, likewise they can have adverse effects via distributional impact against rural household, which can increase poverty. It is worth to mention there that the syrian farmers faced in the same time an other challage of fertilizer price liberalization and the chemical fertilizer

prices doubled which worsened the plight of the farmers [14].

Certainly, the subsidy cut and new diesel price caused a huge shock not only for the farmers but for the whole sector. The rural families in the north-eastern region, in particular forced to leave their irrigated farms without cropping and to migrate to southern cities seeking for other livelihood sources.

Trade and Industry Sectors and New Price Policy

The subsidy cut has affected all economic aspects and living standards of Syrian families because it represents the main energy source in all sectors. This section will address the state of the trade and industry sectors before and after the diesel subsidy cut.

Since the 1970s, a moderate government claimed to have a “pluralistic” economy based on a partnership between the public and private sector [46]. The purpose was to shift towards a social market and to involve the private sector more in the economy and reduce the role of the public sector. Principally, the private sector's share in 2000 was about 98% in the agricultural, 62% in the trade, 59% in the financial, 50% in construction, and 37% in manufacturing sectors [60]. However, the private sector's contribution to the economy reached 60.5% of GDP in 2007 compared to 52.3% in 2000 and in the last decade, the private sector has had remarkable growth due to trade liberalisation, new investment rules of law N.10 in 1991, and its subsequent amendments in 2005 [1].

Figure-7 shows the development of the private sector's contribution to trade from 2000 to 2010. The private and public sectors are moving in the opposite way. The trade was dominated by the private sector from 2003 to 2008. Starting 2008, the public sector's contribution returned higher than the private sector's, even though both contributions have declined due to decreased domestic production.

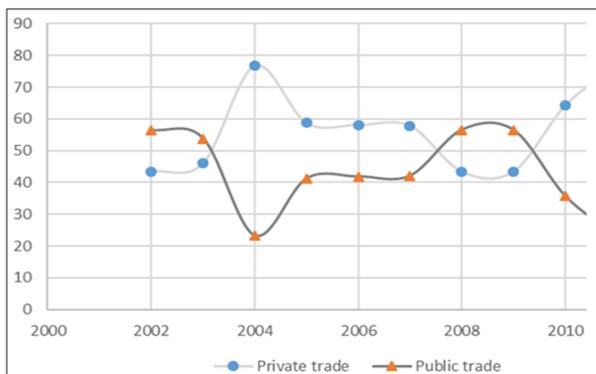


Fig-7: Contribution of public and private sectors in the trade (%)

Data source: CBS, statistic books from 2002 to 2011

The dramatic decline of oil production (Figure-1), exports and incremental growth in the manufactured and non-manufactured imports by the private sector contributed to the apparent trade deficit which reached its highest point in 2009. Figure-8 illustrates the trade balance deficit starting in 2004 accompanied by the continuous decline of the public sector's contribution during the liberalisation process. The remarkable decrease in exports directly reflected the account deficit which accounted for 1.3% of the GDP in 2006 [1].

Regarding the industry sector, the textile, chemical, and food industries contributed the most to Syria's GDP (Figure-3). However, the foreign trade liberalization caused a strong shock to small, medium and large private and public industries alike [2]. The private textile industry was hit the hardest from price

liberalisation and imports from China and Turkey were making it very difficult for local firms to compete [1]. Many private factories shut down during 2007-2010 and more investments have been diverted to lucrative sectors like tourist and services. The total number of licensed private industries were 10,110 in 2007 but only 6,490 remained in business in 2009 [32]. Though Syria was able to ride out the global financial crisis in 2008, the domestic demand for most industrial products crashed 80% between 2008-2009 and 48 textile firms were shut down only in 2010 [1].

Certainly, the trade liberalization itself was not the key reason for the collapse of the domestic industry as much as the rise of input costs that are coupled with diesel price. The trade liberalization led to an apparent trade balance deficit, but it helped expand domestic industries and increase their production and allow them to enter international markets, which can be shown in the increased volume of foreign trade until 2008 (Figure-8).

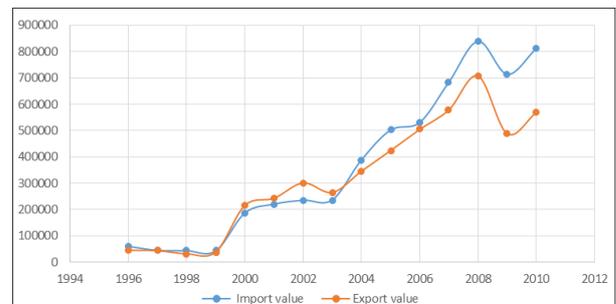


Fig-8: Foreign trade (million SYP)

Data source: CBS, statistic books from 2002 to 2011

The industrial trade balance during 2000-2008 was permanently negative because the value of industrial imports exceeded the value of exports [63]. In contrast, the agricultural trade balance was positive throughout this period. Therefore, the emerging deficit in Syrian trade balance derived from significant increases in industrial imports. In line with above, studies confirmed that the trade liberalization had an equally negative impact on Syria's economic prospects, notably the free trade agreement with Turkey in 2004 and the invasion of Chinese products in the Syrian market [26, 37, 46]. In parallel with a non-oil import boom, small and medium-sized producers in sectors such as food, textiles, and furniture increasingly had difficulty withstanding foreign competition. Finally, it is important to mention that the share of employees in the private sector was 52% of the total workforce in 2002 and it reached 71.7% in 2009 [32].

Living Standards and Social Indicators

The change of subsidy policy has affected all social segments without exception due to its special importance. Diesel is used not only in agriculture, transport, trade, industry sectors and but also in households for heating. This section addresses the

question to what extent the rise in diesel price affect the living standards of individuals and the rate of unemployment in the country.

Comparisons of Living Standards

The Syrian state, since the 1970s, provided social programs that support middle and low-income classes. These programs include free public services for health and education, subsidies to food and energy, and provision of water and electricity infrastructure [27].

Despite the social programs, the number of poor, vulnerable, and food-insecure people reached about 2.02 million, corresponding to 11.4% of the total population of 19.3 million in 2003-2004 [64]. The distribution of poverty significantly varies from the southern, northern, central and coastal areas and between rural and urban families. Using the lower poverty line (less than \$1/day), poverty incidence is highest in the north-eastern rural region (17.9 % of the population) and it is lowest in the southern urban region (5.8%) [65]. According to a UN report, 22% of the Syrian population is vulnerable to severe poverty in light of increasing food and fuel prices [66].

In the period between 2007-2009, food expenditures have increased from 45% to 63% of the total family expenditures [32]. According to the international poverty line (\$2/capita/day), approx. 85% of Syrians were above this line (Table-2). However, if exchange rates weren't fixed by the government since the mid-1990s at 48 SYP/US dollar [67], many families would fall under the international poverty line. Table-2 shows the proportion and individual daily expenditures in rural and urban families. It indicates the expenditure differences of about \$1.35/day in 2009 between the rural and urban population compared to \$1.02/day in 2007. Actually, the diesel price and the lack of job opportunities affected rural families more than urban families and enforced the class differences between them. The effect of the subsidy cut was worse on the rural families because it can't be replaced for Syrian agriculture.

Indeed, the diesel subsidy cut led to increase in all commodities prices and the rural and urban families had to reduce the share of non-food commodities (Table-2) adopting retrenchment strategies and changing their meal composition to cope with new price conditions.

Table-2: Proportion of household's and per capita expenditures (%) of the rural and urban families

	Urban			Rural		
	Food	Non-food	\$/capita/day	Food	Non-food	\$/capita/day
2004	37	63	3.18	44	56	2.03
2007	37	63	3.69	47	53	2.67
2009	42	58	4.32	51	49	2.97

Data source: CBS, statistic books, 2004, 2007 and 2009

Figure-9 provides information about the inflation rates and consumer price index during the last

decade of economic reform. The inflation rate reached its highest in 2008.

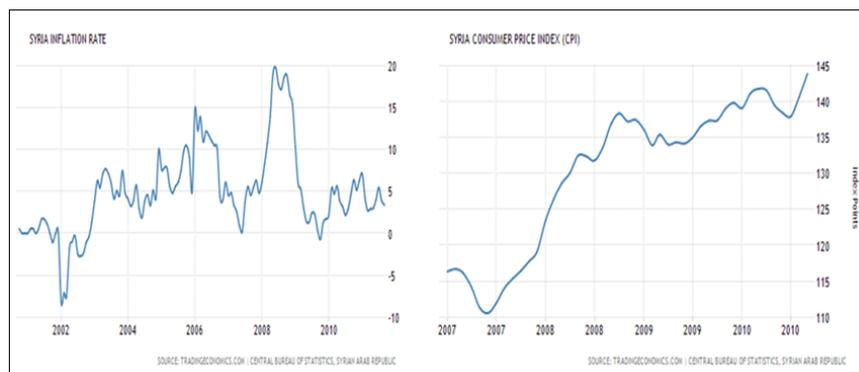


Fig-9: Inflation rate and consumer price index

Source: Trading Economics.

In addition, diesel has been the first source of heating for both urban and rural families. After the price increase, most households turned to electricity for heating. The result was, only in 2008, an increase in total electricity consumption (12%) and losses (22%) [32]. Due the diesel subsidy cut, many cases of illegal electricity theft have surfaced. This led to an amendment of Law No. 26 in 2010, which increased

financial penalties for the illegal tapping of electricity. It is worth mentioning that electricity is subsidized as well and its price is lower than bordering countries such as Lebanon and Jordan.

Unemployment Rates

During the last reform decade, the Syrian economy achieved high growth rates (5-7%) and the

GDP reached \$1.25 billion [27]. Compared with other Arabic countries, the economic performance was slightly higher than average, but the share of GDP per capita was lower than in Lebanon, Jordan, and Tunisia [68].

Figure-10 shows that the country started the reform decade with 10% unemployment rate and fished it with 8.6%; meanwhile, the unemployment in 2008 was about 11%. The labour force participation rate

dropped nearly 10% points from 52% to 42.7% from 2001 to 2010 and the decline was more in rural areas and two-thirds of unemployed people were aged between 15 and 29 years old, namely the working age [68]. The conflict between the high economic growth rates and increased unemployment rate and decreased labour force participation rate indicates a critical imbalance of the economy that cannot be ignored any more.

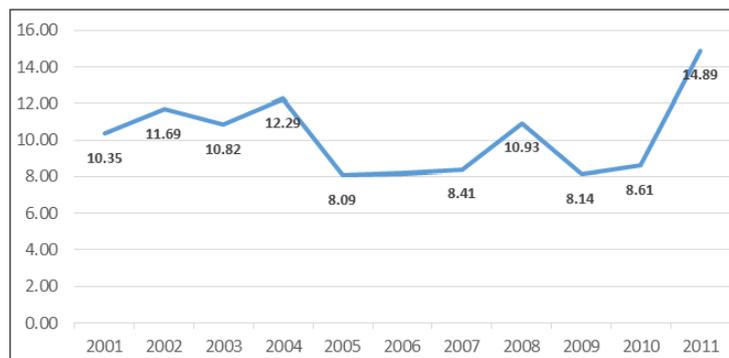


Fig-10: Unemployment rates
Data source: CBS, annual books 2002-2011

Hussein [69] confirmed the positive linkage between the economic openness and the unemployment rates as a result of globalization, where the unemployment rates started to rise when the investment Law No. 10 was declared. Nasser *et al.*, [27] sees that most of Syrians weren't able to partake in the macroeconomic gains during the economic transformation, and the GDP growth was not reflected across the population. The middle-income class had been protected by the governments for its most central role in the economy and it represented about 80% of the population [32]. It is called the class of farmers and workers. However, during the economic reform, the government abandoned this class when it cut the diesel subsidy without any compensation or protection program and this class has clearly been vulnerable to poverty.

DISCUSSION

The debate over the triggering factors of the Syrian crisis in 2011 has not yet been resolved. Many studies have addressed the causes of the conflict, but there is no agreement on the role played by these different causes. Some studies focused on the climatic change and drought what caused a huge migration from the north-eastern region to southern cities and the migrants were the main contributor into protests starting in the south of the country like; Schutter [5], Johnstone & Mazo [13], Gleick [10], Lund [11] and Kelley *et al.*, [9]. Conversely, other researchers like; De Châtel [14], Bazza *et al.*, [7], Fröhlich [15] and Selby *et al.*, [16] pointedly disagreed with the assumed role of drought in triggering the crisis in the country and they claimed there is no reliable evidence that anthropogenic climate

change was a factor in north-eastern Syria's 2006/2009 drought and the rural migration was not on the scale claimed in the existing literature and the migrants' participation in the demonstrations has never been proven. Furthermore, Selby *et al.*, [15] see no clear evidence of migration contribution to civil war, and they merely confirmed that policymakers, commentators and scholars alike should exercise far greater caution when drawing such linkages or when securitizing climate change.

Some others studies referred the causes of the Syrian crisis to demographic factors like; Goulden [30] and SCPR [29]. They saw that the subsequent housing crisis was a 'time bomb' waiting to go off and confirmed that social policies have not adopted any initiative to respect a human person and the rights of citizenship, which has negative effects on the social harmony. On the other hand, Nasser *et al.*, [27] see that the institutional bottlenecks and the low equilibrium were the main roots of the crisis. Hinnebusch [23] saw that the Baath prejudiced policies were the main cause of the Popular discontent. Johnstone & Mazo [13], Bush [18] and Sarah [19] pointed out that rising food prices and poverty could trigger protests in 25 countries around the world 2007-2008 and the Arabic revolutions, including the one in Syria. Bellemare [20] also sees a strong linkage between food price levels and social unrest. Other researchers argued that the economic openness and reform taken place in Syria in 2000s were the crucial factor for crisis. Selby *et al.*, [16], De Châtel [14], and Hinnebusch [23] talked about the government's failure to open Syria's economy to the world market through a progressive transition from a centrally planned economy to a 'social market

economy'. Additionally, Azmeh [26] argued that the economic liberalization program completely failed to address the structural challenges the economy was facing and had negative socioeconomic effects on the Syrian society.

Actually, the previous studies show that there is no agreement on the role of different factors have played in triggering the crisis. However, we argue that each one of this factors might play an important role. There was little interest in academic research on the subsidy cut took place in May 2008. Attempting to add something add value to the existing literature this study aims to highlight the passive role of subsidy cut, fuel subsidy in particular on the social and economic aspects of Syrians in the period preceding the outbreak of the crisis.

The developmental needs in Syria have been growing in the reform decade and the contribution of the private sector has increased; exports have increased and the imports have been competing with domestic goods. During the reform, a decrease in domestic oil production and increase demand for energy unexpectedly occurred due to economic openness. The high oil contributed to the emergence of a clear balance deficit. During these changes, the industrial facilities and irrigated agriculture increased and high population level placed additional pressure on local resources. These events and environments created the need for further economic transformations in a highly undiversified economy.

The government made a decision to cut fuel subsidy in May 2008 without taking into consideration the events of the drought and the international food and financial crisis. Diesel is the most consumed commodity in the Syrian economy and it is the basic input for irrigated agriculture, industries, trade and the main source for household heating in winter as well. The subsidy cut has significantly affected all economic sectors and segments of the Syrian society. The huge increases of inputs and operations costs have forced the farmers in the north-eastern region, where the biggest irrigated areas are, to leave the agriculture and migrate to urban areas. Although there were conflicting statements about the number of immigrants, the consequences of this rural migration were clear: a sharp decline in food production at the national level.

In the industrial sector, private small and medium-sized enterprises, which made up the biggest part of national businesses, were for the most part negatively affected by the diesel subsidy cut and they lost their relative advantage comparing with against foreign producers. Many industrial enterprises were closed due to a severe rise in input prices and low-profit margin. These changes led to an economic depression in 2008 in terms of higher consumer prices, unemployment, and inflation rates; they also negatively

affected food insecurity at national and household levels, which all led to a decline in purchasing power and economic living standards. This changes made the income-middle class slowly disappear which was protected by the government for 40 years.

The government later tried to mitigate the negative impact of new diesel price using several measures. However, these measures weren't able to stop the dramatic effects of the subsidy cut on millions of Syrians who were highly vulnerable to subsidy cut and didn't have any social security networks protecting them against poverty. The subsidy cut caused a high degree of inequality of income distribution and created a new climate of political, economic and social instability with high rates of unemployment and poverty, a recipe for growth in violence and extremism. This social and economic environment represents a push factor for the Syrian people to the level of explosion and it was the last straw which broke the camel's back.

CONCLUSION

By comparing the circumstances of the Arab Spring countries such as Tunisia, Egypt, Yemen and Syria in this decade, it is clear that the motive for these revolutions is purely economic in nature. The environment of high unemployment, poverty, low living standards, high inflation rates and the resulting frustration and despair pushed the people to go in the streets called for changing of the ruling regimes hope in change of this circumstances.

The hypothesis of this work is that changing of the subsidy policy is the most likely to be the strongest trigger for starting the unrest in Syria in 2011. The Syrian policymaker miscalculated the negative effects of the subsidy cut on the whole economy and living standards, and it didn't take to consideration that when people start to starve, which led to increased tensions and represents a blatant appeal to unite the people in opposition.

It is worth to mention there that at the time of conducting this study, the world witnessed demonstrations in Jordan in 2012 and in May 2018 [70] and in France in December 2018 [71], and subsidy cut on fuel was one of the key triggers to the demonstrations.

Finally, there is still an essential need to conduct quantitative and qualitative research to further explore the importance of subsidies and their key role in providing social security and peace in any society whatever it is developed or not.

ACKNOWLEDGEMENTS

The authors thank Baden-Württemberg Stiftung and the Institute of International Education

(IIE) for providing financial support and the University of Hohenheim for hosting this research.

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