Iran Economic Monitor

Mitigation and Adaptation to Sanctions and the Pandemic

Special Focus 1   The Economic Impact of COVID-19 in Iran

Special Focus 2   Understanding Poverty Trends in Iran during 2016/17-2018/19

Spring 2020
Middle East and North Africa Region

WORLD BANK GROUP
Macroeconomics, Trade & Investment

IRAN ECONOMIC MONITOR

Mitigation and Adaptation to Sanctions and the Pandemic

Spring 2020
(Sixth Edition)

Special Focus Topics:

Special Focus 1 – The Economic Impact of COVID-19 in Iran: a Preliminary Assessment

Special Focus 2 – Understanding Poverty Trends in Iran during 2016/17–2018/19 with Poverty Simulation from Gasoline Reform and the COVID-19 Outbreak

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ABBREVIATIONS AND ACRONYMS

ATM	Automated teller machine		MoM	Month-on-month
Bbl	Barrel of oil		NDFI	National Development Fund of Iran
CAB	Current account balance		NIMA	Unified system of foreign exchange transactions (Persian acronym)
CBI	Central Bank of Iran			
COVID-19	Corona Virus Disease 2019 (Novel Coronavirus)		OPEC	Organization of petroleum exporting countries
CPI	Consumer price inflation		OTC	Over-the-counter
E3	Europe 3 (France, Germany and the United Kingdom)		PBO	Plan and Budget Organization
			Pp	Percentage point(s)
ER	Exchange rate		PPP	Purchasing Power Parity
FATF	Financial Action Task Force		PMI	Purchasing managers' index
FDI	Foreign direct investment		RHS	Right-hand-side
GDP	Gross domestic product		SCI	Statistical Centre of Iran
GVC	Global value chain		SHASTA	Social Security Investment Company (Persian acronym)
HIES	Household Income and Expenditure Survey			
			SME	Small and medium-sized enterprise
ILO	International Labor Organization		TEDPIX	Tehran Stock Exchange main index
IPO	Initial public offering		TSE	Tehran Stock Exchange
IMF	International Monetary Fund		UMC	Upper middle-income countries
IMF DOTS	International Monetary Fund's Direction of Trade Statistics database		US(A)	United States of America
			USD	United States Dollar
INTA	Iranian National Tax Administration		WB WDI	World Bank World Development Indicators database
IRR	Iranian Rial			
LHS	Left-hand-side		WHO	World Health Organization
(M)bpd	(Million) barrels per day		YoY	Year-on-Year
MENA	Middle-East and North Africa			

PREFACE

The Iran Economic Monitor provides an update on key economic developments and policies. It examines these economic developments and policies in a longer-term and global context, and assesses their implications for the outlook for the country. Its coverage has ranged from the macro-economy to financial markets to indicators of human welfare and development. It is intended for a wide audience, including policy makers, business leaders, financial market participants, and the community of analysts and professionals engaged on Iran.

The cutoff date for the macroeconomic data used in this edition of the IEM was May 2020.

The Iran Economic Monitor is a product of the World Bank's Global Practice for Macroeconomics, Trade and Investment team. This sixth issue was prepared by Majid Kazemi (Economist, Task Team Leader) under the general guidance of Eric Le Borgne (Global Practice Manager) and Saroj Kumar Jha (Regional Director). The Special Focus Chapter on the macroeconomic impact assessment of COVID-19 in Iran was written by Majid Kazemi (Economist).

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Muna Abeid Salim (Senior Program Assistant) print-produced the report. The team is grateful to the Government of Iran for its contributions to this publication.

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EXECUTIVE SUMMARY

The recession in Iran accelerated in 2019/20[1] as US sanctions further tightened. The contraction in Iran's gross domestic product (GDP) is estimated to have accelerated from 4.7 percent in 2018/19 to 8.2 percent in 2019/20 as the full effect of US sanctions, especially in the oil sector, materialized. GDP contracted by 7.6 percent year-on-year (YoY) in the first 9 months of 2019/20 (Apr–Dec 2019) largely due to a 37 percent (YoY) decline in the oil and gas sector value-added. Since the reintroduction of US sanctions in May 2018, oil production has fallen to a 3-decade low of 2 mbpd. Over 2018/19 and 2019/20, US sanctions also expanded to key non-oil sectors such as construction, basic metals and petrochemical industries and as a result non-oil activity stagnated in Apr–Dec 2019. There were some signs of pick-up in activity in the construction and utilities sector in the first 9 months of 2019/20 while manufacturing sector contraction slowed. However, the contraction of all major components of GDP in the first three quarters of 2019/20 on the expenditure side highlight a broad-based recession and weak demand.

Inflation has gradually declined as the impact of the sharp depreciation of the rial in 2018/19 dissipated but foreign exchange reserves remain limited. High exchange rate passthrough and economic uncertainty led to the inflation rate climbing to 52 percent in May 2019 after the rial depreciated sharply in the second half of 2018/19. Since May 2019 annual inflation has gradually declined as the rial depreciated at a more moderate pace. This is despite a doubling of gasoline prices in November 2019 and liquidity growth having remained high, reaching 28 percent (YoY) in December 2019. Foreign exchange reserves came under pressure as oil exports fell. In response, the authorities have restricted imports of non-essential goods and those with a similar domestically produced counterpart in order to economize the use of these scarce reserves. The decline in imports has mitigated the impact on the current account balance which registered a larger surplus in 2018/19. Despite the continued import restrictions, the current account surplus fell to very low levels in the first 9 months of 2019/20 due to a sharper decline in exports. External exposure to currency depreciation is partly mitigated by Iran's relatively low external debt and foreign direct investment (FDI) which have remained below 3 percent of GDP.

The growing gross borrowing needs has increased the government's reliance on debt issuance and withdrawals from strategic reserves.

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[1] The Iranian calendar year runs from March 21 in each Gregorian calendar year and ends on March 20 of the following year.

Low revenue realization, especially for oil revenues which accounted for 38 percent of total government revenues, have contributed to a growing fiscal deficit. In the first 8 months of 2019/20 only 18 percent of the Budget envisioned amount for the entire 2019/20 year were realized. On the expenditure side, growing current expenditures have led to a shrinking share of capital investments. Despite better performance in tax collection and measures to reduce tax evasion, the government has increasingly relied on the issuance of Islamic bonds which translates to higher interest payments in the future. The government has also resorted to withdrawals from the National Development Fund of Iran (NDFI) originally intended as a multigenerational fund restricted to development financing.

Iran is one of the worst hit countries by the Corona Virus 2019 (COVID-19) global pandemic which has brought a huge loss of life and economic cost. Since the confirmation of the first diagnosed cases in February 2019, the number of confirmed cases has steadily increased to 180,156 and has led to at least 8,584 deaths (as of June 11, 2020). The contraction cases and death toll, similar to all other countries, are subject to availability and distribution of testing kits and thus likely underestimate the full health impact. Economic activity and trade was also hit hard by the spread of the virus as businesses closed and social distancing measures were enforced. The impact in retail sales and services was especially significant as the COVID-19 outbreak in Iran coincided with the usually busy Iranian New Year period in March and early April. The second Special Focus chapter of this issue of the Iran Economic Monitors provides an overview of the economic impact and policies implemented to date and assesses the possible range of economic growth impact within a scenario-based approach.

Facing a growing global pandemic, low oil prices and increasing sanctions, Iran's economy is projected to contract for the third consecutive year in 2020/21 and grow at a moderate pace thereafter. The baseline outlook is primarily driven by the COVID-19 outbreak reducing both oil and non-oil GDP in 2020/21 which is followed by two years of modest recovery. After a decline in

2020/21, oil production in 2021/22 and 2022/23 is expected to grow in line with long term domestic consumption growth and partial increase in global demand. The recent downward inflation trend and slower depreciation of the rial is likely to reverse with COVID-19. Both current account and fiscal balances are expected to remain in deficit as trade restrictions and COVID-19 are likely to negatively impact exports and government revenues on the one hand while increasing import costs and government expenditures at the same time.

Negative economic growth and high inflation coupled with COVID-19 will put further pressure on household livelihoods in 2020/21. Limited job creation due to the projected economic contraction along with loss of purchasing power due to persistent high inflation will impact household livelihoods. The COVID-19 outbreak will also have long-lasting economic and social impacts most likely through the labor market channel. As the existing cash transfers have shown, the cash transfer and loan programs announced by the government will partially mitigate the impact on the most vulnerable households in 2020/21. The Poverty Special Focus provides new estimates on poverty in Iran and assesses the impact of the recent gasoline price increase vis-a-vis the government's cash transfer mitigation strategy. The chapter also includes micro simulations based on shock scenarios using household survey data to provide household welfare and poverty impacts of the COVID-19 outbreak.

The current unique situation of Iran's economy presents significant downside risks for the baseline macroeconomic outlook. The most significant risk is a stronger and more protracted impact of the COVID-19 outbreak through various channels including larger contractions in commerce, tourism and trade as well as higher production costs. Persistence of lower oil prices (ongoing oversupply in the market) and export volumes (e.g., due to an even more significant decline in China's oil demand) would result in a substantially larger overall shock and fiscal deficit in 2020/21. Other developments including additional US sanctions and Financial Action Task Force's (FATF) recent designation of Iran as a high-risk country could further restrict Iran's

production and trade with neighbors. The scale of the external challenges could provide an opportunity to address long lasting structural challenges that have been postponed including banking sector and fiscal reforms.

The country's economic and social challenges disproportionately impact the lower income decile households who have faced significant economic pressure. Additional cash transfers are necessary but not a sufficient tool to protect the most vulnerable. Similar to the experience after 2012, high inflation will especially impact the poor through the rapid erosion of the real value of distributed cash transfers in subsequent years. Poverty trends in the future will depend upon subsequent policy responses. Any increase in the value of cash transfers, along with introducing targeting mechanisms, could help the poor cope with the social-economic shocks, but fiscal constraints may limit the scope for significant response.

RECENT ECONOMIC AND POLICY DEVELOPMENTS

Output and Demand

Iran's GDP continued to contract in 2019/20 as oil production fell to historic lows following the intensification of US sanctions. After a 4.7 percent decline in 2018/19, Iran's GDP contracted by 7.6 percent (YoY) in the first 9 months of 2019/20 as oil and gas output fell by 37 percent (YoY). With the reintroduction of US sanctions in May 2018, Iran's crude oil production fell to 2.08 mbpd in February 2020, levels last seen during the war with Iraq in the 1980s (Figure 1). The decline in oil production was stronger in 2019/20 as major oil importers of Iranian oil received waivers from sanctions up to April 2019 (beginning of 2019/20 Iranian year) and as oil storage capacities were also fully utilized. The recently implemented strategy of offering crude oil purchases through Iran's Energy Exchange Market has had limited impact in curbing the oil output decline due to financial and logistical restrictions.

Non-oil activity stagnated in 2019/20 but represented a marginal improvement compared to 2018/19 (Figure 2). Non-oil GDP growth in Apr–Dec 2019 was close to zero (YoY), a marginal improvement compared to the sector's 2.1 percent contraction in 2018/19. During the first 9 month of 2019/20, agriculture sector output rebounded, growing by 3.2 percent (YoY), despite parts of the country being impacted by floods and desert locusts. Non-oil industries grew by 2 percent (YoY) driven by construction and utilities sector growth rates of 9.6 percent and 7.7 percent, respectively. Manufacturing contraction slowed during the first 3 quarters, however auto sector output in the first 7 months of 2019/20 was 41.1 percent lower YoY. Services value-added accounting for 45 percent of GDP (in nominal terms) contracted by 0.2 percent. More recently, the COVID-19 outbreak has significantly disrupted trade, tourism and retail business during one of the busiest periods of travel and commerce (Iranian New Year).[2]

The recent growth in the construction sector led to spillovers in services, but the sector remains considerably smaller than 2011/12. Since Q4 2018/19, the construction sector underwent

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[2] See, the Special Focus chapter 1 on the economic impacts of the COVID-19 global pandemic in Iran.

FIGURE 1 • Crude Oil Production
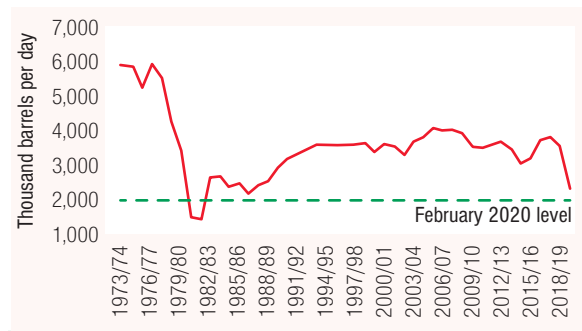
Source: CBI and OPEC (secondary sources).

FIGURE 2 • GDP Growth Oil and Non-oil Breakdown
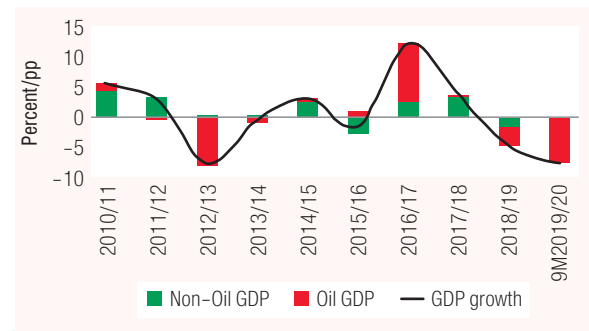
Source: CBI, SCI and World Bank staff calculations.

4 consecutive quarters of accelerating YoY growth and grew by 12.6 percent (YoY) in Q3 2019/20. Historically, construction activity is considered as one of the lead indicators of economic activity due to forward and backward linkages and contributed by 0.3 percentage points (pp) to GDP growth in the first 9 months of 2019/20. Over the same period, real estate services also grew by over 4 percent (YoY) and contributed by 0.6 pp to YoY GDP growth. However, the construction sector was only 69 percent of its size in the same period in 2011/12 (at constant prices) and is likely to be negatively affected by the global pandemic.

All major components of expenditure side GDP contracted in the first three quarters of

FIGURE 3 • GDP Growth and Demand Side Components

Source: CBI, SCI and World Bank staff calculations.
Note: * Changes in inventories includes statistical discrepancy.

2019/20, pointing to a broad-based recession. Private and government consumption declined by 6 percent and 2.4 percent (YoY) respectively in Apr–Dec 2019 while inventories (reported together with statistical discrepancies) grew by 56 percent (YoY). In the same period, investment shrank by 2.6 percent (YoY) despite construction investment growing by 9.6 percent (YoY). Exports declined sharply by 32.6 (YoY) mainly due to the restrictions on oil exports. Similarly, imports declined by 27.1 percent (YoY) as strict import restrictions on non-essential goods were put in place to allow control the pressure on foreign exchange reserves.

The contraction in investment slowed as a result of construction sector activity but follows years of a shrinking capital stock. Gross fixed capital investment contracted by 5.5 percent in 2018/19 as investor sentiments responded to heightened geopolitical tensions. This was followed by a 2.6 percent negative investment growth in the first 3 quarters of 2019/20 as views on economic prospects deteriorated and demand weakened confirmed by the high growth of inventories in this period. The easing of investment contraction in the latter period was mainly due to the activity in the construction sector which saw its investments increase by 9.6 percent YoY. However, at the same time investment in machinery shrank at the fastest pace (14.7 percent, YoY) in the recent years. Since the first round of sanctions in 2011/12 up to 2018/19 investment has been contracting annually by 3.7 percent on average due to volatile economic environment.

TABLE 1: IRAN: SELECTED MACROECONOMIC INDICATORS (2016/17–2019/20)

	(percent change unless otherwise mentioned)			
	2016/17	2017/18	2018/19 (est.)	2019/20 (est.)
Real GDP at factor cost (2011=100)	**12.5**	**3.7**	**−4.4**	**−7.3**
Agriculture	4.2	3.2	−1.5	2.1
Industry	24.7	3.0	−9.5	−16.5
Services	3.7	4.5	0.2	−0.5
Real GDP at market prices (2011=100)	**13.4**	**3.8**	**−4.7**	**−8.2**
Private consumption	3.8	2.5	−2.2	−6.1
Government consumption	3.7	3.9	4.5	−2.4
Investment	−3.7	1.4	−5.5	−2.0
Exports	41.3	1.8	−13.6	−30.4
Imports	6.1	13.4	−38.3	−26.0
Consumer price inflation (average)	**9.0**	**9.6**	**26.9**	**34.8**
Consumer price inflation (end of period)	**11.8**	**8.3**	**47.5**	**22.0**
Current account balance (% of GDP)	**3.9**	**3.5**	**5.3**	**−0.4**
Fiscal balance (% of GDP)	**−1.9**	**−1.8**	**−1.4**	**−5.4**

Source: CBI, SCI and World Bank staff calculations.
Note: Services are reported net of imputed bank service charges.

External Sector

After two years, Iran's balance of payments became positive in 2018/19 due to restrictions on imports and capital flows. The overall balance of payments increased to US$9.9 billion in 2018/19 up from a negative US$8.1 billion a year earlier (Table 2) as all components of the current account balance (CAB), especially goods account, improved. The capital account also indicated a decline in the amount of capital outflows from the country by almost US$3 billion compared to the peak in 2017/18 partly as a

TABLE 2: IRAN'S BALANCE OF PAYMENTS

(million US$)	2014/15	2015/16	2016/17	2017/18	2018/19
Current Account	**13,571**	**1,237**	**16,388**	**15,816**	**26,741**
Goods Account	18,060	5,354	20,843	22,596	32,635
Services Account	−6,877	−4,785	−5,941	−7,916	−7,350
Income Account	1,845	241	928	669	807
Current Transfers Account	543	427	558	467	650
Capital Account	**559**	**2,346**	**−18,288**	**−19,321**	**−16,044**
Errors and Omissions	**−5,569**	**−1,350**	**−5,766**	**−4,635**	**−817**
Overall Balance	**8,561**	**2,233**	**−7,666**	**−8,140**	**9,880**

Source: CBI.

FIGURE 4 • Current Account Balance and Goods Trade

Source: CBI.

FIGURE 5 • Oil Exports Levels and Share of Total Exports
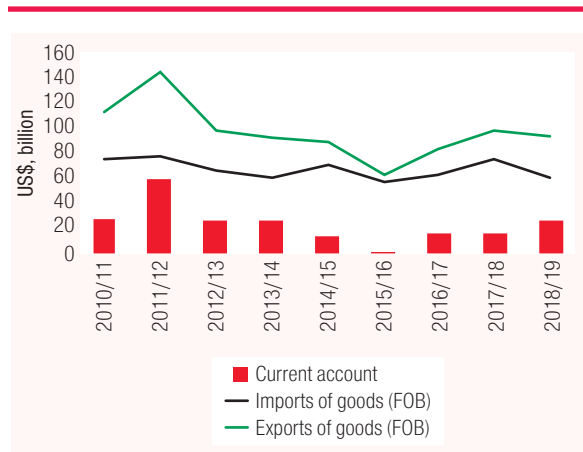
Source: CBI.

result of restrictions on outflows. Table 2 also shows that since 2016/17 the capital account has had a cumulative deficit of around US$54 billion.

More recently, the current account surplus has almost entirely faded despite continued decline in imports. The customs trade balance in 2018/19 registered a deficit of US$2.4 billion, down from a 1.5 billion surplus in 2018/19 and despite a decline in imports.[3] The current account surplus in 2018/19 had increased to US$26.7 billion (highest amount since 2011/12) as the goods trade balance increased by 44.4 percent to US$32.6 billion (Table 2). This was primarily due to the sharp contraction in goods imports by almost 19.6 percent (in nominal terms) and despite a decline in exports (Figure 4).

Oil share of total exports declined in 2018/19 and are estimated to have fallen further in 2019/20 as export volumes declined. Oil exports fell to US$60.7 billion in 2018/19 (a decline of US$5 billion) as oil importers adhered to the sanctions waivers condition of gradual decline of imports from Iran towards the end of the year. This meant that oil share in total goods exports accounted for only a slightly lower share (65 percent) of total goods exports (Figure 5). In the absence of official 2019/20 oil export data accurate estimation of the share of oil in exports is not possible. Triangulating customs exports data for the first 9 months of 2019/20 and higher frequency oil production trends provides an
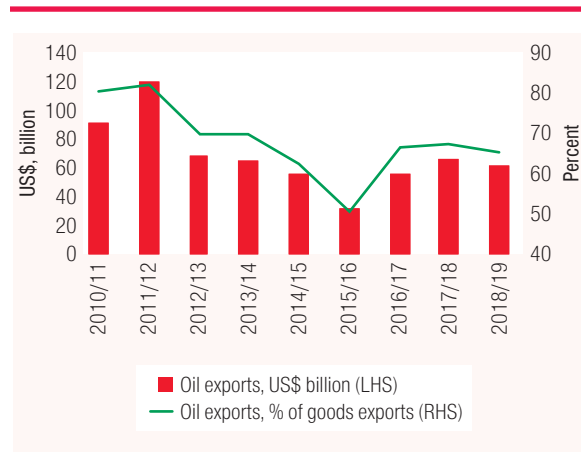
indication of a significant decline of the share in Iran's export basket. The value of goods exported through customs contracted by 7.4 percent in 2018/19 while oil production steadily declined during 2019/20.

The share of Iran's trade with China increased in 2019/20 despite a decline in China's oil imports. Total exports to mainland China fell by 46 percent in Q4 2019 after the reintroduction of US sanctions in 2018 however trade with China became more important. The share of exports to China surged from 29 percent of Iran's total exports in 2018 (72 percent of 2018 exports to china consisted of oil products) to almost 48 percent in Q4 2019 (Figure 6). Based on Chinese customs data, oil imports from Iran almost halved to around 300 thousand bpd in 2019. China also became a more vital import partner of Iran with 29 percent of imports coming from China in Q4 2019, up from 22 percent in 2018 (Figure 7).

Exports to immediate neighbors, while not as sizable as with China, have also gained more importance. Iran has had an increasing presence in the markets of its neighbors in recent years. Based on Iran's customs trade data for 2019/20, Iraq imported US$9 billion of goods from Iran making it the second largest

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[3] Iran's customs trade data covers trade information for non-oil goods and does not include goods transported by passengers or any other unofficial trade.

FIGURE 6 • Iran : Export Destinations

FIGURE 7 • Iran: Import Origins
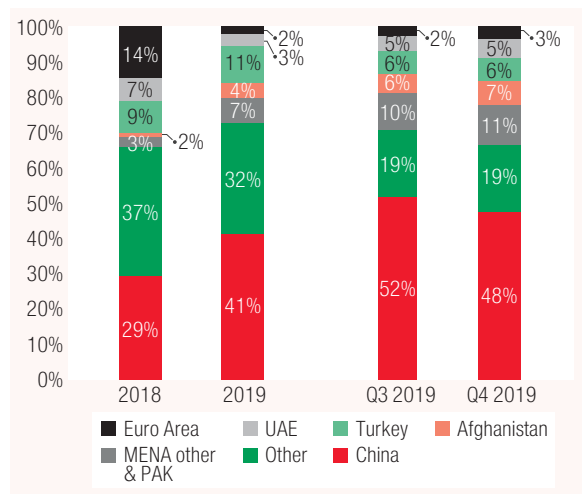
Source: IMF DOTS.
Note: IMF DOTS does not report Iran's exports to Iraq.

Source: IMF DOTS.

export destination for Iran. The reported value of exports to Iraq could represent a lower bound of the actual size of trade volume considering the existence of unofficial cross border trade. In 2019, Afghanistan imported US$1.2 billion of goods from Iran accounting for around 15 percent of its total imports. Replacing China, Iran was the largest exporter to the Afghan market in 2019.

Exports to India saw the largest decline amongst all other destinations of Iranian exports. After a record level of exports in 2018, Iran's exports to India fell by 77 percent in 2019 with a significant accelerating pace across the year. In the second half of 2019, only US$156 million of exports were reported reflecting an almost complete cessation of oil imports from Iran as India turned to US and other MENA oil exporters for its oil imports.

Imports have declined due to bans aimed at protecting vital foreign exchange reserves and encouraging domestic production. Following the sharp exchange rate depreciation in 2018/19, the Ministry of Industries was tasked with classification of all goods and commodities into essential, intermediate inputs and nonessential categories and identifying whether or not they had domestic counterparts, allowing a prioritization in imports. The list of nonessential goods with domestic equivalents (1,650 items as of November 2019) has been

regularly updated and submitted to Iran's Customs Administration to ban imports of such goods. The import restriction policy was the main contributor to goods imports falling by 20 percent to US$61 billion in 2018/19, the lowest level since 2015/16. International trade data for 2019 show that imports continued to decline falling by 39.4 percent in 2019 (IMF DOTS).

The relative importance of Iran's main import partners remained unchanged despite the sharp decline in the level of imports. In 2019, China, UAE and the Euro Area were the top exporters to Iran accounting for 24 percent, 16 percent and 14 percent of total imports, respectively. Turkey's share in Iran's imports increased more recently reaching 9 percent in Q4 2019 (Figure 7). The unchanged relative importance of countries exporting to Iran, albeit at lower levels and despite sanctions, reflects the remaining core of trade links between Iran and these countries.

Monetary, Exchange Rate and Financial Market

After a surge of inflation in 2018/19, price increase of goods and services accelerated further in 2019/20. Consumer price inflation (CPI) accelerated to 34.8 percent in 2019/20 (up from 26.9

FIGURE 8 • Top Contributors to CPI, 2019/20

Source: SCI and World Bank staff calculations.

FIGURE 9 • Consumer Price Inflation (monthly and annual)
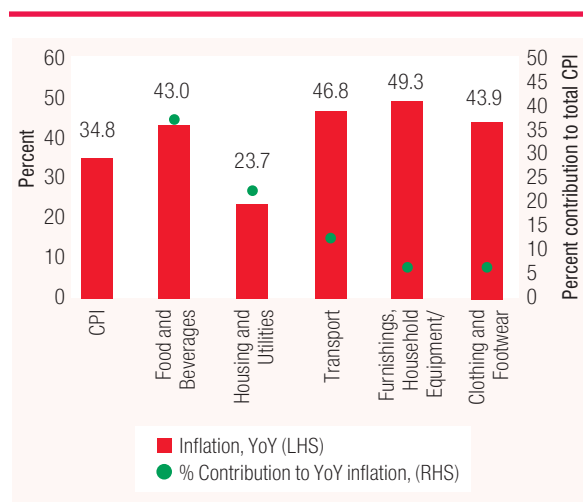
Source: SCI and World Bank staff calculations.

percent in 2018/19) as prices of goods and services were impacted by the depreciation of the rial. Average inflation ranged between 33.9 percent for the lowest income decile households and 36.6 percent for those in the top 10 percent of income distribution in 2019/20. For the most part of the 2018/19 and 2019/20, inflation (YoY) has been higher in the rural areas which have a higher poor population than urban areas.

Food, housing and transport remained the top three contributors to consumer price inflation in 2019/20. The food and beverage group followed by housing and transport each accounted for 13 pp, 6.6 pp and 4.3 pp of the 34.8 percent 2019/20 headline inflation, respectively (Figure 8). The food and beverages sector prices, with a 27 percent weight of the consumption basket, grew by 43 percent accounting for more than a third of the consumer price increase in 2019/20. Housing (36 percent weight in the consumer price index) and transport (9 percent share of the price index) price indexes grew by 23.7 percent and 46.8 percent, respectively.

High food price inflation has impacted the composition of the food basket of the average Iranian household. Between 2011/12 and 2016/17 per capita consumption of chicken increased to over 21kg per year (up from 17.6kg) while red meat consumption fell to 6 kg (down from 8.7 kg in 2011/12). This consumption trend reflects price effects and is

likely to have intensified over the previous three years. Since 2016/17, food prices have more than doubled (120 percent increase) with price i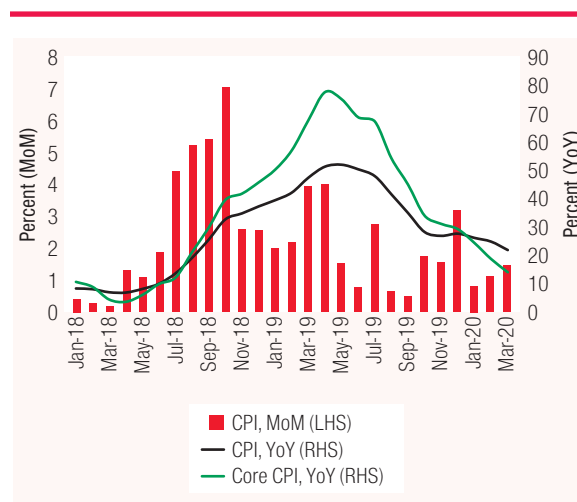ncreases ranging from 73 percent for bread and cereals to 163 percent for vegetables. The food substitution impact varies across household income deciles but is likely to have health and nutritional implications for the population in the longer term.

Inflation followed a downward trajectory for the majority of 2019/20 as rial's depreciation slowed. CPI declined to 22 percent (YoY) in March 2020, down from a peak of 52.1 percent in May 2019, as the impact of the earlier sharp depreciation of the national currency gradually dissipated. In January 2020, core inflation (inflation in the price of goods and services excluding food and energy) fell below total inflation for the first time sine June 2018, highlighting a broader easing of increase in prices (Figure 9).

The inflationary impact of the November 2019 gasoline price increase has been limited. In November 2019 Iran's Government announced a doubling of gasoline prices beyond a defined limit per vehicle and type of usage. The measure was aimed at curbing the surge in gasoline consumption thereby relieving the need for gasoline imports using valuable foreign currency reserves in the near future as well as limiting cross-border gasoline smuggling. The price increase led to monthly inflation reaching 3.2 percent

FIGURE 10 • Iran's Multiple Exchange Rate
System, Recent Trend
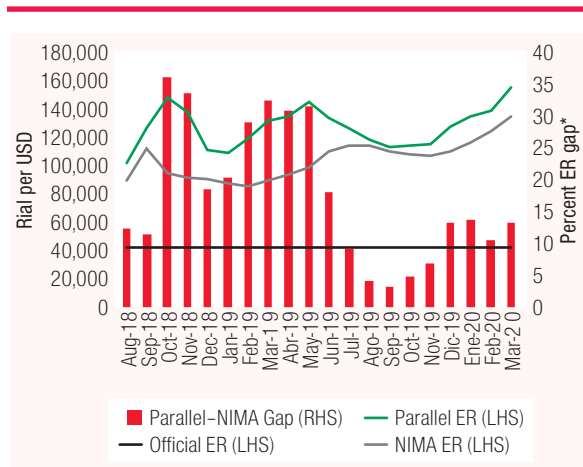
Source: CBI and media sources.
Notes: *The gap between the parallel and NIMA end of period rates divided by the parallel market rate.

in December but subsequently fell in January to 0.8 percent. Since then, CPI slowly edged up to 1.5 percent (MoM) in March 2020 as Iranian new year retail sales initially picked up prior to the COVID-19 outbreak, but remained much lower than the 7.1 percent (MoM) peak of October 2018. The recent trend of higher inflation in rural areas compared to urban areas also reversed in February 2020 continuing in March 2020 with prices increasing by 21.1 percent (YoY), 1.1 pp slower than in urban areas.

The rial saw a more sustained depreciation trend in the second half of 2019/20 but has been influenced by the COVID-19 outbreak. The exchange market witnessed a large turmoil in 2018/19 due to an environment of heightened uncertainty which led to liquidity fleeing to safer foreign exchange assets and increased speculative demand. The rial's value underwent some correction in the first half of 2019/20 but has depreciated more moderately since then in the parallel market reaching 142,257 rial per USD in February 2020 (Figure 10). Since then, the currency depreciated by over 11.6 percent in the month ending March 19 after the first cases of COVID-19 were confirmed in Iran in February 19, 2020.

After the attempted unification of the dual exchange rates in April 2018, foreign currency transactions effectively operate under a multiple

exchange rate system. As of March 2020, at least three different foreign exchange rates are used as a reference for various foreign currency denominated transactions. The first rate is the official exchange rate which has remained constant (IRR 42,000 per 1 USD) since the attempted unification of the exchange rates in April 2018 and is used for subsidizing the import of essential goods. Around US$14 billion of essential goods, medicine, medical equipment and animal feed was imported at this rate in the first 11 months of 2019/20. The second, NIMA rate, is a quasi-market rate that is supervised by the CBI in which major exporters including the petrochemical sector producers are required to sell their export proceeds to bidders consisting of importers and money shops. Finally, other smaller demand such as travel and cash demand are met through the parallel market by banks and money exchange shops for limited amounts.

The CBI has started pursuing conventional monetary tools for a more effective control on the interbank rate and liquidity growth. In 2019/20 the central bank announced the formal initiation of open market operations which can provide a means of controlling the persistent high liquidity growth (28.2 percent, YoY, in December 2019). As part of this drive all banks have been instructed to purchase treasury bills and more recently repurchase agreement (repo) regulations and guidelines have been approved. In the cash exchange rate market the National Bank of Iran through its "National Exchange Bureau", has increasingly played an active role in maintaining the exchange rate shocks in the open market within a managed range.

The Tehran Stock Exchange has seen strong gains over the last two years capturing part of the high liquidity growth and impacted by the rial's depreciation and investor expectations. The total market capitalization of the Tehran Stock Exchange in February 2020 reached IRR 17,617 trillion equivalent to US$419 billion at the official exchange rate.[4] Between

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[4] All US Dollar equivalents of the values originally reported in rial in the text have been calculated based on the official exchange rate of IRR42,000 per 1 USD for consistency purposes.

FIGURE 11 • Tehran Stock Exchange

Source: TSE.

Source: CBI and PBO.
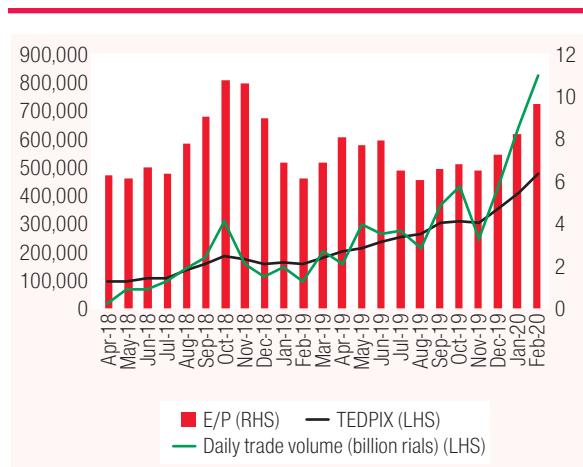
April 2018 until February 2020 the Tehran Stock Exchange has grown five folds as part of the liquidity has been directed towards the stock market (Figure 11). Looking at the price to earnings ratio (E/P) and daily trade volumes, the stock market activity has quickly rebounded in periods of heightened uncertainty after initial short lapses.

Public Sector Finances

The under realization of government revenues compared to the budget targets put pressure on the limited fiscal space in 2019/20. Revenues from disposal of nonfinancial assets (mainly oil export revenues) registered 18 percent realization in Apr–Nov 2019, relative to the approved amount for the 2019/20 year, following the intensification of US sanctions. Government tax revenues also have come under pressure despite attempts of improving collection and widening the tax base. In the first 8 months of 2019/20, tax revenues collected were closer to the target for the period at around 57 percent of the annual envisioned amount in the Budget. Import taxes and goods and services taxes had the lowest realization rates of 27 percent and 59 percent, respectively, in the reported period.

The growing financing gap has increased the reliance on debt issuance and alternative financing measures. With expected growing expenditures and the increasing pressures on revenue receipts the financing gap has increased. The government has relied on disposal of financial assets mainly consisting of debt issuance, withdrawals from the NDFI and privatization. In Apr–Nov 2019, disposal of financial assets was around 31 percent higher than the 2019/20 Budget target for the entire year with debt issuance reaching 79 percent of budget value[5] and additional withdrawals from the NDFI. The widening financing gap has put Iran's debt to GDP ratio at an estimated 37 percent in 2019/20.
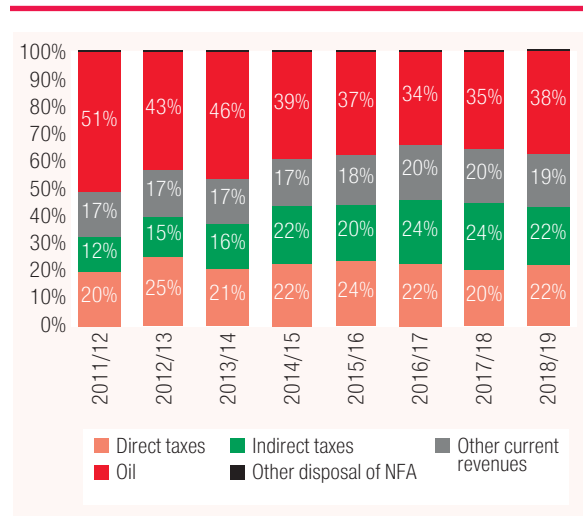
Previously, in 2018/19, the fiscal deficit to GDP ratio had declined mainly due to a large base effect of an increase in nominal GDP. Total government revenues increased by 13.4 percent in 2018/19 with the majority of growth coming from oil revenues due to the lag in higher oil exports in the previous year. Oil revenue share of total government revenues in 2018/19 reached 38 percent considerably less than the 51 percent share in 2011/12 (Figure 12). The growth in the financing gap (13 percent) was more than offset by a large increase in nominal GDP in the denominator (the GDP deflator surged

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[5]   These ratios are based on budget targets approved at the beginning of the year.

TABLE 3: RECENT LABOR MARKET INDICATORS

	Q4 2018/19		Q4 2019/20	
	Population	Rate (%)	Population	Rate (%)
Labor force	26,654,077	43.5	26,223,747	42.4
Employment	23,382,708	38.2	23,435,161	37.8
Unemployment	3,271,368	12.3	2,788,587	10.6
Underemployment	2,687,119	11.5	2,428,346	10.4

Source: SCI.
Note: Data reported for working age population of 15+ years of age.

by over 50 percent). The government's net disposal of financial assets to meet borrowing requirements remained high as a share of revenues (10.4 percent) in 2018/19 but lower than the peak in 2016/17 (11.6 percent).

Growing current expenditures and limited revenues continue to depress government investments. In 2018/19, government investment (capital expenditures) grew by 10.6 percent, accounting for 78 percent of that year's budget target and 62.1 percent of the amount envisioned for the second year of the Sixth Five-Year Development Plan. This is largely the result of higher current expenditure growth (from a considerably higher base) in recent years which have come at the expense of lower investment. Since 2012/13 capital expenditures have fallen below 3 percent of GDP from a high of 6 percent of GDP in 2006/7.

The government has continued issuing debt instruments for clearing arears in the OTC market. In 2015 the Debt and Asset Management Centre within the Ministry of Economy and Financial Affairs was instituted with the aim of identifying public sector debt and assets. A key function of the unit has been the securitization of the public sector arears to contractors through issuance of Islamic Treasury bills which are tradable in the OTC market. In the last two years, the government has also used other means of settling arrears to contractor firms such as deduction of outstanding tax payments using the centralized monitoring of debt and asset data. The 2020/21 budget envisages a large increase in disposal of government assets. As part of this drive, the government is planning to increase sales of assets including shares in banks, insurance and other publicly owned industries primarily

through the stock exchange. Other public institutions have also resorted to sales of assets as financing has been increasingly limited.[6]

Labor Market and Jobs

Lower economic participation contributed to unemployment marginally improving in the March quarter 2019.[7] The unemployment rate declined to 10.6 percent in the last quarter of 2019/20 (Jan–March 2019), from 12.3 percent a year earlier as economic activation declined (Table 3). The decline in unemployment rate however can be partly attributed to lower economic activity as reflected in the decline in employment ratio from 38.2 percent to 37.8 percent of the working age population. Out of the 23.4 million Iranian's employed in the March quarter 2019 around 8.8 million have worked less than 44 hours a week. Within the latter group around 28 percent were

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[6]   In the first month of 2020/21 (April 2020), 10 percent of the of Iran's largest pension investment fund SHASTA was offered in the TSE's largest initial public offering (IPO) valued at IRR70 trillion (US$1.7 billion). While this IPO does not directly impact the government balance it can partly mitigate the risk of contingent liabilities.

[7]   This does not include the impact of COVID-19 as per labor force methodology data for each quarter are gathered in the middle month. For example, the March quarter (i.e., the three months ending on March 19) reported data relies on labor force surveys carried out during the month ending February 20 and as such does not include the impact of COVID-19 which had the first confirmed cases on February 19, 2020.
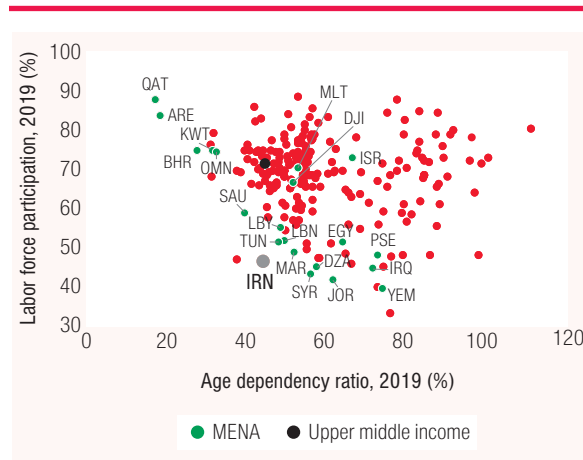
Source: WB WDI.

seeking to work for more hours but were unable to find employment putting the underemployment share at 10.4 percent of total employed population.

Labor force participation declined in the last quarter of 2019/20 at a higher rate for the male population. During the March quarter, labor force participation fell by 1.1 pp (YoY) to 42.4 percent with male and female participation falling by 1.3 pp and 1.0 pp (YoY), respectively. Overall, this was equivalent to the country's labor force population falling by 430,000 people in the latter period compared to the previous year. The low activation in the recent years is more significant when taken into consideration with the current demographic window of the young working age population with a low age dependency ratio (estimated at 44 percent in 2019)—Figure 13.

Female and youth unemployment rates remain high in the most recent reported period (Q4 2019/20). Male and female unemployment rates of 9.2 percent and 17.2 percent in Q4 2019/20, respectively, suggest continued gender gaps in the labor market which edged up compared to Q4 2018/19. Youth unemployment (15–24 years) declined from 28.1 percent to 25.7 percent in December quarter 2019. Both female and youth unemployment indicators remain high compared to regional and income group (upper middle income countries) averages.

The overall pace of job creation has declined; only the services sector has provided additional employment opportunities. The unemployed population decreased by 482,781 people in Q4 2019/20. The decline in unemployment came as net job creation slowed to 52,453, which indicates lower economic activity and fewer jobseekers actively seeking employment. During this period, the 265,043 additional services jobs created were in part offset by contractions in agriculture and industries sectors' work forces of 80,339 and 130,152 people, respectively. This sectoral employment trend reinforces the difficult challenge of job creation especially for the growing young and educated population entering the labor market. In March quarter 2020, 39 percent of the unemployed population were university graduates which increased by 1.4 pp compared to the same period in 2018/19. University graduates accounted for 25.1 percent of the employed population (up from 24.6 percent).

2

OUTLOOK AND RISKS

The outlook presented here incorporates all information available at the time of publication of this report. Given the uncertainty of the global economic context, the outlook is subject to risks and revisions as more information become available.

Facing a growing global pandemic, low oil prices and increasing sanctions, Iran's GDP growth is projected to remain subdued in 2020/21–2022/23. The baseline outlook is primarily driven by the shock from the COVID-19 outbreak reducing both oil and non-oil GDP in 2020/21 which is followed by two years of modest recovery. After a decline in 2020/21, oil production in 2021/22 and 2022/23 is expected to grow in line with long term domestic consumption growth and partial recovery in global oil demand (Figure 14). The Special Focus 1 provides macro outcomes in the case of an alternative downside scenario.

The negative global outlook due to the COVID-19 pandemic will negatively impact Iran's main trading partners and their demand for Iranian exports in 2020/21. Iran's economy is projected to remain in recession for the third consecutive year in 2020/21, contracting by 5.3 percent. All major trading partners of Iran have also been hit hard by the coronavirus. China, Tukey and India accounted for more than half of Iran's exports in 2019. Table 4 provides estimates of the

magnitude of impact on GDP for Iran, and these three countries by comparing the recent outlook with the past round of projections prior to the outbreak in January 2020. China and Turkey's GDP growth outlooks have deteriorated markedly by 4.9 pp and 6.8 pp, respectively. Strong downward revisions to economic activity in these countries as well as other neighbors in 2020 are strong contributors to the projected decline of Iran's exports by 7.6 percent in 2020/21.

The fiscal deficit is projected to widen as revenues fall short of targets and COVID-19 adds

FIGURE 14 • GDP Growth Outlook: Oil vs Non-Oil
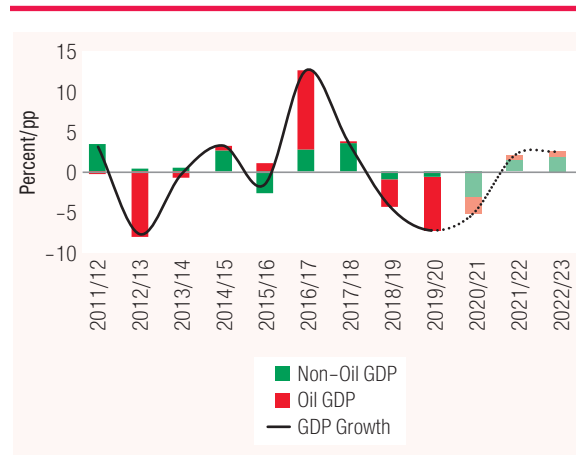
Source: CBI, SCI and World Bank staff calculations.

TABLE 4: GDP GROWTH AND TRADE OUTLOOK IN 2020, IRAN, CHINA, TURKEY AND INDIA

	GDP growth (%)			Iran export share (%)	Oil price, (US$/bbl)
	2019e	2020f	2021f	2019e	2020f
Iran	8.2	5.3 (−5.3)	2.1 (1.1)	N/A	
China	6.1	1.0 (−4.9)	6.9 (1.1)	41.2	*32 (US$42.5/bbl downward revision)*
Turkey	0.9	−3.8 (−6.8)	5.0 (1.0)	11.1	
India	4.4	−3.2 (−9.0)	3.1 (−3.0)	10.4	

Source: World Bank staff calculations and IMF DOTS.
Note: Figures in brackets represent percentage point differences in World Bank projections in June 2020 compared to January 2020.

to expenditures. The 2020/21 draft budget, though contractionary in real terms, relies on optimistic assumptions. The expected widening budget deficit especially in light of COVID-19 and other exogenous shocks are likely to lead to further debt issuance and withdrawals from strategic reserves (see, the Special Focus macro chapter on COVID-19 in Iran).

Iran's current account balance is projected to be in deficit due to trade restrictions and oil market dynamics. Non-oil exports are expected to fall short of total imports as oil exports flatline (assumed at under 500 thousand bpd under the baseline in 2021/22 and 2022/21). The budget also outlines a large increase in the sales of government assets as source of revenues which especially considering the COVID-19 uncertainties would be hard to achieve. However, low external debt (under 3 percent of GDP) limits external financing exposures of the government and the economy as a whole.

The recent decline in inflation and slower depreciation of the rial are likely to reverse with COVID-19. While COVID-19 is expected to add to inflationary pressures, inflation is expected to follow a downward trend due to weak demand. Headline inflation is expected to remain above 20 percent due to pressures on foreign exchange reserves and projected fiscal deficits.

Negative economic growth and high inflation coupled with COVID-19 will put further pressure on household livelihoods in 2020/21. Limited job creation due to the projected economic contraction along with loss of purchasing power due to persistent high inflation will impact household livelihoods. The COVID-19 outbreak will also have long-lasting economic and social impacts most likely through the labor market channel. As the existing cash transfers have shown, the cash transfer and loan programs announced by the government will partially mitigate the impact on the most vulnerable households in 2020/21.

The unique challenges facing Iran's economy present significant downside risks for the baseline forecast. The most significant risk is a stronger and more protracted impact of the COVID-19 outbreak through various channels including widescale contractions in commerce, tourism and trade as well as higher production costs. Persistence of lower oil prices and export volumes (e.g., due to an even more significant decline in China's oil demand) would result in a substantially larger overall shock and fiscal deficit in 2020/21. Other developments including additional US sanctions and FATF's recent designation of Iran as a high-risk country could further restrict Iran's production and trade with neighbors. Intensification of geopolitical tensions coupled with supply push factors could also translate to higher inflation and downward pressure on the currency. The sheer scale of the external challenges could provide the government with an opportunity to address long lasting structural challenges that have been postponed including banking sector and fiscal reforms.

The country faces serious economic and social challenges which disproportionately impact the lower income decile households who already face significant economic pressures. Similar to the experience after 2012, high inflation will especially impact the poor through the rapid erosion of the real value of distributed cash transfers in subsequent years. Poverty trends in the future will depend upon subsequent policy responses. Any increase in the value of cash transfers, along with introducing targeting mechanisms, could help the poor cope with the social-economic shocks, but fiscal constraints may limit the scope for significant response.

TABLE 5: IRAN SELECTED ECONOMIC INDICATORS (2017/18–2022/23)

	2017/18 Act.	2018/19 Est.	2019/20 Est.	2020/21 Proj.	2021/22 Proj.	2022/23 Proj.
Real sector	(annual percentage change, unless otherwise specified)					
Real GDP at factor cost	3.7	−4.4	−7.3	−5.3	2.1	2.5
Total crude oil production (million barrels/day)	3.8	3.6	2.4	2.0	2.1	2.2
Crude oil, average price (US$)	52.8	68.3	61.4	32.0	38.0	40.7
Money and prices	(annual percentage change, unless otherwise specified)					
CPI Inflation (p.a.)	9.6	26.9	34.8	28.7	23.0	21.1
	(percent of GDP, unless otherwise specified)					
Investment & saving						
Gross Capital Formation	34.7	38.0	41.9	41.7	41.6	41.8
Gross National Savings	38.3	43.3	41.5	39.6	40.7	41.5
Government finance	(percent of GDP, unless otherwise specified)					
Total revenues	17.0	13.9	9.6	8.2	9.3	9.6
Tax Revenues	7.6	6.1	5.5	4.9	5.9	6.2
Direct Taxes	3.5	3.1	2.8	2.7	3.0	3.1
Indirect Taxes	4.1	3.0	2.7	2.2	2.9	3.1
Total expenditures	18.7	15.4	15.0	16.0	16.1	16.6
Current	15.9	13.1	12.5	12.7	12.6	12.6
Net lending/borrowing (overall balance)	−1.8	−1.4	−5.4	−7.8	−6.8	−7.0
Gross Public Debt Stock (% of GDP)	36.1	37.8	37.2	43.0	44.4	47.2
External sector	(percent of GDP, unless otherwise specified)					
Current Account	3.5	5.3	−0.4	−2.1	−1.0	−0.3
Net Exports	3.3	4.4	−0.8	−2.3	−1.3	−0.7
Export of Goods and Services	24.2	21.9	17.5	16.5	16.0	15.4
Import of Goods and Services	21.0	17.5	18.3	18.8	17.3	16.0
Memorandum Items:						
Nominal GDP (Billion IRR*)	15,316,483	21,138,199	25,681,020	30,630,734	39,192,848	49,499,432

Source: Government data and World Bank staff calculations.
Note: *IRR: Iranian Rial.

SPECIAL FOCUS 1 –
THE ECONOMIC IMPACT
# OF COVID-19 IN IRAN:
A PRELIMINARY
ASSESSMENT

Iran is one of the most impacted countries in the world by the coronavirus. With the economy reeling from sanctions, the capacity to address the pandemic is restricted. Less than forceful containment measures are expected to result in a deeper and more protracted pandemic. On the economic side, even under a benign COVID-19 scenario, this would result in a marked economic impact (–5.3 pp in 2020/21 and +1.1 pp in 2021/22), notwithstanding the recent deep economic recession. Under a more protracted one, the impact would almost double. The hardest hit sectors are oil, travel, tourism and retail sales sectors as well as manufacturing and construction. Public finances would deteriorate further, as oil and non-oil revenues dip, and expenditures rise. Rising inflation and reduced earnings would impact purchasing power.

COVID-19 Spread in Iran[8]

Iran was one of the hardest hit countries by COVID-19 and experienced a second wave of new diagnosed cases in June 2020. The total number of diagnosed cases went from about 1,000 on March 1—11 days after the first cases were officially confirmed (February 19)—to 180,156 on June 11, 2020 2020 after a second wave of new cases were reported (Figure 15). Initial response was slow and less than forceful which could mean a deeper and more protracted pandemic than in other countries. No city (including Qom, the initial epicenter of the outbreak in Iran) were fully quarantined. Ministry of

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8   Reported COVID-19 cases are based on data available as of June 11, 2020.

FIGURE 15 • Iran: COVID-19 Cases (June, 2020)

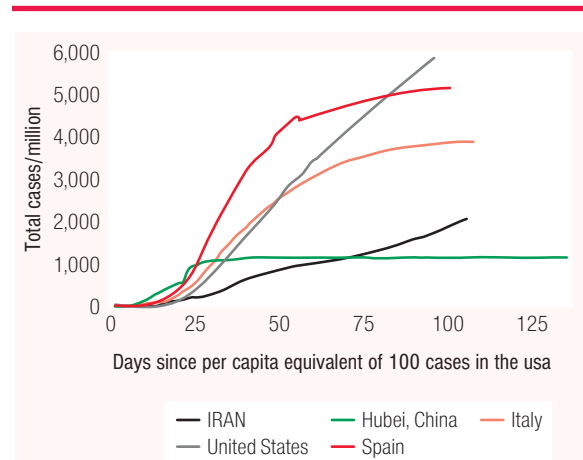*Source*: World Bank, John Hopkins CSSE.
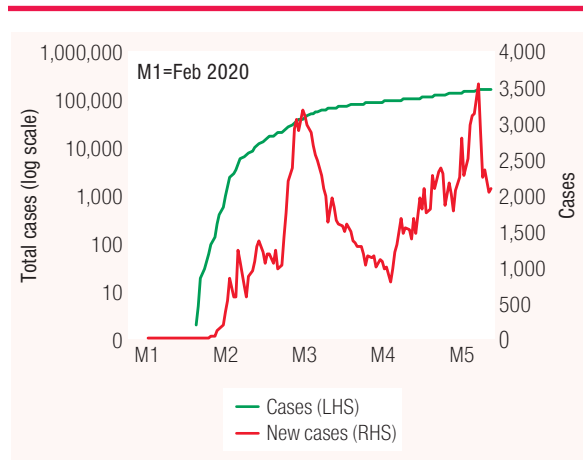
Source: World Bank, John Hopkins CSSE.

Health (MoH) screening stops were placed at the entry and exit points of major cities and access to some cities was restricted to residents. Official reports indicate that daily fatalities fell below 100 for the first time in mid-April 2020. Low risk category activities (i.e., those which does not involve large crowds) partially resumed in April 11, 2020 with all employers needing to register with MoH to operate after April 18. Based on available cross-country policy response data, the measures taken in Iran have been less stringent than some affected peers such as China, Italy and South Korea (Figure 16).[9] Iran's health system also ranks 109 globally in epidemic response preparedness.[10]

Within Iran, COVID-19 outbreaks occurred in Tehran and Esfahan, densely populated provinces of the country and also its two largest centers of industry and commerce. The two provinces jointly account for over 20 percent of the population and almost one third of Iran's GDP. Tehran alone accounts for a sizable share of the spread of the diseases (a third of all new diagnosed cases and fatalities in mid-April). While this could partly reflect better screening facilities in Tehran it also highlights the higher speed of the spread and higher potential economic impact of the outbreak on the economy (e.g., *ceteris paribus*, a 5 percent decline in the Tehran and Esfahan provinces' GDP could lead to a 1.5 percent GDP contraction at the national level).

Overall Economic Impact of COVID-19

The outbreak is expected to have a large negative impact on real GDP growth, even as economic activity was at a low base following two years of deep recession. Given the uncertainty around COVID-19, we assess the economic impact through two scenarios referred to as "benign" and "downside". The former one assumes a moderate impact to sectors directly affected by health measures due to a shorter lockdown period and includes a small shock in oil production as demand in China recovers earlier. The medium scenario assumes a stronger impact in key affected sectors and moderate shock to others in addition to a 20 percent decline in oil output mainly due to a drop in orders from China. In our benign scenario, real GDP growth would be reduced by 5.3 pp in 2020/21 but add 1.1 pp in 2021/22 compared to projections in

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9   Based on the University of Oxford's Government Response Stringency Index time series, Iran had a less stringent and slower response. As of April 15, 2020, Iran had a policy response index of 54, lower than China, Italy and Korea who experienced a COVID-19 spread earlier than Iran (https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker).

10   Global Health Security index (https://www.ghsindex.org/).

	Benign			Downside	
	2019/20	2020/21	2021/22	2020/21	2021/22
GDP	−8.2	−5.3	2.1	−8.3	1.0
Agriculture	2.1	1.5	2.0	1.0	1.5
Industry	−16.5	−8.0	3.0	−12.4	1.5
Services	−0.5	−4.3	1.5	−6.6	0.5
Nonoil GDP	−0.9	−3.7	1.7	−6.5	0.8

Source: World Bank staff estimates.
Note: Under the benign assumptions oil output declines by 15 percent and agriculture output is minimally impacted while the shock in the impacted industries and services sectors ranges between 2 to 5 percent. The downside scenario assumes the COVID-19 crisis continue globally impacting Iran's oil output (−20 percent) and further intensify domestically (up to 10 percent contraction in sectors with high exposure).

January 2020; in our downside scenario, 2020/21 growth would drop by 8.3 pp, while 2021/22 would remain at 1 percent (Table 6).

From the expenditure decomposition of GDP, the impact on growth in 2020/21 is expected to be strongest through private consumption and net exports. Private consumption, with an estimated 40.8 percent real GDP share in 2019/20, could decline by as much as 5 percent accounting for 2.0 pp of the 5.3 percent projected GDP contraction in 2020/21 due to a combination of social distancing, individuals' self-isolation, and reduced disposable income (e.g., unpaid leave) that reduce spending. The consumption decline on GDP is relatively high as the initial impact came at a time when sales would have otherwise been the strongest in the year (Norouz/new year quarter accounted for 29 percent of 2018 GDP). Net exports is expected to drag down growth by 1.2 pp as exports and import could contract by 7.6 and 6 percent, respectively in 2020, due to cross-border restriction measures and weaker demand. Investment, although already depressed due to the past 2 years' recession, is projected to further decline by 10.8 percent due to an increasingly uncertain economic condition, and supply and labor disruptions for ongoing investment. Real government consumption is expected to decrease by 0.4 percent in 2020 despite the unexpected crisis-related spending (especially health).

From the production side, the services sector is expected to subtract the most from growth, followed by industry, while the impact on agriculture is expected to be limited. The large services sector (45 percent of GDP) is expected to be broadly impacted, with sales (retail and whole),[11] transportation and financial services disproportionately so. These three components jointly account for almost half of the services value added. As the containment measures expanded to hospitality services and semi-quarantine status in some major cities were enforced the overall impact on these sectors decline could reach into double digits.[12] Social distancing measures implemented such as cancelation of cultural and sports events, closure of schools and universities will also have a knock-on effect on transportation services and as economic activity slows financial services are likely to be impacted. Retail sales visibly declined at the initial peak of the outbreak as people reduced visits to bazaars and shopping malls. On the industry side, manufacturing and construction are projected to be hardest hit due to both supply chain and demand shocks. The former (19 percent of GDP) is expected to suffer in part due to shortages of parts as production declines in China, especially the auto sector. Daily auto production has reportedly also fallen since the spread of the virus.

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[11] The purchasing mangers' index (PMI) gathered by Iran's Chamber of Commerce fell to 31.4 in March from 47.6 a month earlier.

[12] The Iranian Hoteliers Association estimates the COVID-19 has cost to the sector IRR30 trillion (US$714 million).

FIGURE 17 • GVC Linkages of Iran and other
MENA Country Exports

Backward Linkages to GVCs   Forward Linkages to GVCs
No Linkages to GVCs
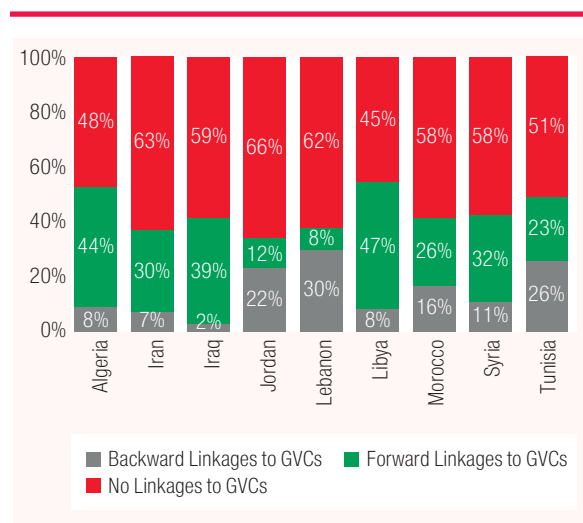
Source: UN Comtrade and World Bank staff calculations.

Construction is also expected to be impacted (due to both demand and supply constraints) but the economic impact will be more limited as the sector only accounts for 4 percent of GDP (but 12.6 percent of total employment). Agriculture output is expected to only be impacted moderately as demand for essential goods remain in place and as food imports remain restricted. In the downside scenario where the crisis persists in size and duration it could impact Iran's oil output by as much as 20 percent.

Detailed Economic Impact Channels

1. **Trade in goods – Iran has a large, and prior to the outbreak, rapidly growing trade exposure to China.** Since the reintroduction of US sanctions in 2018, exports to China have risen in significance, increasing from 29 percent of Iran's total exports in 2018 to 48 percent as of Q4 2019 (72 percent of 2018 exports to china were oil products)—Figure 6. The share of imports from China has been more stable (and large) reaching 29 percent in Q4 2019 (Figure 7). In 2018/19, 84.3 percent of Iran's imports consisted of intermediate and capital goods. Manufacturing products due to their more complex nature tend to have a higher import content. This highlights the vulnerabilities

posed by lower imports from China (29 percent of imports in Q4 2019) as a supply side risk not just for the domestic market but also for non-oil exports to other destinations relying on Chinese components. Manufacturing products accounted for 81 percent of non-oil exports in 2017/18. Nonetheless, Iran's exports have limited linkages in global value chains (especially backward) even compared across MENA peers (Figure 17).

Trade with immediate neighbors, while not as sizable as with China, is also expected to be negatively affected due to proximity and containment measures. In recent years, Iran has had an increasing presence in the markets of some of its neighbors. After China, Iraq was the second largest export destination for Iran in the first 9 months of 2019/20 (official data could under-represent the importance of trade with Iraq as informal trade between the two country is likely significant). In 2019, Afghanistan imported US$1.2 billion of goods from Iran accounting for around 15 percent of its total imports which for the first-time placed Iran in the first place, ahead of China, in the Afghan market. Apart from some closely monitored crossings with Afghanistan and Iraq and Azerbaijan other border crossings with other neighbors have been closed or severely restricted which have severely disrupted trade and transit routes. A protracted COVID-19 crisis could also potentially have longer-term impact for Iranian exports losing market share in these markets.

2. **Trade in services – Travel and tourism accounted for 6.5 percent of GDP and 5.4 percent of employment in 2018.** About 7.8 million tourists traveled to Iran in 2018/19. Iraq, Azerbaijan and Afghanistan were the top countries of origin while Chinese visitors accounted for less than 1 percent (Figure 18). Iraqi pilgrims to Iranian holy shrines accounted for 24 percent of all visitors alone. As a result, while there is very little direct impact from Chinese visitors, the closure of borders especially land is likely to have a significant negative impact on tourism from closer neighbors.

3. **Oil – In light of the sanctions, the exposure to lower oil prices and production cuts are**

FIGURE 18 • Iran: Foreign Visitors' Country of Origin, 2018/19
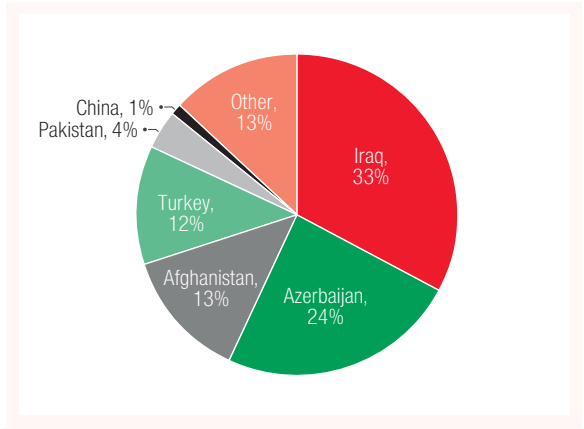
Source: Iran Cultural Heritage Organization.

reduced but add to pressures on an already strained economy with limited buffers. US sanctions on exports of Iranian oil have sharply reduced production (from 3.8 mbpd to 2 mbpd between 2017 and end of period 2019) and export volumes. As a result, Iran's current exposure to oil prices are more muted. Nevertheless, Iran already sells its oil at discounted prices and the recent steep decline in oil prices to US$33/bbl will hurt the current account (a US$10/bbl decline in oil prices is estimated to reduce the CAB by 0.4 pp of GDP). On the volume side, producing at a historic low of close to 2 mbpd, Iran will likely be exempt from future OPEC production cuts, but it would be more vulnerable to a direct reduction in China's oil import orders. Iran has very limited FDI exposure risk (under 1 percent of GDP in 2017/18) and low external debt (2.4 percent of GDP in 2017/18), following multiple rounds of sanctions.

4. **Public finances – The expected decline in oil and non-oil revenues and higher expenditures will widen the fiscal deficit and increase indebtedness.** Government revenue collection even before the outbreak was below budget targets due to sanctions and is expected to come under further pressure as the tax base declines due to the disruption in economic activity. The draft 2020 budget assumes annual oil exports of 1 mbpd and an oil price of US$50/ bbl, which would generate around 13.4 percent of government revenues. A $10/bbl drop in oil prices would reduce oil revenues by 2.7 percent.

5. **Monetary and exchange rate—Since the outbreak, the rial has come under pressure and inflation is expected to accelerate.** Since the first cases were confirmed in Iran, the rial has depreciated by 8 percent in nominal terms in the parallel exchange market reaching IRR155,000 per 1 USD; the central bank, however, intervened to smooth the adjustment as it already did during recent external shocks. CPI inflation which in March declined to 22 percent YoY, is expected to rise again as the cost push factors such as scarcity of parts, depreciation, and the fiscal expansion are likely to dominate the demand-pull impact of weaker economic activity especially as foreign reserves are running low. The Tehran Stock Exchange index, dominated by petrochemical producers with some having strong exports to China, has continued its upward trend after a decline in early March.

Policies Implemented

The government has announced a COVID-19 package, a relatively limited response due to restricted fiscal space after two years of deep recession, and a sharp reduction in oil revenues due to sanctions. The government announced a IRR1000 trillion (US$24 billion) rescue package to address the impact of COVID-19, equivalent to 17.5 percent of the 2020 Budget Law. The plan is partly financed through a Euro 1 billion emergency withdrawal from the NDFI and reduction of reserve requirements of the banking system. The response package includes four major components:

1. US$17.9 billion (75%) is offered to impacted businesses and households in bank loans at (lower) 12 percent interest rate. The size of loan to businesses is determined by the sector of activity and number of employees and conditional on employees not having been fired.

2. US$2.9 billion (12%) allocated for additional medical and health sector expenditures.

3. US$1.9 billion (8%) earmarked for cash transfers (4-stage cash transfers to 1.5 million households with no stable source of income, each stage up to US$40) and consumption loans (of up to US$476 per person to 4 million impacted households), both components depend on household size.

4. $1.2 billion (5%) allocated to the Unemployment Insurance Fund to support those who have become unemployed as a result of businesses closing due to the pandemic.

All 23 million households receiving previous subsidy reform cash handouts are eligible to request an interest free loan of US$238 (per household) to be repaid over 30 months from their future cash handouts. The funds for these loans will be secured from the first item of the above list where a third of the US$17.9 billion was later announced to be allocated to household consumption loans.

Other fiscal measures implemented so far include extra funding (IRR2,000 billion/US$46 million) to MoH. The Plan and Budget Organization (PBO) has also processed overdue employee payments (IRR16,650 billion/US$396 million) as per the 2019/20 budget for health sector specialists to Iran's Health Insurance Organization. The Iranian National Tax Administration (INTA) extended the grace period in which penalties of overdue taxes were reduced to 10 percent for manufacturing businesses and 20 percent for others. The Ministry of Education was provided funding (IRR1000 billion/ US$23 million)

for refurbishing and installation of equipment that can limit the spread of the virus. Treatment costs of COVID-19 patients were announced to be covered under the national health insurance program. Import tariffs of face masks and rubbing alcohol were reduced to 5 percent. Utility bill payments have been postponed for three months, payable in May.
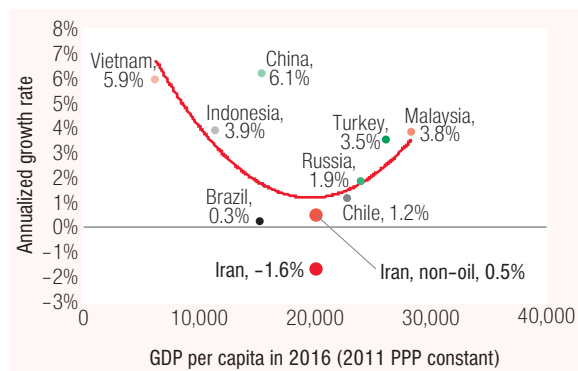
The monetary authorities announced temporary measures to reduce the impact on indebted businesses and their cash flow constraints. The Money and Credit Council instructed banks to reschedule loan repayments which are due in March, April to be payable together with the May payments, without incurrence of any additional service charge or interest payments. The directive covered loans to designated list of businesses especially small and medium-sized enterprises (SMEs, including hotels, restaurants and transportation sector) and all individuals with interest-free loans (normally provided to vulnerable households). Limits on bank transactions were increased. Expired bank cards were extended validity for up to 3 months without in-person visits to banks and daily withdrawal limits from ATMs were increased. However, due to the nature of the crisis in which production is hampered not just by liquidity constraints but by physical obstacles to commerce such as sourcing components or lack of demand due to isolation and social distancing the impact monetary policy interventions is expected to be limited. Iran has had persistently high liquidity growth rates (above 20 percent annually) leaving limited space for policy rate interventions (as this would further fuel inflation).

SPECIAL FOCUS 2 – UNDERSTANDING POVERTY TRENDS IN IRAN DURING 2016/17-2018/19 WITH POVERTY SIMULATION FROM GASOLINE REFORM AND THE COVID-19 OUTBREAK

Aziz Atamanov, Mohammad-Hadi Mostafavi, Laura Rodriguez Takeuchi and Matthew Wai-Poi[13]
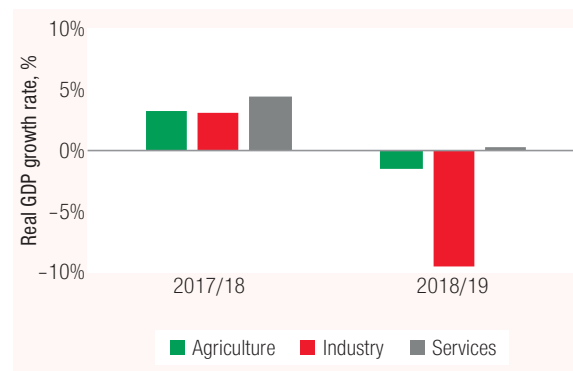
Source: WDI, April 2020. Authors' calculation.
Notes: Annualized growth rates in Figure 19 are calculated using geometric mean. Non-oil GDP in Iran is measured at factor costs.

Source: WDI, April 2020. Authors' calculation.

This note continues and updates the special focus on monetary poverty published in 2018 in the Iran Economic Monitor. It extends the existing poverty and inequality trends in Iran by looking at the period from March 2016 to March 2019. Poverty is measured using the 5.5 international poverty line based on U.S. dollars at 2011 purchasing power parity (PPP).

Introduction

Political and economic uncertainty and shocks continued to affect economic development in Iran after 2016 with a new wave of sanctions imposed in the fall of 2018. Annualized GDP per capita real growth was negative in Iran for 2016/17–2018/19 years and close to 1.6 percent.[14] If non-oil GDP per capita is considered, the country grew by about 0.5 percent. This was still lower than growth rates observed among most of Iran's selected peers during 2016–2018. This result was a combination of slowed down growth in 2017 after strong oil-based bounce back in 2016, and a large decline caused by imposed sanctions in 2018. Sectoral GDP growth rates shows that industry sector was hit the most in 2018/2019, while growth was affected the least in the services sector.

There is limited knowledge of the most recent trends in socio-economic wellbeing of the population in Iran after 2016. Two special focuses in Iran Economic Monitor (Karakurum-Ozdemir et al. 2016, Hayati et al. 2018) reported international poverty and inequality trends after 2008 and analyzed its determinants. The remarkable performance of Iran in poverty reduction during 2009/10–2012/13 was driven by the universal cash transfer program, which mitigated the adverse impacts of the energy tariff reforms. However, declining values of transfers in real terms could not sustain the poverty reduction or boost shared prosperity after 2012/13 and poverty was gradually increasing after that.

This note fills the existing knowledge gap about the most recent socio-economic development in Iran after 2016 by extending poverty and inequality trends to cover the period from March 2016 to March 2019. Given the absence of an official poverty line, poverty is measured using international poverty lines expressed in U.S. dollars at 2011 PPP. Poverty changes are decomposed to reveal the key factors behind the trends.

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[14] Numbers on Iran in this note are based on Persian calendar which bridges two years in Gregorian calendar starting and ending in March.
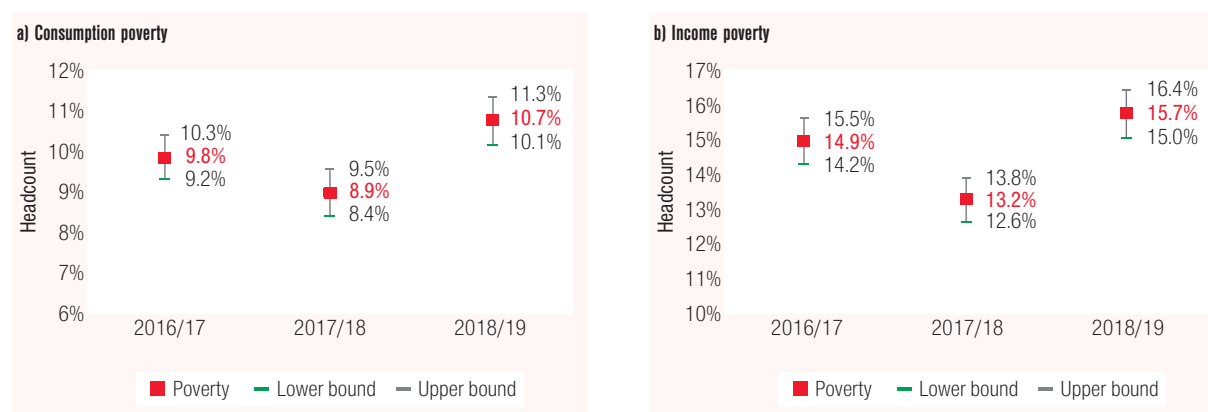
a) Consumption poverty

b) Income poverty

Source: Authors' calculation using HIESs.

Note: International poverty rates and inequality reported in this note are different from the poverty rates reported by the World Bank in World Development Indicators and PovcalNet. The difference comes from the way welfare aggregate is created. In this note, the welfare aggregate excludes expenditure on health and durables for technical reasons and is inter-temporally and spatially deflated to account for changes in prices during the survey period and spatial variation in prices.

Stylized Facts on Poverty and Inequality in Iran for 2016/17-2018/19

Trends in poverty and inequality

The poverty measurement methodology applied in this section follows a well-established and widely accepted tradition. Measuring poverty requires two broad steps. The first step is to define an indicator to measure welfare or living standards. The second step requires setting a poverty line— the minimum welfare level below which a person is considered to be poor. Standard procedures were followed in order to construct the components of the welfare aggregate as well as price adjustments to ensure comparability within survey years and across them (Deaton and Zaidi, 2012; Haughton and Khandker, 2014).

Poverty lines in this section are expressed in U.S. dollars at 2011 PPP. The most widely used international poverty line is $1.90 (Ferreira et al. 2015). It was established by the World Bank as an average of the national poverty lines of the 15 poorest developing countries expressed in PPP terms to monitor global extreme poverty (Chen and Ravallion 2010). Extreme poverty is almost non-existent in Iran, so the $5.50 2011 PPP daily poverty

line, also called upper middle-class line (Jolliffe and Prydz, 2016), is used in this note.[15] Although the analysis uses the World Bank $5.50 PPP daily poverty line, the levels of poverty are slightly different than reported by the World Bank for global poverty monitoring, to permit a more granular analysis of annual poverty fluctuations between March 2016 and March 2019.

Both consumption and income poverty dropped in 2017/18 and increased in 2018/19 period. Figure 21 shows changes in consumption and income poverty during last three years after 2015. Poverty marginally decreased in 2017/18 and increased back in 2018/19 regardless of welfare measured by consumption or income. In contrast, inequality measured by Gini coefficient was not as volatile and was increasing for both measures, especially in 2017/18 (Figure 22).

Rural poverty continues to be much higher than poverty in urban areas, but trends remained the same. Figure 23 shows poverty rates in urban

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[15] 5.5 USD 2011 PPP was about 88,849 Iranian rial in 2018/19 prices. The formula is 5.5*consumer price index 2018 (base 2011)* private consumption 2011 PPP= 5.5*3.23*5001.363. We used national CPI from the Statistical Center of Iran constructed by using rural and urban CPIs weighted by population.

FIGURE 22 • Income and Consumption Per Capita Gini Index in Iran, 2016/17-2018/19
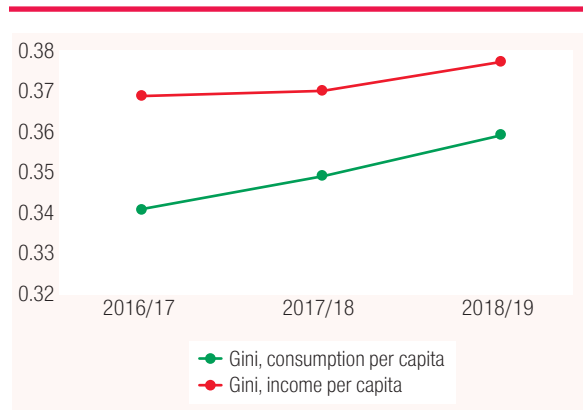
- ● Gini, consumption per capita
- ● Gini, income per capita

Source: Authors' calculation using HIESs.
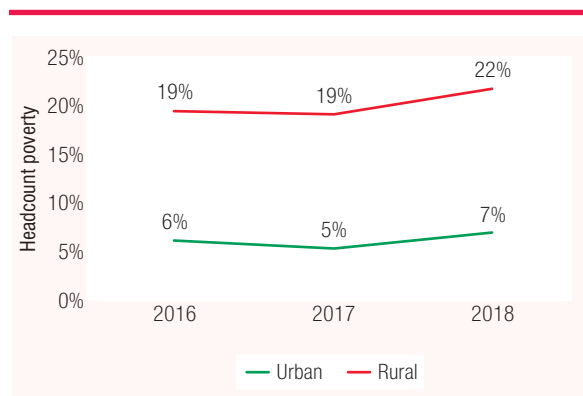*Note*: International poverty rates and inequality reported in this note are different from the poverty rates reported by the World Bank in World Development Indicators and PovcalNet. The difference comes from the way welfare aggregate is created. In this note, the welfare aggregate excludes expenditure on health and durables for technical reasons and is inter-temporally and spatially deflated to account for changes in prices during the survey period and spatial variation in prices.

and rural areas of Iran.[16] Poverty in rural areas were three times higher than in urban areas and increased to 22 percent compared to 7 percent in urban areas. We have also looked at poverty rates in different provinces aggregated into nine regions in 2016 and 2018. Only in four regions there was a statistically significant change in poverty rates. In regions 6, 3 and 9 poverty increased by two-three percentage points,

while in region 7 poverty declined by two percentage points. Poverty in the poorest region 8 remained to be around 33/34 percent.

Bottom 40 percent of population in Iran were benefiting the least from economic growth in 2017/18 and lost the most in 2018/19. Growth incidence curves, reflecting real expenditure per capita growth rates across the whole distribution of a population, are shown in figure 24ab. During the period 2016/17–2017/18, population experienced positive growth in consumption, but consumption of the bottom 40 percent grew less than consumption of the top 60 percent of population. In a similar way, there was a negative consumption growth rate across the whole population on average, but the bottom 40 percent were disproportionally affected. These unequal changes in consumption per capita across

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[16] Comparing welfare across urban and rural areas in Iran should take into account substantial differences in prices across areas. As explained in Atamanov et al. (2016), expenditure aggregate is adjusted for variation in food and rent prices across rural and urban areas within eight aggregated regions. The food spatial deflator is constructed from unit values of purchased food products from the survey. Rent deflator is calculated based on predicted rents for a typical dwelling.

FIGURE 23 • Headcount Poverty Rates at $5.5 2011 PPP by Rural/Urban Areas, 2016-2018

- — Urban — Rural

Source: Authors' calculation using HIESs.
Note: *** difference is statistically significant at 1%, ** at 2% and * at 10%.

TABLE 7: HEADCOUNT POVERTY RATES AT $5.5 2011 PPP BY REGIONS, 2016-2018

	2016	2018
**Region 6 (Tehran, Qom, Alborz)	3%	5%
*Region 7 (Zanjan, Qazvin, Markazi)	7%	5%
Region 4 (Esfahan, Chaharmahal & Bakhtiyari, Khuzestan)	8%	7%
**Region 3 (Hamedan, Kermanshah, Lorestan, Ilam)	6%	8%
Region 2 (E. Azarbayejan, W. Azarbayejan, Ardebil, Kordestan)	8%	9%
Region 5 (Fars, Bushehr, Kohgiluyeh & Boyerahmad)	7%	9%
Region 1 (Gilan, Mazandaran, Golestan, Semnan)	9%	10%
***Region 9 (S. Khorasan, Khorasan-e-Razavi, N. Khorasan)	8%	11%
Region 8 (Yazd, Kerman, Sistan & Baluchestan, Hormozgan)	34%	33%

FIGURE 24 • Growth Incidence Curve Showing Annualized Real Expenditure Per Capita Growth Rates by Percentiles, %
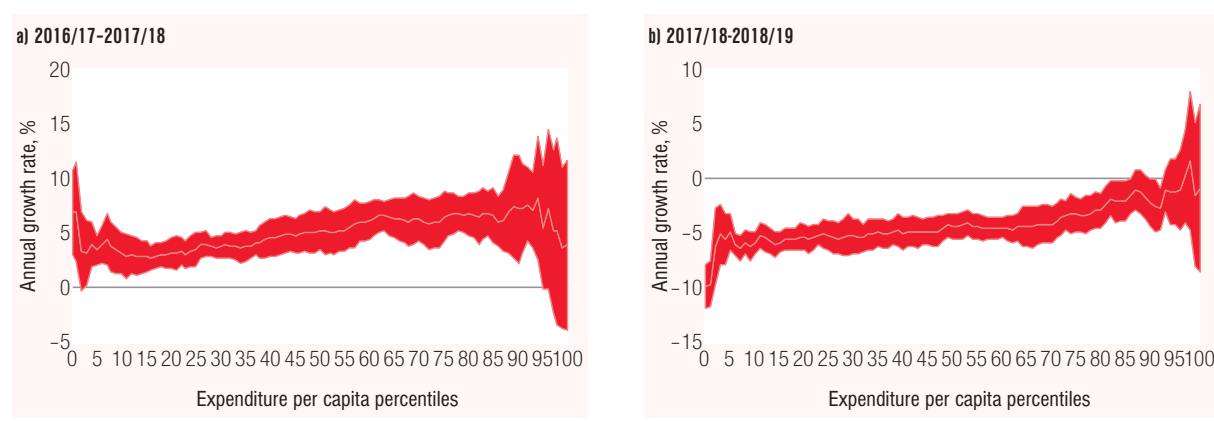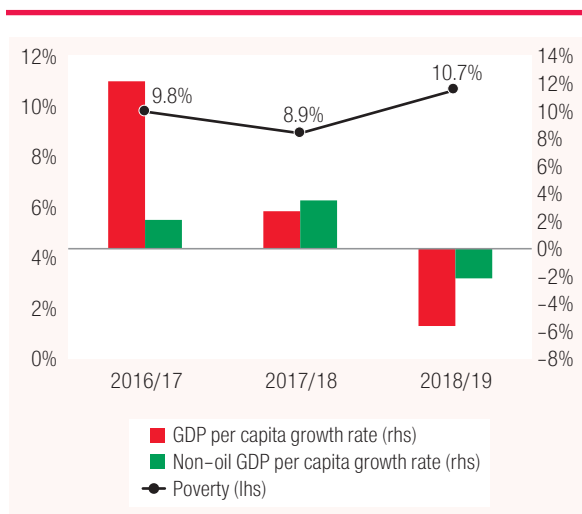

Source: Authors' calculation using HIESs.

the distribution are consistent with growing inequality in the country during 2017/18 and 2018/19.

Explaining Welfare Changes in 2016/17–2018/19

Poverty in Iran broadly followed macroeconomic performance in recent years. Figure 25 combines real growth rates of GDP (including non-oil GDP) in Iran with poverty rates at the $5.50 2011 PPP poverty

FIGURE 25 • GDP Growth Rates and Poverty Rates in Iran, 2009-2016

Source: Authors' calculation using HIESs.

line. Poverty declined slightly in 2017/18 following 3 percent growth in real GDP per capita. Increase in poverty in 2018/19 coincided with a decline in real GDP per capita by 6 percent and non-oil GDP by 2 percent in 2018/19.

In order to better understand the underlying factors behind observed changes in poverty, we decompose income poverty changes. One way of identifying and quantifying the sources of poverty changes is to decompose changes in income poverty into changes in income sources (Azevedo, Minh, and Sanfelice 2012). This will help to identify the key drivers underlying the increase or decline in income poverty and inequality. We select two periods for the analysis: the first is 2016/17–2017/18 when there was a slight poverty reduction, and the second is 2017/18–2018/19 when poverty increased. The total income aggregate consists of labor income, cash transfers, other transfers (scholarships, private transfers, charity and welfare transfers), pensions, property income (interests, capital, land, and rent) and income from products sold from home.[17] As was shown in Figures

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[17] Income aggregate is also spatially deflated to account for difference in prices across different areas. To do spatial adjustment a weighted spatial deflator was constructed by combining rent and food deflators. Shares of rent in the total welfare aggregate were used to construct a weighted deflator for each household.

FIGURE 26 • Sources of income Poverty Changes at $5.5 2011 PPP Poverty Line, 2016/17–2017/18, Percentage Points
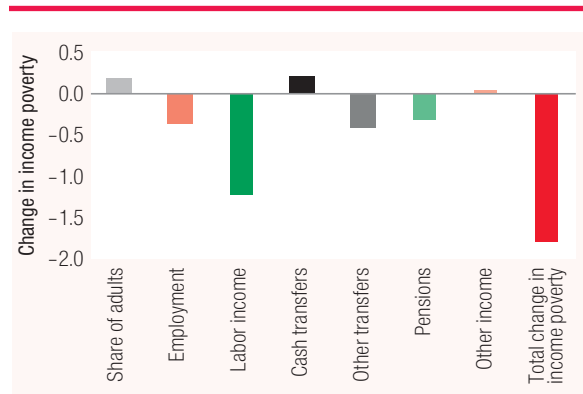
Source: Authors' calculation using HIESs.
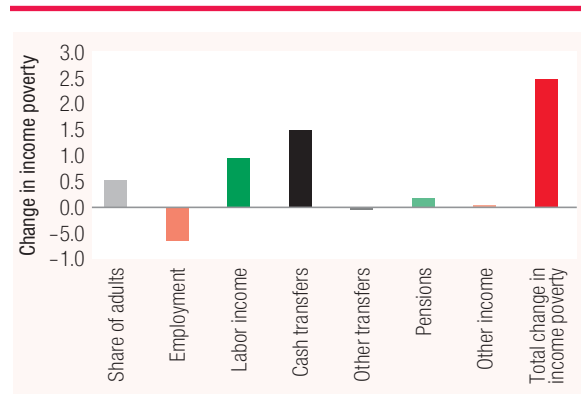*Note*: The levels of income poverty are different from the level of poverty based on expenditure per capita, nevertheless their trends are qualitatively similar. The income welfare aggregate is spatially deflated. Share of adults measures share of working age adults in total household size.

FIGURE 27 • Sources of Income Poverty Changes at $5.5 2011 PPP Poverty Line, 2017/18–2018/19, Percentage Points

Source: Authors' calculation using HIESs.
Note: The levels of income poverty are different from the level of poverty based on expenditure per capita, nevertheless their trends are qualitatively similar. The income welfare aggregate is spatially deflated. Share of adults measures share of working age adults in total household size.

21 and 22 income poverty and inequality are higher than those based on expenditures, but the trends are qualitatively similar.

Labor income was responsible to a large extent for the decline in income poverty in 2016/17–2017/18. Figure 26 shows contributors to income poverty changes in 2016/17–2017/18. In total, income poverty dropped by 1.7 percentage points. Absolute majority from this drop is related to increase in labor income. Pensions, other transfers and employment were also poverty declining sources.

The erosion of cash transfers and lower labor income in real terms were responsible for increase in poverty after 2017/18. Figure 27 shows the main contributors to income poverty change in 2017/18–2019/20. In total, income poverty increased by 2.5 percentage points. About 1.5 percentage points from it come from decline in real value of cash transfers. About 1 percentage point increase was associated with lower labor income. There was a slight declining effect from higher employment, but it was not enough to compensate the negative impact coming from cash transfers and labor income.

Table 8 shows mean values for the most important determinants of income poverty across income per capita quintiles. Employment shares,

measured as a share of adults with non-zero labor income, were growing during the whole period across the whole distribution, explaining its poverty reduction effect. Labor income per capita, in contrast, increased in 2017/18 across all quintiles, but declined in 2018/19 for the whole distribution. Cash transfers were of the main factors behind increase in income poverty in two years. This happens because of two reasons. First, cash transfers were losing real values each year. Second, cash transfers play a very important role among the poorest comprising more than one third of labor income. Therefore, any change in cash transfers affect the poor disproportionally more than more affluent Iranian population.

Reforms of Gasoline Subsidies and Impact on Poverty and Government Revenues[18]

The National Iranian Oil Products Distribution Company (NIOPDC) announced in November 2019

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[18] This section draws heavily from Atamanov, Mostafavi Dehzooei and Wai-Poi (2020), https://openknowledge.worldbank.org/handle/10986/33744.

TABLE 8: SELECTED INCOME CATEGORIES AND EMPLOYMENT INDICATORS BY INCOME PER CAPITA QUINTILES ACROSS YEARS

	Employment share[a]			Labor Income Per Capita			Cash Transfer Per Capita		
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19
poorest	31.2%	31.7%	32.3%	2.5	2.7	2.6	1.2	1.1	0.9
2	36.4%	38.0%	38.7%	5.5	6.0	5.7	1.2	1.1	0.9
3	38.2%	38.5%	38.7%	7.7	8.4	7.8	1.2	1.1	0.9
4	37.4%	38.6%	39.3%	10.0	11.1	10.6	1.2	1.0	0.8
richest	42.1%	42.0%	42.2%	19.2	19.9	19.0	1.1	1.0	0.7

Source: Authors' calculation using HIESs.
Note: [a] Employment calculated in HIES is different from employment calculated based on Labor Force Survey, nevertheless, trends were consistent across both sources.

a 50 percent price increase in petrol prices. The prices increased from 10,000 to 15,000 Iranian rial (IRR) per liter below re-introduced rationed amounts (e.g. 60 liter/month for private cars and 25 liters for motorcycles) and a 200 percent increase to IRR 30,000 per liter for consumption above this. All revenues generated from the price increase are supposedly being exclusively redistributed back to 18 million means-tested households. The price increases led to street protests which quickly became violent.

This section briefly discusses the key results from the analytical work which used the most recently available household income and expenditure survey (HIES) from 2018/2019 to estimate the direct and indirect impacts on poverty, inequality and government revenues from the proposed price increase. Direct impacts measure the effect of a price change on household wellbeing via the consumption of subsidized product. Indirect impacts measure the effect via the consumption of products that are affected indirectly by the change in price of subsidized products.[19]

The analysis consists of the following steps. First, we calculate cost recovery price for gasoline. Second, we update household expenditure from HIES 2018/2019 by applying pre-Covid-19 outbreak projected nominal GDP per capita growth and the poverty line by projected increases in the Consumer Price Index in order to obtain expenditures and the poverty line in 2019/20 prices, from which we obtain a forecasted poverty rate for this period.[20] Third, we analyze the distribution of gasoline expenditures

and quantities consumed across population in Iran. Fourth, we simulate direct and indirect impacts from the increase of gasoline prices on population wellbeing, poverty and inequality using the publicly available SUBSIM Stata package (Araar and Verme 2012). Finally, we assess the impact on government expenditures and revenues after the reform, including the cost of any mitigation measures.

Initial and final prices on gasoline are shown in Table 9. Despite the proposed increase, gasoline prices will remain much lower than our estimated cost recovery price of IRR 66,301 per liter. The cost recovery price for gasoline is estimated as follows. We used U.S. regular all formulations retail gasoline price from November 2019 reported by U.S. Energy Information Administration. We have subtracted from this price federal tax and an average of total state taxes taken from the same website. The

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[19] We estimate the impact of the gasoline price reform on producer prices by combining the Input-Output (I/O) table of Iran for 2011/12 with a price-shifting model of price formation in the productive sectors. Since all petroleum products are aggregated together in the Iranian I/O table, we estimate the price hike in petroleum products to be 57.9 percent.

[20] This is very crude prediction of poverty due to the assumption of a one-to-one relationship between GDP and consumption, but our main goal is to have consumption in the current prices and baseline poverty level to check the impact from the reform. It is the change over the forecast baseline which represents the magnitude of the impact of the reform; the precise levels matter less for our purposes.

TABLE 9: THE PRICE SCHEDULE OF THE GASOLINE IN IRAN, NOVEMBER 2019

		Initial price	Initial subsidy	Final price	Final subsidy
Only car	Below 60 liters per month	10,000	56,301	15,000	51,301
	More than 60 liters		56,301	30,000	36,301
Only motorcycle	Below 25 liters per month	10,000	56,301	15,000	51,301
	More than 25 liters		56,301	30,000	36,301
Both car and motorcycle	Below 85 liters per month	10,000	56,301	15,000	51,301
	More than 85 liters		56,301	30,000	36,301

Source: Authors' compilation.

TABLE 10: INPUTS FOR CALCULATING COST RECOVERY PRICE FOR GASOLINE

Unit	U.S. Regular All Formulations Retail Gasoline Prices	Federal and state taxes	Cost recovery price, USD	Cost recovery price, IRR
Per gallon	2.5980	0.481	2.11740	250,975
Per liter	0.6863	0.127	0.55936	66,301

Source: Authors' calculations using information from U.S. Energy Information Administration (https://www.eia.gov/) and Bonbast website (https://www.bonbast.com/historical).

resulting cost recovery price is about USD 55.936 cents per liter. Applying the average November market exchange rate of IRR 118,530 per USD gives us a cost recovery price about IRR 66,301 per liter (Table 10).

Almost 41 percent of households in Iran do not report expenditure on gasoline which is very much related to the ownership of cars and motorcycles. Poorer households are least likely to own private transportation and to report gasoline expenditure. As a result, the consumption of gasoline is much higher among richer population. The richest 40 percent of population have an average monthly household consumption of gasoline higher than 80 liters, while the poorest 10 percent consume on average about 20 liters per month (Table 11). Due to their higher gasoline consumption, the per capita benefit from subsidies is largest for the rich. For example, the average per capita benefit for the richest 10 percent of people is 10 times higher than the average benefit size for the poorest 10 percent.

In terms of budget shares, gasoline accounted on average for about 2.1 percent of total expenditure in 2019/20. Shares of gasoline expenditure are largest among the middle of the distribution and lowest among both the poorest (who consume the least gasoline) and the richest (whose high gasoline consumption is still only a small share of their overall expenditure). Nonetheless, even the poorest 10 percent spent on average about 1.8 percent of their overall budget on gasoline (Table 11).

Impact on welfare and government revenues

The negative impact on consumption from increased prices of gasoline (direct) and prices of goods and services other than the gasoline sector (indirect) is shown in Table 12. The average loss in welfare from indirect impacts is about 3.4 percent and it is higher than direct impacts for all deciles. Thus, due to the indirect effects, the poorest 10 percent will lose more than twice as much as they lose due to direct effects. For the richest, direct and indirect impacts are closer in the magnitude of impact on overall consumption per capita. As a result of reduced consumption, overall poverty is expected to increase by 2.9 percentage points, while inequality, measured by Gini index, is expected to increase by 0.5 points (Table 13).

TABLE 11: EXPENDITURES, CONSUMPTION OF GASOLINE AND PER CAPITA BENEFITS FROM GASOLINE SUBSIDIES IN IRAN 2019/20 BY DECILE, FORECASTED

	Daily expenditure per capita	Quantity, liters per month	Share of gasoline expenditure in total budget	Daily per capita benefit through gasoline subsidies
Poorest	1,476	20	1.8	8,311
2	2,493	31	2.0	14,034
3	3,482	41	2.3	19,604
4	4,098	47	2.3	23,071
5	5,270	57	2.5	29,669
6	6,190	65	2.5	34,850
7	7,349	74	2.4	41,378
8	8,935	84	2.4	50,304
9	10,982	98	2.2	61,828
Richest	15,487	116	1.6	87,194
Total	6,576	68	2.1	37,022

Source: Forecasted numbers from HIES 2018/19 are used.

TABLE 12: THE INDIRECT AND DIRECT IMPACT ON WELL-BEING FROM INCREASE IN GASOLINE PRICES IN IRAN 2019/20 BY DECILES, %

	Direct impact	Indirect	Ratio, indirect over direct
Poorest	−2.0%	−5.2%	2.7
2	−2.2%	−4.6%	2.1
3	−2.6%	−4.3%	1.6
4	−2.6%	−4.2%	1.6
5	−3.0%	−3.9%	1.3
6	−3.0%	−3.7%	1.2
7	−3.1%	−3.6%	1.1
8	−3.2%	−3.4%	1.1
9	−3.1%	−3.1%	1.0
Richest	−2.4%	−2.7%	1.1
Total	−2.8%	−3.4%	1.2

Source: Authors' calculation using forecasted HIES 2018/2019.

Overall annual budget savings from the proposed subsidies reform will be around IRR 439 trillion (Table 13). The Government of Iran started to distribute cash transfers as a compensatory measure immediately after the reform. The plan is to distribute them to the poorest 18 million households.

The monthly size of the benefit depends on the household size and ranges from 550,000 IRR for one-member household to 2,050,000 IRR for 5 member households and above. We assumed perfect targeting for this program, which will approximately cover the bottom 77 percent of total population in Iran and will

TABLE 13: DIRECT AND INDIRECT IMPACT ON POVERTY AND ANNUAL GOVERNMENT REVENUES FROM INCREASE IN GASOLINE PRICES

	Pre-Reform, forecasted numbers for 2019/20	Post-Reform	Change
Poverty (%)	11.2	14.2	2.9
Inequality (%)	39.7	40.3	0.5
Subsidies (in trillions IRR)	1,170	731	–439*
Transfers (in trillions IRR)			
Universal to bring poverty to pre-reform level (example)		300	300
Targeted at bottom 77 percent of population (government proposed)		338	338

Source: Forecasted numbers based on HIES 2018/19.
Note: * negative numbers for subsidies mean reduction of government expenditure. Price elasticity for gasoline was set to be equal to –0.15 and it is used to calculate post-reform amount of subsidies. Inequality is based on welfare aggregate without spatial adjustment.

TABLE 14: RATIO OF CONSUMPTION PER CAPITA AFTER REFORM AND AFTER PROPOSED GOVERNMENT SCHEME TO THE PRE-REFORM CONSUMPTION PER CAPITA IRAN 2019/20 BY DECILES

	Daily expenditure per capita, pre-reform (1)	Daily expenditure per capita after reform, (2/1)	Daily expenditure per capita after reform and proposed Government scheme (3/1)
Poorest	100%	93%	108%
2	100%	93%	104%
3	100%	93%	102%
4	100%	93%	101%
5	100%	93%	100%
6	100%	93%	99%
7	100%	93%	98%
8	100%	93%	96%
9	100%	94%	94%
Richest	100%	95%	95%
Total	100%	94%	97%

Source: Forecasted numbers from HIES 2018/19 are used.

costs about IRR 338 trillion or 77 percent of the total subsidy savings.[21]

Planned Government mitigating scheme (if perfectly targeted) will fully compensate population from the bottom 50 percent for the direct and indirect impacts from increased gasoline prices as shown in Table 14. In particular, population in the bottom decile will have consumption per capita 8 percent higher than the pre-reform level after receiving the transfers.

This would reduce poverty to 9.7 percent which is lower than the pre-reform level. Inequality, measured by Gini index, would also fall below the pre-reform level – 38.1.

[21] Merely maintaining poverty at the pre-reform levels with the use of universal cash transfers and lower benefit levels would cost less—IRR 300 trillion—and will consume 68 percent of the overall savings (Table 13).

BOX 1: POTENTIAL EFFECTS OF THE CORONAVIRUS (COVID-19) OUTBREAK ON HOUSEHOLD WELFARE AND POVERTY IN IRAN

Iran has been heavily affected by the Coronavirus (COVID-19) pandemic, with close to 180 thousand cases and 8 thousand deaths in the country by June 11, 2020. We conducted a partial-equilibrium analysis to simulate the first-order effects of the shock on various sources of household income using micro-level data from the 2018 Household Income and Expenditure Survey (HIES).

In our analysis we focused on the impacts running primarily through labor income, and in a second stage, we considered some sources of non-labor income. Labor incomes may suffer due to restrictions to work or loss of earnings and working hours associated with declines in aggregate demand, direct illness, caring needs within the household, quarantines or social distancing behaviors. The impacts are likely to be starker in certain sectors such as construction, retail, transport, hotels and restaurants, communications, real estate, administrative and support activities, entertainment and art. Moreover, within sectors, individuals gaining income from self-employment are more vulnerable to lay-offs or income reductions than those with a salary. On the other hand, we expect that the income of those individuals working in the public sector to be much less volatile though the pandemic. Remittances, which typically increase during a crisis, will most likely be a limited source of consumption smoothing this time as the effects of the pandemic are felt globally.

Following the above discussion, we model a reduction in incomes according to the income type and sector of employment. Table A.1 displays the parameters; for instance, the post-shock self-employment income (general) is assumed to decline to 80% of the pre-shock annual level. We could think of this as a reduction in this type of income for two-and-a-half months. A parameter of 1 indicates no change in the income source. In addition to these changes by income source, we also model a differential effect by province of residence to account for the fact that some regions of the country have been more heavily affected by the disease than others.

TABLE A.1: PARAMETERS BY TYPE OF INCOME AND ECONOMIC SECTOR OF OCCUPATION

Income source	Parameter – Scenario A % of initial income (months without income)	Parameter – Scenario B % of initial income (months without income)
Self-employment general	0.80 (2.4 months)	
Self-employment selected sectors*	0.50 (6 months)	
Salary – public sector	1 (no change)	
Salary – private sector general	0.90 (1.2 months)	
Salary-private sector selected sectors *	0.70 (3.6 months)	
Household transfers	–	0.90 (1.2 months)
Pensions	–	1 (no change)
Social assistance	–	1 (no change)

Note: *Selected sectors are construction; retail; transport; hotels and restaurants; communications; real estate; administrative and support activities; entertainment and art; other services.

Before simulation, we checked where the most vulnerable people are across the welfare distribution. 60 percent of workers in the poorest 20 percent of the population are employed in the sectors expected to be affected the most, a large proportion of them because they work in the construction sector. The poorer are also less likely to work in the public sector and rely more on private earnings, while those in the middle of the distribution rely more on self-employment income.

Under the simulation analysis we found that the labor income shock (scenario A) results in an average reduction of 14% in total household incomes, and in a further 2 percentage points fall when incorporating additional shock to transfers (scenario B). There is a marginally higher reduction in total income for households in the poorest deciles in scenario B, because transfer income play a more important role for the poorest (Figure A1).
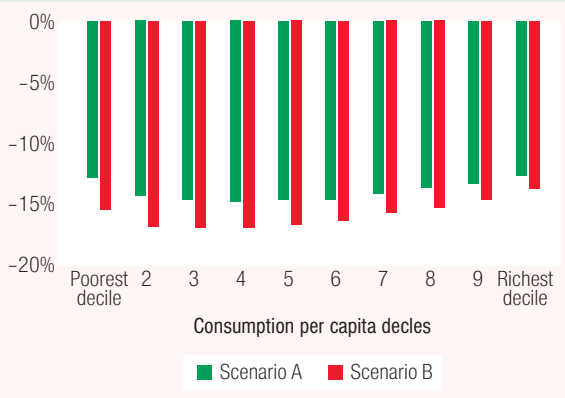
We then apply this income change to the welfare aggregates used to estimate poverty: total consumption per capita per day (in 2011 PPP dollars) and total income per capita per day (in 2011 PPP dollars), and calculate the increase in the poverty rate under each scenario. We follow Atamanov et al. (2016) in using the $5.5 2011 PPP dollars per person per day line as the poverty threshold. These income losses are estimated to increase poverty by 7 percentage points from the baseline under scenario A, and a further 1.5 percentage points under scenario B (Figure A2). Results using income as the welfare measure are of similar magnitudes.

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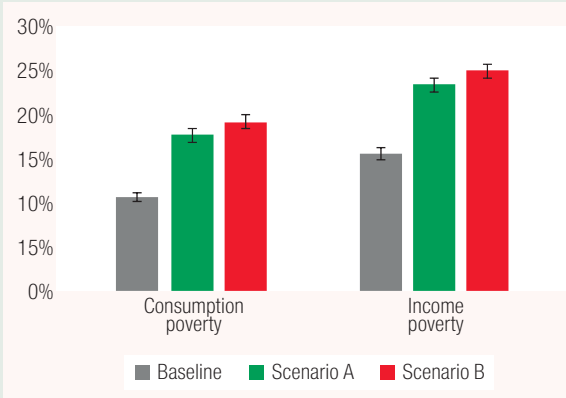
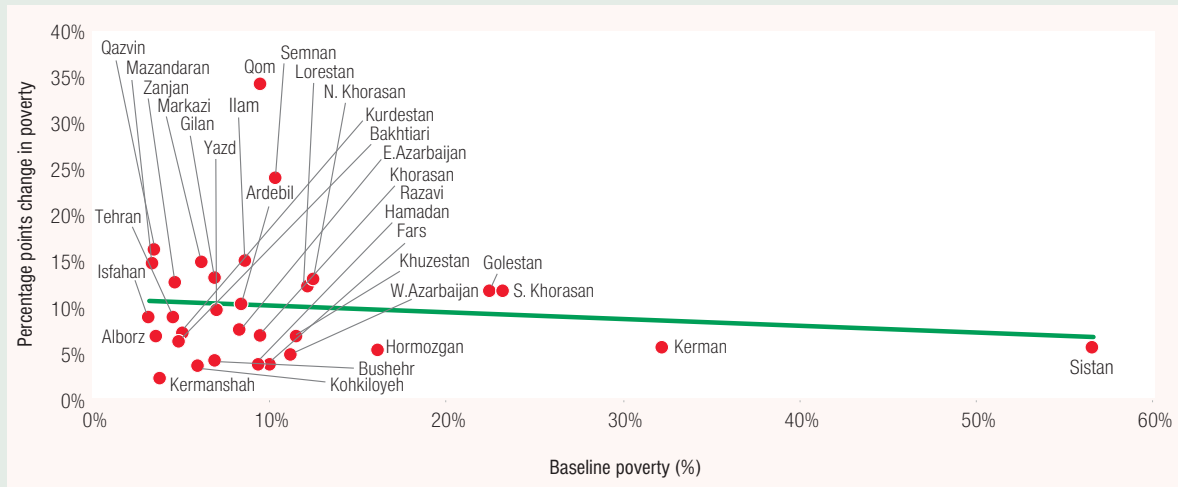FIGURE A.1 • Income Reduction across Consumption Per Capita Deciles (%)

Source: Authors' calculations based on HIES 2018/19.

FIGURE A.2 • Simulated Poverty Impact under Scenarios A and B. Headcount Poverty Rates at $5.5 2011 PPP

Source: Authors' calculations based on HIES 2018/19.

FIGURE A.3 • Change in Poverty by Initial Poverty Rate by Province

Source: Authors' calculations based on HIES 2018/19.

There is considerable subnational variation in the simulated poverty impacts (Figure A3), and these depend on the incidence of COVID-19 as well as on the degree to which households rely on the most affected types of incomes in each province.

Finally, we estimate that the monthly per capita cash transfer required to bring poverty to the pre-shock level would be of about 437 thousand IRR (scenario A), or 507 thousand IRR (scenario B). The overall costs of such transfer program would depend substantially on the capacity for targeting the transfer; under perfect targeting the cost of mitigating measures would be reduced by almost 5 times (scenario A), or by 4 times (scenario B).[a]

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[a] Our calculations are based on welfare aggregate in 2018/19 prices, however, due to high inflation, the real costs of the program in 2019/20 can be much higher as well the size of the benefit.

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