

# IRAN ECONOMIC MONITOR

## SUSTAINING GROWTH: THE CHALLENGE OF JOB CREATION

Fall 2017



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## P R E F A C E

The Iran Economic Monitor provides an update on key economic developments and policies over the past six months. 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 Iran Economic Monitor is a product of the World Bank's Global Practice for Macroeconomics, Trade and Investment team. This fourth issue was prepared by Kamer Karakurum-Ozdemir (Senior Economist, Task Team Leader) and Majid Kazemi (Economist), under the general guidance of Kevin Carey (Global Practice Manager) and Saroj Kumar Jha (Country Director). The Special Focus was prepared by Jumana Alaref (Social Protection Economist) and Johannes Koettl (Senior Economist, GSP05), under the guidance of Hana Brixi (Practice Manager) and was based on a report authored by Hadi Salehi-Esfahani (University of Illinois at Urbana-Champaign). Janet Minatelli (Senior Country Officer) provided helpful comments. Muna Abeid Salim (Senior Program Assistant) formatted the report. The team is grateful to the Government of Iran for its contributions to this publication.

The findings, interpretations, and conclusions expressed in this Monitor are those of World Bank staff and do not necessarily reflect the views of the Executive Board of the World Bank or the governments they represent.

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## EXECUTIVE SUMMARY

***Growth performance in 2016 exceeded expectations based on the bounce back in oil production and exports.*** The economy registered a record growth rate of 13.4 percent according to the new GDP data published by the Central Bank of Iran.<sup>1</sup> While Iran's economy is relatively diversified for a resource-rich country, oil proceeds still play a crucial role in public finances and external accounts. Iran's ability to increase production in 2016, despite the cuts agreed to by the rest of the OPEC members helped bring production near its pre-sanctions levels. The surge in exports led to an improvement in the current account surplus, to 3.9 percent of GDP in 2016, as growth in imports remained stagnant. Increased oil production and exports brought an increase in government revenues, however, the improvement was not enough to offset the widening expenditures; the fiscal deficit grew from 1.7 percent in 2015 to an estimated 2.2 percent in 2016. Creating fiscal space for growth will be important especially in view of the expected burden from securitization of government arrears and growing pension system liabilities. Iran managed to achieve single digit inflation in 2016, but inflationary pressures resurfaced towards the end of the year and in early 2017, as liquidity rose and the Iranian Rial continued to depreciate. Job creation remained limited.

***In the medium-term, the growth rates are expected to revert to an average of 4 percent, reflecting modest reintegration with the global economy in banking, trade and investment.*** Despite recent signals from European banks for engaging with the Iranian banks, FDI inflows to Iran remain restrained. At the same time, recent developments suggest that the non-oil sector and private investments are likely to play a bigger role in the next few years, bringing growth to an average of 4 percent in 2018-19. This positive growth outlook still hinges on the assumption that some of the agreements between Iran and major foreign companies in the oil and gas and other key sectors, including manufacturing, will materialize. This would create renewed confidence, validating the positive expectations generated in the immediate aftermath of JCPOA implementation in January 2016 and leading to gradually improving medium- to long-term growth dynamics as potential output starts to rise.

***There are significant downside risks, both domestic and external, to this moderate medium-term outlook.*** Re-election of President Rouhani in May 2017 for a second four-year term provides the conditions for continuity in reform efforts, despite a significant change in the members of his government. Yet, concrete measures are yet to be taken to address the priority areas in the sixth 5-year development plan. Sustainability of growth hinges on increased investment in the economy, that will modernize and increase production capacity in the oil and particularly gas sectors and most importantly boost non-hydrocarbon sectors. Inclusiveness of growth through creating jobs for all segments of the society and through creating a level-playing field for existing and new firms will require improving the business environment and the efficiency of labor markets. The major external risk in the near future is the prolonged discussions around the future of the JCPOA and the US policy towards new sanctions on Iran, which directly influence investor confidence and lead to delays in actual investment inflows to Iran. Furthermore, lower than projected oil prices would put pressure on government revenues and undermine growth.

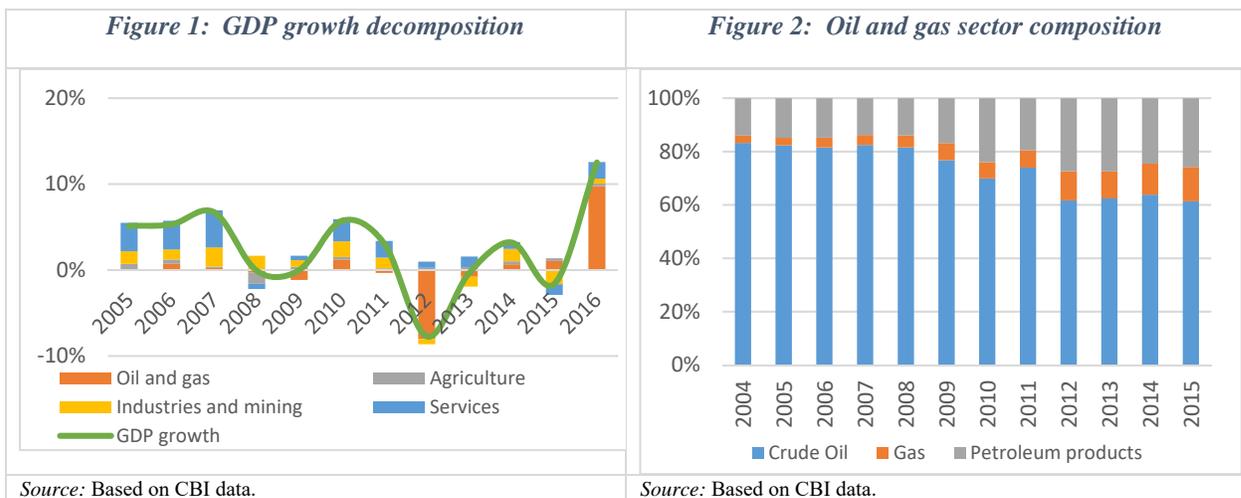
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<sup>1</sup> The years in this note refer to Iranian calendar year, which runs from March 21 to March 20 of the following Gregorian year. For example, 2016Q1 in this text refers to the first quarter of the Iranian calendar year 1395 (April-June).

## I. RECENT ECONOMIC AND POLICY DEVELOPMENTS

### A. Output and Demand

**GDP growth reached 13.4 percent (at market prices) in 2016.**<sup>2</sup> Headline economic growth surpassed initial estimates and reached a 25-year high in 2016 mainly due to a quick recovery in oil production (Figure 1)<sup>3</sup> The impressive growth outcome occurred after the economy had grown at a negative rate not only in real terms but also in nominal terms a year earlier due to the lingering effects and financial sector disruption, as well as the cumulative effect of sanctions. Growth picked up through 2016; the second half of 2016 was especially strong, with y-o-y growth of more than 14.8 percent (ending March 2017) as oil production accelerated. Non-oil growth recovered to its highest rate in five years, from a 3.1 percent contraction in 2015 to 3.3 percent growth in 2016 as both services and overall non-oil industry sector growth turned positive. In 2016, real GDP rose 5 percent above the historical peak of 2011 while real non-oil GDP reached marginally above its highest level in 2014.



**As crude oil reaches its current production ceiling, Iran has started expansion of gas production and exports.** The country's real oil and gas value added grew by an impressive 62 percent in real terms during 2016. OPEC reports<sup>4</sup> indicate that in August 2017 crude oil production reached 3.83 mbpd, up from 2.8 mbpd in 2015. The authorities plan to increase production to 4.5 mbpd in the next five years based on the sixth Five-Year Development Plan (FYDP) goal. Two factors are expected to limit further expansion of crude oil production. First, production is almost at full capacity levels and investment in future production capacity increases does not appear to be taking place yet, despite the various initial agreements with large foreign investors. The second factor is the ongoing OPEC+ (OPEC plus

<sup>2</sup> 12.5 percent measured at factor cost.

<sup>3</sup> The CBI has published a new base year (2011) national accounts series. This has resulted in some revisions to growth rates from the previous version of this report. The old series reported growth rates of 5.4 and 9.2 percent for Q1 and Q2 2016 whereas the new series growth rates are 7.5 and 12.9 percent for those two periods.

<sup>4</sup> OPEC Monthly Oil Markets Report, September 2017.  
[http://www.opec.org/opec\\_web/static\\_files\\_project/media/downloads/publications/MOMR%20September%202017.pdf](http://www.opec.org/opec_web/static_files_project/media/downloads/publications/MOMR%20September%202017.pdf)

cooperating non-members) agreement which is expected to be extended beyond the current expiration of March 2018. In this environment, the government has recently focused on expansion of gas production. Based on BP's recent annual report,<sup>5</sup> Iran now possesses the biggest share of officially proven gas reserves in the world (18 percent) overtaking Russia (17.3 percent). The gas production's share in the overall oil and gas sector has steadily increased in the past decade (Figure 2). Until recently, the majority of the increase in production was absorbed by the domestic market.<sup>6</sup> However, the National Gas Company has announced<sup>7</sup> that Iran's gas exports grew by around 64 percent between March to August 2017, mainly due to initial gas exports to Iraq, which are planned to increase significantly in the coming years.

***Non-oil GDP growth has not been adequate to dent unemployment.*** While non-oil growth recovered in 2016, this followed a large contraction in the previous year and fell short of improving the long-standing unemployment problem. In the 6 years up to 2011, non-oil value added had grown annually by around 5 percent on average but the growth rate declined to less than 1 percent per annum between 2012 to 2016. Amongst the different components of the non-oil sector, industry and mining contributed the least, which reflects the productivity-dampening effect of sanctions and constraints on investment in these sectors. Between 2005 to 2011 almost 2 percent of overall annual non-oil growth was attributed to the industries and mining sector. Since 2011, the sector's contribution has fallen to -0.34 percent. As a result, in 2016 this component of non-oil GDP was almost the same size as it was 5 years ago. Unemployment is also related to the sector composition of growth (see Special Focus chapter).

***The biggest contributor to the weak performance of the industrial sector has been the construction sector, which is highly cyclical due to the dynamics in the financial sector and public investment.*** The construction sector has remained in recession in the past 5 years, leading to a decline in its value added to only 62 percent of what it was in 2011. The downturn in this sector can mainly be associated with the housing market problems where a decline in the speculative demand amidst political and economic uncertainty have weighed in on growth. Furthermore, the increase in the years prior to 2011 had been especially strong due to the initiation of the Mehr housing program which alongside high real interest rates in the banking sector since 2013 redirected money away from the housing sector towards bank deposits. In addition, the lack of investment in the construction sector has occurred not only through a decline in private investment but also by an equally sized negative growth (-7 percent) in government investment in 2016 as the government tried to curtail the fiscal deficit.

***In 2016, the surge in oil exports overwhelmingly led growth on the demand side, while investment and consumption demand were yet to fully recover.*** In 2016, total exports grew by a staggering 41.3 percent as a result of the increase in oil exports following the sanctions relief being implemented from January 2016. Growth in imports of around 6.1 percent was substantially more moderate and failed to offset the large 20.2 percent contraction in 2015. While weak investment performance has been a key factor behind the moderate increase in imports, policy measures also played a role. For example, according to the high-level directives issued aimed at reducing "import dependence" since January 2017, the online portal of the Ministry of Industries website that was previously used to file car import certificates has stopped accepting new requests until further notice.<sup>8</sup> Consumption demand growth, though recovering to around 3.8 percent, has also not been enough to move real consumption

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<sup>5</sup> See, BP Statistical Review 2017.

<sup>6</sup> The increase in gas exports is especially significant despite the halting of gas imports by Turkmenistan after a pricing dispute in January 2017.

<sup>7</sup> <http://www.irna.ir/fa/News/82657279>

<sup>8</sup> <https://financialtribune.com/articles/auto/56723/iran-halts-car-imports>

expenditures beyond the recent years' peak levels. This emphasizes the uneven nature of the economy's recovery in 2016 which is yet to be adequately addressed.

**Box 1: CBI's new national accounts series**

Since the last issue of the Iran Economic Monitor, IEM (Spring 2017), the CBI released a new series of national accounts data based on the new 2011 base year. The tables and data in this issue of the IEM use the new series. The new series is currently available for the 2004-2016 Iranian fiscal years. The main difference in the series has been the base year change from 2004 to 2011 based on updated relative weight of different sectors in overall real GDP. The new weights reflect a more up to date price of basket of consumer and producer used goods and services. While this has clearly impacted the real GDP growth rates, changes in nominal values reflects use of additional data and newer methodologies used in the calculation of national accounts data. The previous data series covered the years 1959 to 2014, with the data for 2011-2014 being released as preliminary figures.<sup>9</sup>

**Figure B1: Real GDP growth based on the old and new series (2005-2015)**



Source: CBI

The new series introduced adjustments to the nominal values in all major subcategories. The below table illustrates that apart from services which has seen marginal downward adjustments, the majority of the revisions to the other components and overall GDP are positive for other main GDP components on the production side:

**Table B1.1: Gap between the nominal GDP components of the two series (production side)**

% adjustment compared to old series	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Oil and Gas	0.0	-0.1	0.2	2.2	4.1	8.9	11.1	-10.7	-13.7	5.1	-6.9
Agriculture	0.0	0.0	0.0	0.5	-0.6	-0.4	0.7	-5.1	0.2	14.8	11.6
Industries and Mines	17.8	17.4	16.5	15.5	14.8	14.6	15.4	24.6	23.1	19.6	22.0
Services	-0.3	-0.5	-0.5	0.0	-0.5	-0.5	-0.6	-0.9	-1.8	-2.6	-1.1
<b>Total GDP</b>	<b>3.5</b>	<b>3.0</b>	<b>3.0</b>	<b>3.7</b>	<b>3.8</b>	<b>4.4</b>	<b>5.0</b>	<b>1.8</b>	<b>2.7</b>	<b>5.4</b>	<b>4.4</b>

Source: CBI

<sup>9</sup> The only other data point that was reported based on the old base year was overall GDP growth for 2015.

The group with the highest adjustments has been the industries and mines sector with adjustments of more than 14 percent of the old series for each year. This might to some extent reflect a more accurate methodology of factoring in of the informal sector in the 2011 base year data.

On the expenditure side, the largest downward adjustments for the outer years are reported for net exports and consumption which suggest a larger impact of the challenges in these key components during the sanctions period. However, these downward revisions have been more than offset by increases in inventory values.

*Table B1.2: Gap between the nominal GDP components of the two series (expenditure side)*

% adjustment compared to old series	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Consumption	-0.6	-0.5	-0.6	-0.4	-0.3	-0.5	-0.6	-0.6	-1.4	-4.0	-3.7
GFCF	3.0	2.4	2.3	4.5	5.0	4.2	3.3	3.9	5.4	-0.3	3.9
Inventories	23.5	38.9	35.1	30.0	34.4	46.6	45.2	16.8	16.4	167.1	100.2
Net Exports	0.0	0.4	0.8	2.6	3.4	11.5	4.3	-9.9	-44.2	-52.9	-66.8

Source: CBI

**Gross capital formation continued to contract for the sixth consecutive year as the impulse from sanctions relief was insufficient to overcome structural constraints on investment.** Despite great anticipations for an influx of cash and investment into the economy after the JCPOA, actual investment failed to meaningfully kick-start in 2016 due to political uncertainties including the presidential elections in Iran and the US and the persistent effects of previous boom-bust cycles in investment. Total investment declined by around 3.7 percent (declining to 20 percent as a share of GDP) as a result of contractions in total construction investments and public investment in machinery. However, more recently there has been more positive signals for an increase in investment expenditure. In July, the country signed a US\$4.8 billion deal with an energy consortium led by the French company Total for developing the South Pars gas field, which was followed by an agreement of Euros 1 billion with Austria's Oberbank for financing of export credit lines. Other lines of credit agreements were also signed with Belgium, China, Denmark, Germany, Italy, Korea and Russia for projects especially in infrastructure and energy sectors<sup>10</sup> These recent agreements, if fully operationalized, can jump-start the growth of the non-oil sectors contributing towards a more sustainable growth in the coming years.

<sup>10</sup> <https://financialtribune.com/articles/economy-business-and-markets/72825/iran-austria-banks-finalize-1-billion-finance-deal>, <https://financialtribune.com/articles/economy-business-and-markets/72826/iran-signs-500-million-finance-deal-with-denmark>, <https://www.reuters.com/article/us-sk-e-c-iran/south-koreas-sk-ec-signs-1-6-billion-deal-to-modernize-iran-oil-refinery-idUSKBN1AM076>, <https://financialtribune.com/articles/economy-business-and-markets/71089/framework-agreement-signed-for-s-korean-finance>, [http://www.koreatimes.co.kr/www/news/biz/2016/06/488\\_203988.html](http://www.koreatimes.co.kr/www/news/biz/2016/06/488_203988.html)

*Table 1: Islamic Republic of Iran: Selected Macroeconomic Indicators (2014-17) \**

	(% change unless stated otherwise)			
	2014	2015	2016E	2017F
Real GDP, at factor cost (2011=100)	3.2	-1.6	12.5	3.5
Agriculture	5.4	4.6	4.2	4
Industry**	5.1	-1.4	24.7	4.6
Services	1.4	-2.3	3.6	2.3
Real non-oil GDP, at factor cost (2011=100)	3.0	-3.1	3.3	n.a.
Real GDP, at market prices (2011=100)	4.6	-1.3	13.4	3.6
Private Consumption	2.0	-3.5	3.8	3.4
Government Consumption	4.2	4.8	3.7	3.8
Gross Fixed Capital Investment	7.8	-12	-3.7	1.7
Exports, Goods and Services	7.2	12.1	41.3	7.1
Imports, Goods and Services	-4.5	-20.2	6.1	6.0
Prices				
Inflation (Consumer Price Index)	15.6	11.9	9.0	11.5
Current Account Balance (% of GDP)	3.1	2.3	3.9	4.1
Fiscal Balance (% of GDP)	-1.1	-1.7	-2.2	-2.2

\* Iranian calendar years, running from March 21<sup>st</sup> to March 20<sup>th</sup> of the following year.

\*\*Industry includes the oil and gas sector.

Sources: Government data and World Bank staff calculations.

## B. Jobs and Labor Market

*The unemployment rate declined to 11.7 percent in the second quarter of 2017, following a rising trend in 2015-16.*<sup>11</sup> The recent easing in the unemployment rate took place despite an increase in the labor force participation rate (LFPR) to 41 percent (a rate last seen in 2007) from 40.4 percent in the same period of 2016. In 2016, while the adult labor force (15 years and older) grew by 1.1 million, the economy managed to generate about 0.6 million net additional jobs. As a result, 470,000 people joined the ranks of the unemployed and the rate of unemployment rose noticeably from 11.5 percent in 2014Q4 to 12.5 percent in 2016Q4 and even edged up to 12.6 percent in the first quarter of 2017, before declining to 11.7 percent in the second quarter. The government has implemented a series of measures to improve participation and job creation, including improving applied skills of new university graduates and social security contribution waivers for businesses employing new graduates.

*Despite the recent increases, labor force participation (LFP) rates remain low in Iran, particularly for women and youth.* Disaggregation of labor force by gender and age reveals stark differences. Almost 64 percent of men aged 10+ participated in the labor market in 2016, while the participation rate for women was only 15 percent, lower than the already low MENA average at 20 percent. Between 2005 and 2013, the LFP rates for both genders, particularly amongst youth, witnessed a dramatic decline. Women aged 25-29 participate the most in the labor market when compared to other age groups. However, the drop in women's LFP rates prior to 2013 affected all age groups and contrary to the case of men, it was much more pronounced in the middle of the age distribution. The drop for both genders

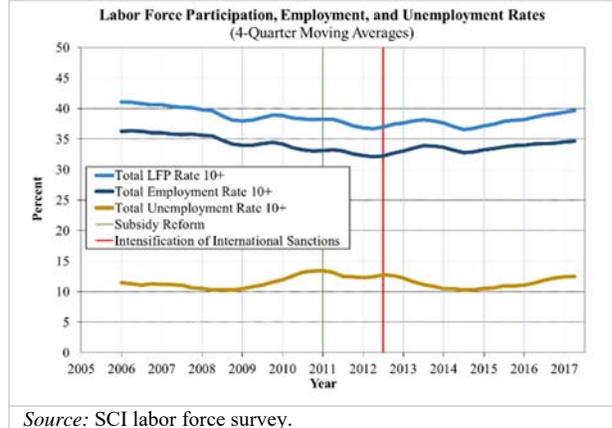
<sup>11</sup> The labor force in Iran is the population 10 years of age or above.

seems to have halted in the last few years, although it did not recover to its 2005 levels. In addition, the share of adults who are not in employment, education or training (NEET) is high among youth, especially among women. More than a third of youth (aged 15-24) were not in employment, education or training in 2013.

***The profile of LFP rates for men and women also differs in rural and urban settings.*** The LFP rates for men aged 30-44 have remained stable over the years in both urban and rural settings. For women, however, the decline in participation between 2005 and 2014 is quite large in rural areas. In fact, in 2005, a third of female employment in the economy was in agricultural activities. This share declined to less than 22 percent in the mid-2010s.

***While the demographic window of opportunity remains open, increasing labor force participation will be critical to ensure Iran is prepared for the aging challenge ahead.*** Due to the remarkable drop in fertility, the age-dependency ratio<sup>12</sup> was more than halved between 1980 and early 2000s. The ratio will remain at this low level for the next three decades, when it will start to climb back up – due to increasing aging of the population. If current trends continue, Iran will start to age drastically by 2050 with the share of elderly (65+) reaching a quarter of the total population. Only a limited portion of the working age population joins the labor force in Iran, hence, until now it has not been able to take full advantage of the “demographic window of opportunity.” It will be critical to raise labor force participation rates in the coming years not only to propel economic growth but also to prepare for the aging challenge ahead. Removing barriers to labor force participation, addressing labor market rigidities, and improving relevance of skills are potentially critical in taking full advantage of the demographic window of opportunity. The special focus section below provides a more detailed look at the recent trends in the labor markets and explores possible explanations for the weak link between economic growth and job creation.

**Figure 3: Labor force participation, employment ratio and unemployment rate**



<sup>12</sup> Age dependency ratio is the ratio of dependents--people younger than 15 or older than 64 - to the working-age population - those ages 15-64. Data are shown as the proportion of dependents per 100 working-age population.

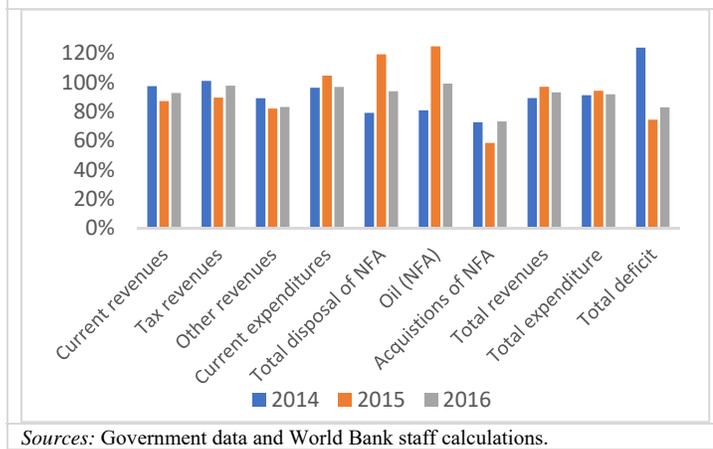
## C. Public Finances

***The central government budget deficit, as a share of GDP, widened in 2016, as the pace of expenditure growth more than offset the growth in revenues.<sup>13</sup>***

The government deficit increased from 1.7 percent in 2015 to around 2.2 percent in 2016. The increase is significant especially in light of the double-digit growth of the GDP in 2016 as well as declining inflation in 2016. Government revenues and expenditures increased by 22.6 and 25.6 percent<sup>14</sup> respectively, significantly higher than the previous two years. Consequently, the government revenues as a share of GDP reached 16.7 percent the highest

level since 2011 when global oil prices were at their historical peak. The biggest contributor to the rise in 2016 revenues was tax revenues, accounting for more than half of total growth in government income. The increase in tax revenues seems to be mainly associated with better enforcement, improved monitoring and use of more efficient tools in determining tax policy and collection. No significant change in tax rates such as VAT and income taxes were implemented in 2016. Nevertheless, actual total revenues fell short of the amount envisaged in the budget (by 7 percent) while oil and tax revenues were very close to their targeted amounts (Figure 4). In fact, tax revenues increased to 7.7 percent as a share of GDP which is the highest share in the past 25 years.

Figure 4: Actual performance compared to approved budget



***Fiscal performance did not improve in the first quarter of 2017 as current expenditures have increasingly dominated government spending.*** On the expenditure side, the authorities managed to keep spending below the initial approved budget (actual total expenditure was 92 percent of the approved budget amount). Nevertheless, the operating balance (current revenues net of current expenditures) has surpassed the projected level, which partly highlight the challenges the government has faced compared to the previous years. The current expenditure pressure has come at the expense of capital expenditures, which has consistently fallen short of target levels. Data for the first quarter of 2017 show that current revenues declined by 5 percent compared to the same period in 2016, while current expenditures increased by 23 percent which has resulted in the widening of the overall balance. At the same time, the share of capital expenditures, while above the 2015 levels, remains lower than the same period in 2014 despite the removal of sanctions.

***The share of oil revenues in the first quarter of 2017 edged up but volatile oil prices are expected to put further pressure on the government budget.*** Oil revenues as a share of total government revenues continued to reduce and stood at 33.5 percent in 2016. However, the increase in oil exports in 2016 is also expected to lead to an increasing share of oil revenues in total government revenues in 2017. In the first four months of 2017, oil revenues increased by almost 150 percent compared to the same quarter in

<sup>13</sup> For an overview of the allocation of oil and gas revenues see the Spring 2016 issue of the Iran Economic Monitor.

<sup>14</sup> Government revenues is defined here as the sum of current revenues (tax and other) and disposal of nonfinancial assets. Similarly, total expenditures is the sum of current expenditures and development expenditures as defined by the CBI.

2016. This increase has pushed up the share of oil in government revenues back to almost 40 percent (roughly double the share a year before). World oil prices remained sluggish until October 2017, constraining the path of recovery.

**The government continued the securitization of public debt and arrears in 2016 and 2017.** The government has signaled its continued commitment to honoring its debt and arrears by expanding its new debt issuance program in 2017. Debt instruments have become more diverse and instruments including treasury bills, participation bills and Islamic bonds (Sukuk) have been more extensively issued. In 2016 alone, the government sales of Islamic financial instruments more than quintupled reaching 538 trillion rials (equivalent to US\$17.1 billion). This policy is helpful in allowing the lenders to the government to liquidate their receivables. It would especially help the producers, who have long suffered from lack of cash flows after participating in government projects, to be able to reinvest the proceedings in new productive activities. This sudden expansion has however highlighted the need for a more comprehensive capital market mechanism, strong public debt management and better coordination with the CBI's efforts in banking sector reform in reducing lending rates. The government reports suggest that it has continued to pay principle and interests of all bonds issued and has had no additional arrears. This dynamic was also essential to banks' recapitalization and injection of 170 trillion loans to unfinished projects and companies operating at suboptimal capacity.

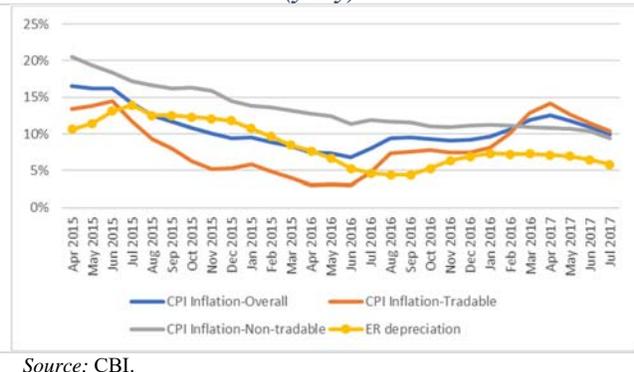
#### D. Monetary Policy and the Financial Sector

**Inflation declined to 9 percent in 2016, the lowest level in 25 years, likely marking the end of disinflation.** CPI inflation remained below 10 percent (year on year) in the first ten months of 2016. The biggest contributor to inflation during this period were the food and beverages sector. Food and beverages prices picked up in the last quarter of the year (Jan-Mar), reaching almost 18 percent year over year and continued its upward trend to almost 20 percent in April 2017. This raised annual headline inflation in April to 12.6 percent, a level that was last recorded in August 2015. The increase in food prices can mainly be attributed to the increase in global commodity prices in this period. Since then food prices have eased to 14 percent year over year in July 2017. Health and education are the other two sectors where prices resisted falling below the 10 percent mark between April 2016 to July 2017.

**The recent increase in prices in the last quarter of 2016 was largely led by the increase in tradable goods prices.** This increase in the prices of tradables is associated with depreciation of the rial and rising world prices (Figure 5). Non-tradable goods' price inflation however has steadily decreased since the beginning of 2015. Interestingly, there has been no increase in non-tradables' inflation since the beginning of 2016 through the high oil-backed growth that the economy experienced in this year.

**Producer price inflation remained around the same rate as the previous year.** The producer price index (PPI) slightly edged up to around 5 percent in 2016, up from 4.9 percent a year earlier. However, the increase in prices across sectors has been varied more recently. Inflation accelerated in the manufacturing sector from a slight negative rate in 2015 to around 3.6 percent increase in 2016. The Competition Council has allowed increases in prices of domestically manufactured cars after a freeze was placed by the council for the second half of 2016, which is also likely to be reflected in higher

Figure 5: Exchange rate depreciation and CPI inflation (y-o-y)



Source: CBI.

manufacturing PPI in the coming months. However, agriculture and services sectors' PPI, accounting for the other half of the weights of PPI calculation, slightly moderated to 2.4 and 8.7 percent from 5.7 and 13.8 percent in 2015 respectively.

***Low inflation has exposed deep and longstanding fragilities in the country's isolated, multi-tier banking system.*** One of the major issues that the banking sector has been grappling with is the persistence of high deposit and lending rates, which are associated with pervasive adverse selection and moral hazard arising from weak credit market infrastructure and strong political influence on bank lending. During the high-inflation period before 2015, when inflation reached 34 percent, deposit rates as high as 20 to 30 percent were considered tolerable. However, while the authorities succeeded in curbing inflation in the past two years, the interest rates did not adjust accordingly. As a result, the banks have been paying a significant positive real rate of return to their depositors, rates that during the high inflation period were predominantly negative in real terms. This caused capital to divert from other sectors of the economy and flow into the banks depressing activity in the productive sectors such as manufacturing. The weakness in the real sector production caused a negative knock on effect which in turn left the banks with a growing amount of illiquid assets, low capital adequacy and high non-performing loans on their balance sheets (many of which are loans to SOEs). This reinforced banks and other financial institutions to compete for liquidity by keeping interest rates at high levels that were not aligned with the fundamentals of the real economy. In the past few months, managing this turmoil has been the top priority of the CBI. Though the Bank does not use conventional policy rates it has intervened through a number of channels. The unregulated shadow banking sector was audited and reconsolidated in order to operate under the direct supervision of the CBI. In August 2017, the Central Bank issued instructions to all banks to reduce deposit rates to a maximum of 15 percent for one-year deposits and 10 percent for shorter-term accounts. The authorities also embarked on recapitalization of banks and the government has committed to paying back its arrears to the banking system along with other measures to tackle the imbalances in the sector.

***The Central Bank has pushed through the implementation of a range of other reforms to overhaul the banking sector operations and support the economy.*** The authorities have begun to address the structural challenges through the preparation of a detailed 'road map' to strengthen the resilience of the banking sector and in parallel, reform its legal and regulatory framework. Important steps were taken to recapitalize banks with high levels of illiquid assets. The government issued a decision to allow the clearing of banks debts to CBI by offsetting it against their existing claims from the government. The government also increased its capital in public banks and waived interest payments on loans of up to 1 billion rial for a maximum of 450 billion rial of loans. These measures led to a reduction of 131.2 trillion rial of government debt to banks and 242.5 trillion rial capital increase for public banks. The monetary authorities have also required banks to sell excess assets based on a given timeline, which if not met will subject banks to new penalties and taxes. To more effectively monitor and mitigate potential emerging threats to financial stability and resolve troubled banks, the authorities have drafted new bills on banking and the central bank. The authorities have also continued streamlining of International Financial Reporting System (IFRS) guidelines among all financial institutions and officially came to an agreement with the Ministry of Finance's Audit Organization on the role of each entity regarding future supervision and introduction of financial reporting principles.<sup>15</sup> The standardization of financial reports contributed to improvements in transparency and was a factor in the decision of the Financial Action Task Force (FATF) to extend suspension of Iran from its blacklist of countries. FATF has announced that it will continue to monitor Iran's fulfilment of its action plan to improve the regulatory framework for anti money laundering and combatting the financing of terrorism. Other measures undertaken by the CBI

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<sup>15</sup> <https://financialtribune.com/articles/economy-business-and-markets/73110/iran-dispute-over-ifs-compliance-resolved>

include finalizing the transfer of all government accounts to the CBI, expanding banking services for non-resident entities and a directive on all foreign currency purchases by people travelling abroad at the market rate offered by commercial banks.

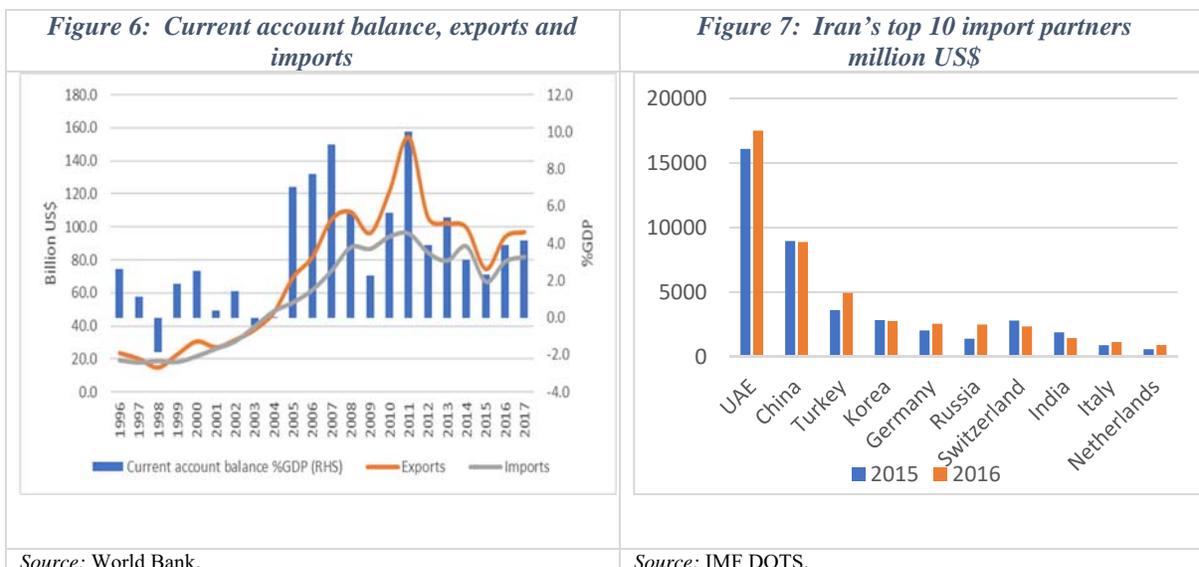
***Reestablishing correspondent banking relations (CBR) with major international banks have remained as a major challenge.*** For global banks, the political uncertainties surrounding conducting financial transactions with Iran and the precedence of large fines that were imposed on banks and businesses during the sanctions period continues to overshadow the prospects of reconnecting with Iranian banks. However, the CBI and the ministry of finance have succeeded in negotiating a number of direct credit lines with banks in a number of countries including Korea, Austria and Denmark. These could pave the way for further expansion of financial relations.

***Unification of the official and market exchange rates has been further postponed.*** The wedge between the interbank official rate and the parallel market rate has remained stable between 15 to 17 percent of the official rate between April and November 2017. The authorities have publicly committed to implementing the unification of the two rates, although this is further delayed from the revised target date (end of 2017 fiscal year). The real effective exchange rate depreciated by 4.2 percent during Oct-Dec 2017, bringing the first three quarters' average rate to 0.6 percent below the rate of the previous year.

***The Tehran Stock Exchange (TSE) index has risen in 2016, before declining through the first five months of 2017.*** The overall index increased by around 14 percent in 2016, albeit on the back of a slightly narrower volume of trade with respect to 2015. The improvement was particularly sharp in the immediate aftermath of JCPOA as investor expectations were adjusted to the prospects of a more bullish market. The rise in the top 30 index however, was not as pronounced. TSE index (TEDPIX) declined by 5 percent from January to May 2017 and recorded thin trading volumes as uncertainties before the elections mounted. In the aftermath of the May elections the stock market received a boost and started on an upward trend which was further strengthened due to the increase in world energy prices, which particularly influenced the shares of petrochemical (accounting for around 30 percent of the TEDPIX). Furthermore, the reduction of banking sector deposit rates and reduction of government bond yields also contributed to the surge of the index above the 95,000 band by December 2017 (almost 19 percent higher than what the index registered in May).

## **E. External Position**

***Iran's external position improved in 2016 following the slump in the current account surplus in 2015.*** The surplus rebounded from 2.3 percent of GDP in 2015 to 3.9 percent of GDP in 2016, with higher oil production, due to the lifting of sanctions and improved oil prices (Figure 6). According to the government sources, oil exports increased to 2.1 mbpd by the end of 2016, compared to 1.5 mbpd in the same quarter of the previous year. Buoyed by the oil recovery, total exports grew by more than 26 percent after a 25 percent contraction in the previous year. Net exports surged to 3.6 percent as a share of GDP, up from 2 percent of GDP in 2015, as the increase in exports more than offset the increase in imports. On the financing side, while FDI increased from US\$2 billion in 2015 to US\$3.4 billion in 2016, it remains significantly short of the high of US\$4.7 billion observed in 2012 and the government's targets under the five-year development plan.

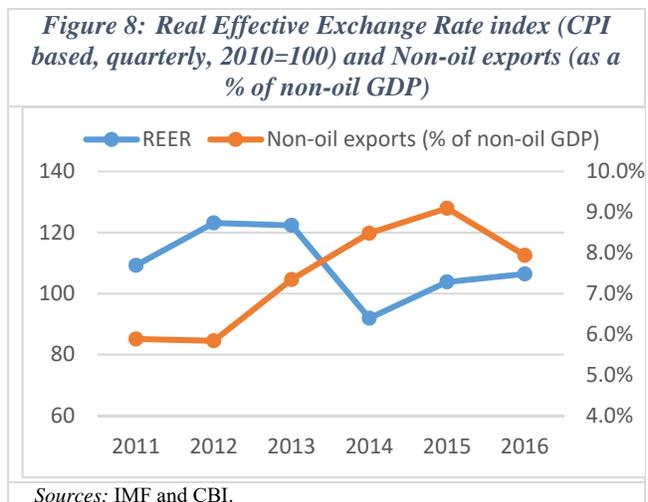


**The gradual re-shifting of Iran's exports towards advanced economies continued in 2016.** Around 44 percent of the country's exports in 2016 were to the European Union and other advanced countries. Iran's oil exports volume to Europe is reported to have increased by a factor of 7 between January to April 2017 year over year. In this period, France is reported to have become the second biggest importer of Iranian oil, accounting for 24 percent of oil exports.

**The top 10 import partners of Iran remained the same as previous years.** The UAE and China continue to remain at the top of the list however in 2016 while imports increased from UAE by 8.9 percent, total value of imports from China contracted by 1 percent (Figure 7). Turkey's exports to Iran increased by a staggering 37 percent in 2016, equivalent to more than 55 percent of China's exports to Iran in the same year. However, overall trade with Turkey remained almost the same as Iran's imports increased almost as much as its exports reduced in 2016.

**Recent data indicate a considerable slowdown in non-oil exports in the beginning of 2017.**

Following the appreciation in the real exchange rate since 2014, non-oil exports as a share of non-oil GDP came down from 9.1 percent in 2015 to 7.9 percent in 2016 (Figure 8). More recently, Iran's non-oil trade balance slipped back into a deficit in the first 5 months of the 2017 fiscal year compared to the surplus in the first 5 months of 2016. In the same period, petrochemical exports were reported at around US\$4.6 billion down from the US\$9.6 billion in 2015. The authorities plan to further expand petrochemical output to 120 million tons by 2022 from the 2016 output of around 50.6 million tons. The decline in non-petrochemical exports such as copper and steel was partly due to export restrictions by the government to control domestic prices while petrochemical exports' downward trend can be also attributed to restrictions imposed by China on Iranian firms because of the implementation of new banking regulation in China.



*Table 2: Iran's Non-oil Export Destinations*

*There has been some shift in Iran's non-oil export destinations in 2016.*

Table 2 shows the country's top non-oil export destinations. According to Iran Customs Administration (IRICA), the value of non-oil trade with Iraq in 2016 stood at around US\$6.11 billion which accounted for almost 14 percent of total non-oil exports,

2016 Rank		2016		2017: Apr-Sep	
		Value (million US\$)	Share (%)	Value (million US\$)	Share (%)
1	China	8,377	19.07	4,313	21
2	UAE	7,436	16.93	2,953	14.4
3	Iraq	6,111	13.91	3,180	15.5
4	Turkey	3,244	7.39	918	4.5
5	Korea	2,877	6.55	2,064	10
6	India	2,788	6.35	1,337	6.5
7	Afghanistan	2,457	5.59	1,199	5.8
	World	43,930		20,544	

placing Iraq as the third biggest export destination of Iranian non-oil exports in 2016. Non-oil exports to Iraq consists of a range of agricultural produce, ceramics, automobiles, machinery and food products. Data for the first half of 2017 also suggest a slight uptick in exports to Iraq—to US\$3.18 billion or around 5 percent higher compared to the same period in 2016. This puts Iraq below China as the second biggest importer of Iranian goods. However, more recently Iraq has increased tariffs and introduced import bans for certain goods such as cement. Previously one of the major Iranian exports to Iraq had been cement which accounted for more than 60 percent<sup>16</sup> of total exports of the product. Towards the end of 2015 Iraq had banned imports of cement to help protect the domestic production. More recently, in November 2017, Iraq more than doubled import tariffs of Iranian dairy products. It is also worth noting that official export and import figures between Iran and its neighbors, especially Iraq, are likely to underestimate the real size of trade between the two countries due to the significant amount of cross-border unofficial trade and smuggling (especially with the KRG region). Trade with Azerbaijan in 2016 stood at around 500 million after recording a significant growth of 70 percent. Iran's goods exports to the country was around US\$359 million, accounting for less than 4 percent of Azerbaijan's imports.<sup>17</sup> The two countries have recently moved towards strengthening political and economic ties that could indicate a possibility of expanding cross border investments and trade in future years.

<sup>16</sup> <https://financialtribune.com/articles/economy-business-and-markets/60773/iran-cement-exports-115m-tons-in-11-months>

<sup>17</sup> <https://www.al-monitor.com/pulse/originals/2017/11/iran-azerbaijan-ties-russia-aliyev-rouhani-expansion.html>

## II. OUTLOOK AND RISKS

***Revived medium-term growth prospects are dependent on at least modest reintegration with global trade and finance.*** While the 2016 economic performance was stronger than initially envisaged on the back of an impressive bounce back in the oil sector, medium-term growth outlook continues to be plagued by uncertainties regarding the reestablishment of banking, investment and trade linkages (beyond the recovery in oil exports). As oil production reaches close to full capacity levels, growth is expected to moderate to 3.5 percent in 2017 with the help of a recovery in gross fixed capital investment that will drive both oil and non-oil sectors. Iranian economy is expected to grow by an average of 4 percent in 2018-2019, slightly lower than projected in the Spring 2017 issue of the *Iran Economic Monitor* (IEM). This moderate growth outlook however still hinges on the assumption that some of the agreements between Iran and major foreign companies in the oil and gas and other key sectors, including manufacturing, will materialize, helped by the availability of trade financing through foreign banks.

***The banking sector is a major overhang on macroeconomic stability and a source of drag on the moderate growth outlook described above.*** The Iranian banking sector remains fragile, after a long period of being substantially cut off from foreign capital, credit lines, correspondent banking facilities and know-how. The Iranian banks operate with numerous constraints on deposit and lending terms, impacting resilience and performance (capitalization levels, return on assets / equity, liquidity and the rise of non-performing loans, etc.). As a consequence, with limited capital or liquidity buffers, many banks are vulnerable to external shocks and have sharply increased their borrowing from the central bank in 2016. Tackling the deep rooted structural problems of the banking sector remains as the single most important initiative towards ensuring macroeconomic stability in order to achieve sustainable high growth rates.

***Increased inflationary pressures will make maintaining single digit inflation challenging.*** Following a substantial decline in CPI inflation in the last two years, inflationary pressures started to build up particularly through food prices. Under the baseline scenario, inflation is projected to reach 11.5 percent in 2017 and ease to marginally below 11 percent in 2018-2019. As a result, continued tight fiscal and monetary policies will be crucial to keep inflation under control. Finalizing the long-delayed unification of the official and parallel market exchange rates will also be a positive step towards building credibility and promoting macroeconomic stability.

***Demographic changes imply increased urgency for deep fiscal reforms focused on transfers.*** While fiscal balances in the last few years suffered from low oil revenues, in the medium-term spending pressures will dominate, given the expected rise in interest payments from securitization of government arrears and the burden arising from the challenges in the pension system. The pension system in Iran is experiencing a considerable decline in the support ratio (contributors per beneficiary) and the parameters of the schemes are not aligned with the overall sustainability of the system. The system also suffers from low returns to investment and growing government arrears. As a result, government transfers to the civil service and military pension schemes, which increased from 2.8 percent of the total budget in 2005 to 14 percent in 2014, are expected to further widen to 28 percent in the next 7 years. In 2014, total deficit of the system reached around 4 percent of GDP. Thus, reforming the pension system to ensure long term sustainability is a major priority for the policymakers.

## ANNEX

### IRAN: SELECTED ECONOMIC INDICATORS (2014-2019)\*

	2014	2015	2016	2017	2018	2019
	Act.	Act.	Est.	Proj.	Proj.	Proj.
<b>Real sector</b>						
		(annual percentage change, unless otherwise specified)				
Real GDP at factor cost	3.2	-1.6	12.5	3.5	3.9	4.1
Total oil production (million barrels/day)	3.1	3.2	3.8	4.0	4.1	4.2
Crude oil, average price (US\$)	96.2	50.8	42.8	53.0	56.0	59.0
<b>Money and prices</b>						
		(annual percentage change, unless otherwise specified)				
CPI Inflation (p.a)	15.6	11.9	9.0	11.5	10.9	10.6
<b>Investment &amp; saving</b>						
		(percent of GDP, unless otherwise specified)				
Gross Capital Formation	26.1	22.7	20.3	20.6	22.1	23.7
Gross National Savings	29.2	25.1	24.2	24.8	26.1	27.4
<b>Government finance</b>						
		(percent of GDP, unless otherwise specified)				
Total revenues	14.0	15.7	16.7	17.8	17.8	17.7
Tax Revenues	6.2	6.9	7.7	7.8	8.0	8.0
Direct Taxes	3.1	3.8	3.8	3.8	3.9	3.9
Indirect Taxes	3.0	3.2	4.0	3.9	4.0	4.1
Total expenditures	15.1	17.4	18.9	20.0	20.2	19.8
Current	12.5	15.0	15.7	15.7	15.5	15.2
Net lending/borrowing (overall balance)	-1.1	-1.7	-2.2	-2.2	-2.3	-2.1
<b>External sector</b>						
		(percent of GDP, unless otherwise specified)				
Current Account	3.1	2.3	3.9	4.1	4.0	3.8
Net Exports	2.6	2.0	3.6	3.7	3.6	3.4
Export of Goods and Services	22.9	19.3	22.4	23.7	25.3	26.3
Export of Goods	20.5	16.7	20.0	20.9	22.2	23.3
Export of Services	2.4	2.6	2.4	2.8	3.1	3.0
Import of Goods and Services	20.3	17.3	18.9	20.1	21.8	23.0
Imports of Goods	16.3	13.6	15.1	17.2	18.6	19.7
Imports of Services	4.0	3.7	3.8	2.9	3.2	3.3
Total International Reserves (Billion US\$)	126.2	128.4	134.3	147.2	166.1	178.1
as Months of Imports (number of months)	17.1	23.0	18.3	20.7	22.4	24.4
Total Gross External Debt Stock (US\$ bln)	5.1	7.5	8.5	7.5	8.3	8.8
Total Gross External Debt Stock (% of GDP)	1.2	1.9	2.0	1.8	2.0	2.1
<b>Memorandum Items:</b>						
Nominal GDP (Billion IRR**)	11,517,488	11,414,167	13,151,259	14,764,349	16,680,753	18,889,961

Source: Government Data and World Bank Staff Calculation.

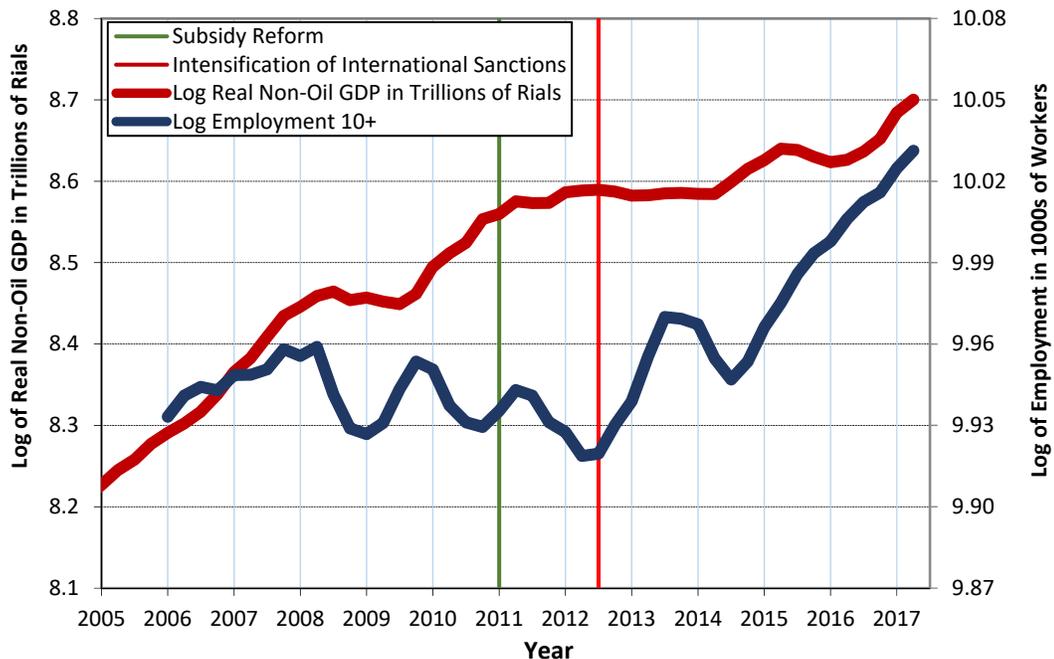
\* Fiscal year ends March 20. For example, 2015 corresponds to the fiscal year of 2015/2016.

\*\* IRR: Iranian Rials

## 1. Introduction: Linkages between economic growth and employment

*The relationship between economic growth and employment in Iran has displayed a puzzling trend over the years.* Between 2005 and 2012, real non-oil GDP grew steadily, while net employment remained stagnant (Figure 9). The employment-to-growth elasticity was low at just 0.10, especially when compared to an average of 0.56 percent for countries of the Middle East and North Africa (MENA) region (Figure 10). In other words, the relatively high growth in the non-oil sectors of the Iranian economy was not job intensive. Figure 9 suggests a weak and in some cases, even reverse relationship between economic growth and employment.

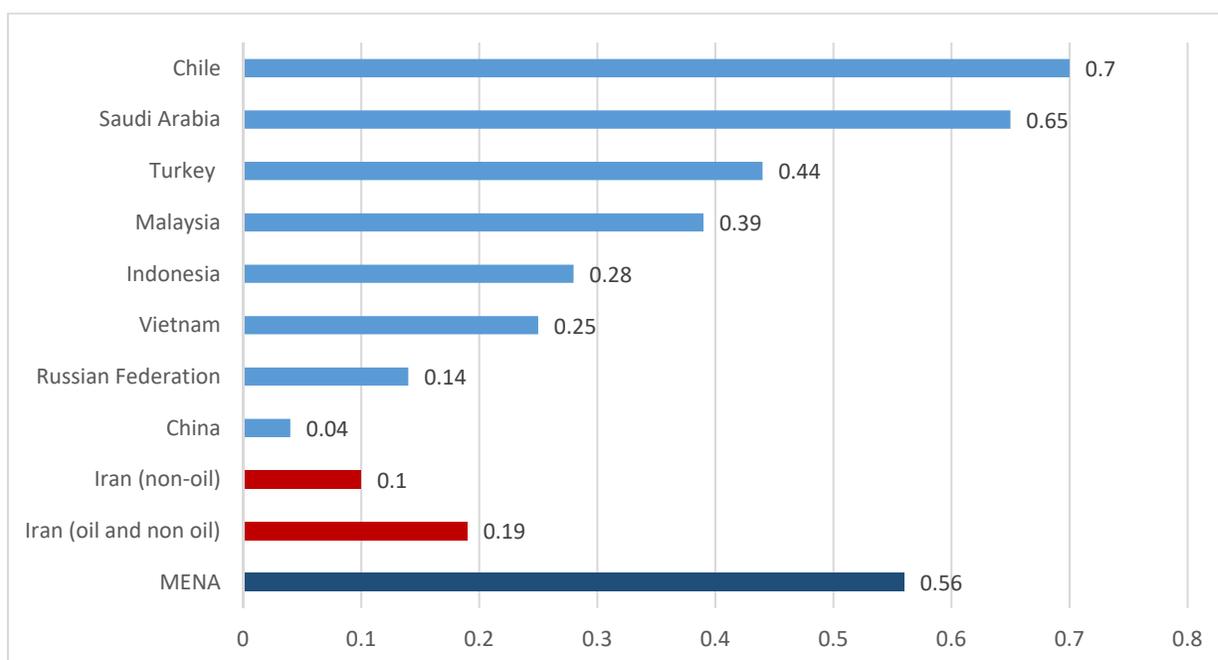
*Figure 9: Real Non-Oil GDP and Employment in Iran  
(4-Quarter Moving Averages)*



Source: Calculated based on the data published by the Statistical Center of Iran.

<sup>18</sup> This Special Focus was prepared by Jumana Alaref (Social Protection Economist, GSP05) and Johannes Koettl (Senior Economist, GSP05). Its analytical work and findings are derived from a comprehensive report prepared and authored by Hadi Salehi-Esfahani (University of Illinois at Urbana-Champaign).

Figure 10: Employment-growth elasticities, 2003-13



Note: Employment-growth arc elasticities are calculated as the percentage change in employment between the two points of time to the percentage change of GDP. For Iran, it has been calculated for 2005-2013 period while for other countries it is for 2003-2013 period.  
 Source: Calculated based on the data published by the Statistical Center of Iran.

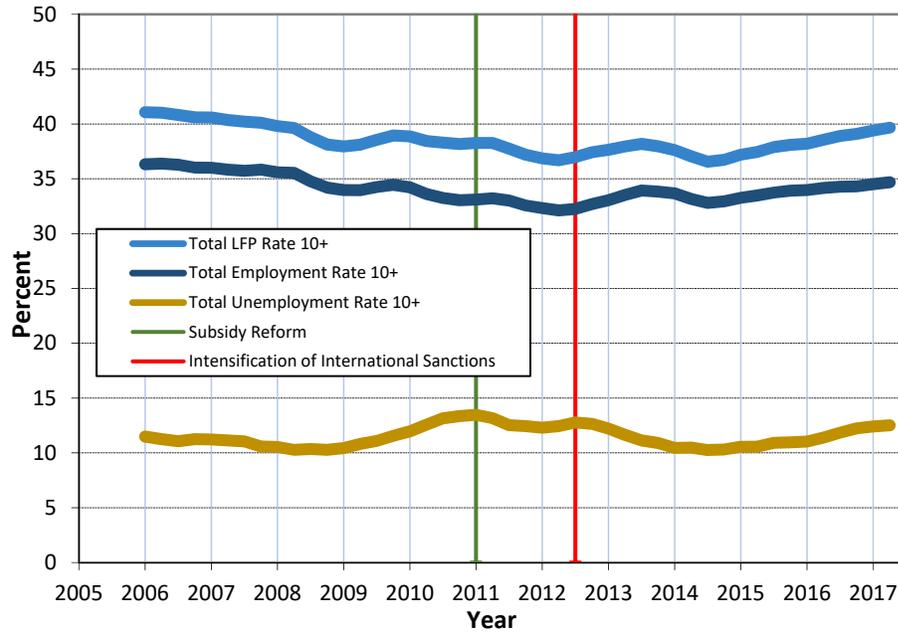
**Two factors took place in the early 2010s that have had consequences on growth and the Iranian economy.** The first is the subsidy reform, which significantly reduced energy and food subsidies and introduced a large universal cash transfer at the end of 2010. Figure 9 demonstrates that GDP rose robustly through 2011. The second factor was the intensification of international sanctions in mid-2012, which together with the rise of inflation over the following months resulted in a strong decline in economic activity and worsened labor market outcomes. FDI inflows to Iran were adversely affected, which led to a decrease in the number of jobs created by greenfield FDI (Devarajan & Mottaghi, 2015).

**While recent quarters in 2017 seem to indicate that GDP and employment trends are beginning to converge, job creation remains heavily constrained.** In 2016, while the adult labor force grew by 1.1 million, the economy managed to generate about 0.6 million net additional jobs. As a result, 470,000 people joined the ranks of the unemployed, and the rate of unemployment rose tangibly from 10.5 percent in 2014Q3 to 12.3 percent in 2016Q3 and even edged up to 12.6 percent in the first quarter of 2017).

**As an additional challenge, the labor force participation (LFP) of adults remains quite low in Iran, hovering in the 40 to 43 percent range in the past decade (Figure 11).** This is considerably low by international standards (Figure 12). If the LFP rises to 50 percent, at least 4 million new jobs (about 18 percent of current total employment) have to be created to keep unemployment from rising, not taking into account further population increases. The pressure further increases as employment stagnation during the 2005-2014 period motivated young people to prolong their education and postpone their labor market entry as a mean of avoiding unemployment and better positioning themselves for future job opportunities. Between 2006 and 2015, the total number of students enrolled in higher education in Iran went up from 2.8 million to 4.8 million. The highest rate of enrollment increase was among master's

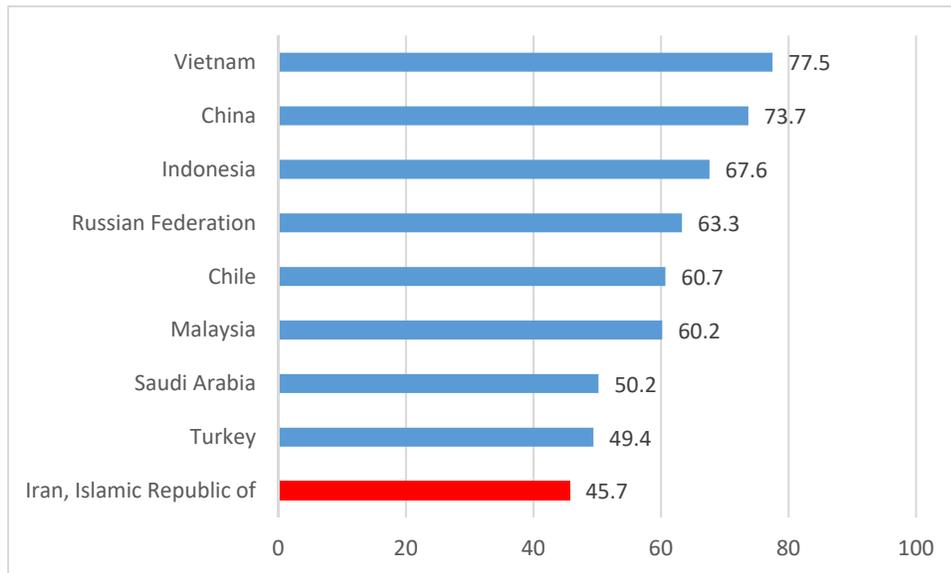
level students (5.7 times for men and 6.7 times for women). The challenge of placing young educated entrants into the labor market will persist over the next several years.

*Figure 11: Labor Force Participation, Employment, and Unemployment Rates (4-Quarter Moving Averages)*



Source: Calculated based on the data published by the Statistical Center of Iran.

*Figure 12: Labor force participation rates, Iran and comparator countries, 2013*



Source: ILO KILM – ILO estimates

*A careful look at the age structure of the population in Iran indicates that the challenge of matching the supply of labor with sufficient job creation may lessen in the upcoming decades as the country*

*passes its 'demographic dividend'*. Starting early 2000s, Iran has witnessed strong growth in its working age population, a result of the baby boomers of the 1970s and 1980s, which was followed by a strong decline in the age-dependency ratio and a drop in fertility. Between 2005 and 2016, the size of the 25-39 age cohort witnessed a significant increase, while the size of the 10-25 age cohort witnessed a sharp drop. It is the former cohort that has entered working age exactly when the economy failed to generate employment opportunities for them. Once the current cohort of those in that age group settles with jobs, the task of meeting the demand for jobs will become easier. This indicates a significant risk that Iran may face in a few decades, when the baby boomers begin to retire and will need to be supported by a much smaller working-age population.

*This Special Focus consolidates available evidence on trends of recent labor market outcomes in Iran.* Section 2 elaborates on the present labor market participation and unemployment challenges, with emphasis on groups who appear to be most adversely affected, namely women as well as the young and educated workforce. Subsection 2.1 presents a picture of employment trends over the last decade by gender, education, occupation, and sector. Subsection 2.2 provides a discussion on the sectoral shifts in employment over the last decade. Section 3 provides some possible hypotheses for the persistent job creation challenges. Section 4 concludes.

*The methodology for the analysis relied on time-series aggregate labor force and firm-level (manufacturing) data obtained from the Statistical Center of Iran.* Further analysis would benefit from more detailed data on wages and informality.

## **2. The Challenge of Labor Market Participation and Unemployment**

*It is essential that Iran reaps the benefits of its demographic window of opportunity before facing an aging population. Currently, Iran is underutilizing its second most abundant resource—labor—and women and youth in particular.* As previously mentioned, overall labor market participation (LFP) rates are low in Iran and stood at 39.4 percent in 2016. A further disaggregation reveals stark differences by gender and age (Table 3). Almost 64 percent of men aged 10+ participated in the labor market in 2016, while the participation rate for women was only 15 percent, lower than the already low MENA average at 20 percent. Between 2005 and 2013, the LFP rates for both genders, particularly among youth, witnessed a dramatic decline. The LFP rates for men are the highest for those aged 30-44, which remained relatively stable over the years, given the growth of this age cohort. On the other hand, younger and older men participate less and their rates have fallen over the years. Women aged 25-29 participate the most in the labor market when compared to other age groups. However, the pre-2013 drop in women's LFP rates affected all age groups and contrary to the case of men, it was much more pronounced in the middle of the age distribution. The drop for both genders seems to have halted in the last few years, although it did not recover to its 2005 levels.

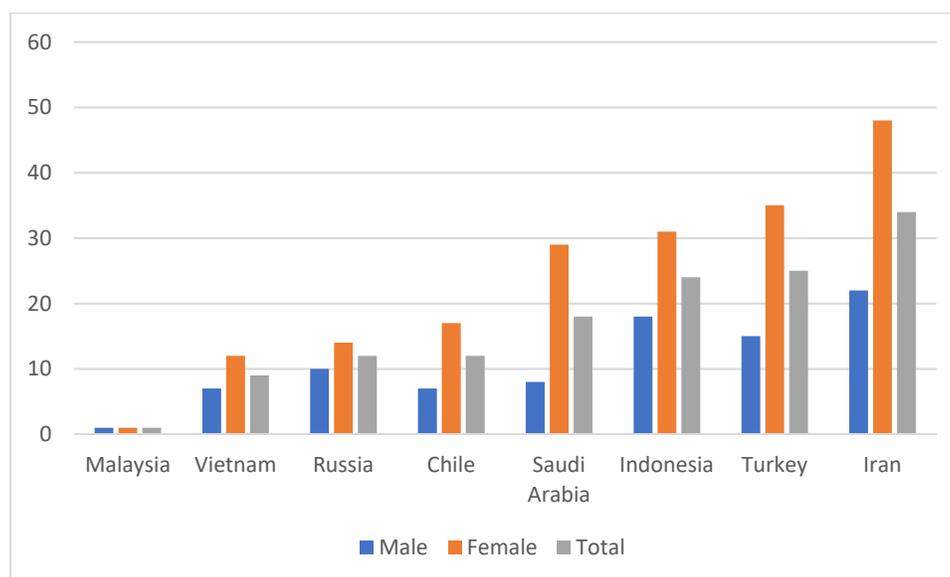
*Table 3: Labor Market Trends for Women and Men 10 Years and Older in Iran*

Year	Women						Men					
	2005	2009	2010	2012	2014	2016	2005	2009	2010	2012	2014	2016
<b>Adult Population 10+ (millions)</b>	28.145	30.410	30.935	31.388	32.064	32.836	28.618	30.936	31.456	31.324	31.953	32.603
<b>Labor Force 10+ (millions)</b>	4.781	4.408	4.349	4.400	3.859	4.893	18.513	19.432	19.526	19.705	19.960	20.899
<b>LFP Rate 10+ (%)</b>	17.0	14.5	14.1	13.8	12.0	14.9	64.7	62.8	62.1	61.6	62.5	64.1
<b>Employed 10+ (millions)</b>	3.962	3.667	3.457	3.526	3.099	3.881	16.657	17.334	17.200	17.635	18.205	18.707
<b>Unemployed 10+ (millions)</b>	0.819	0.742	0.892	0.874	0.760	1.012	1.856	2.098	2.326	2.070	1.755	2.192
<b>Unemployment Rate 10+ (%)</b>	17.1	16.8	20.5	19.9	19.7	20.7	10.0	10.8	11.9	10.5	8.8	10.5
<b>Unemployed, 15-24 (millions)</b>	0.452	0.318	0.379	0.320	0.228	0.265	0.912	0.853	0.922	0.750	0.534	0.605
<b>Unemployment Rate, 15-24 (%)</b>	32.6	32.4	41.3	41.5	43.8	44.2	20.4	22.7	25.5	23.4	21.3	25.4
<b>Unemployed, 15-29 (millions)</b>	0.658	0.567	0.714	0.640	0.526	0.645	1.269	1.356	1.483	1.333	1.038	1.182
<b>Unemployment Rate, 15-29 (%)</b>	29.9	31.0	39.7	38.3	40.1	42.3	17.8	19.7	21.8	20.9	17.8	21.4

*Source:* Calculated based on the data published by the Statistical Center of Iran

***In addition to high inactivity rates among youth, the share of those not in employment, education or training (NEET) is high, especially among young women.*** More than a third (34 percent) of youth (aged 15-24) were not in employment, education or training in 2013, which is the highest share among comparator countries (Figure 13). The NEET share is higher among young women (48 percent) when compared to young men (22 percent) in Iran.

*Figure 13: NEET Rates (%), 2013*

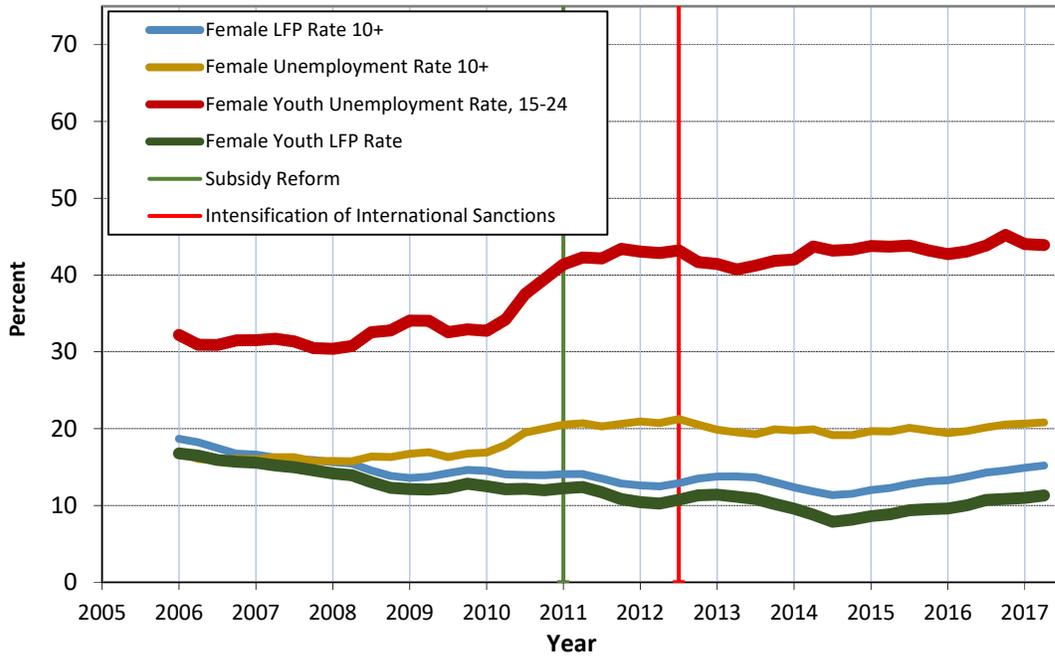


Source: ILO KILM – ILO estimates

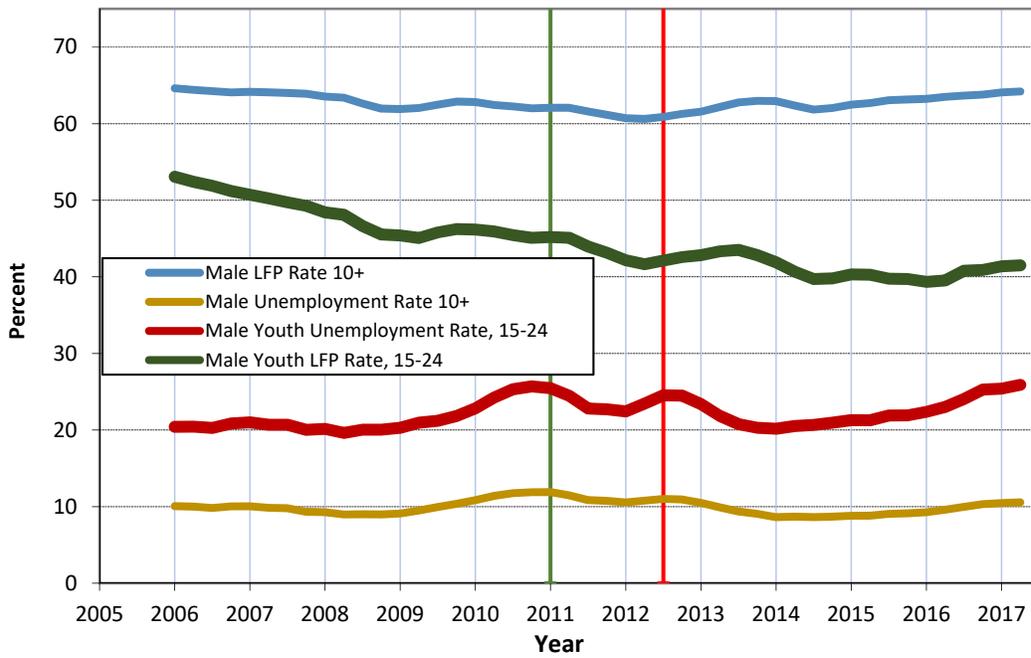
***The profile of LFP rates for men and women also differs in rural and urban settings.*** LFP rates for men aged 30-44 have remained stable over the years in both urban and rural settings. For women, however, the decline in participation between 2005 and 2014 is quite large in rural areas, suggesting that a large chunk of the decline in female LFP rate was due to the departure of rural women from the labor market. For example, LFP rates for women aged 25-29 in rural areas declined from 29 percent in 2005 to 16 percent in 2014.

***Patterns of unemployment follow patterns similar to those of LFP. The striking differences again emerge with regards to youth and women.*** National unemployment rate reached 12.4 percent in 2016. The largest cohort of employed persons are individuals in their 30s. Employment of individuals in their 20s has continued to decline over the years and youth unemployment rates currently remain much higher than the national average for both men and women (Figure 14). The unemployment rate for women aged 15-24 years old reached over 45 percent in 2016 and 26 percent for male youth.

Figure 14: Labor Force Participation and Unemployment Rates by Gender  
a) women



b) men



Source: Calculated based on the data published by the Statistical Center of Iran.

## 2.1 Employment Trends<sup>19</sup>

***Female employment seems to be particularly affected by the broader context of a constrained job creation environment.*** Large fluctuations in the LFP in the short run for both men and women and the strong correlation with employment indicate that the main drivers of employment are probably from the demand side. In other words, it seems that employment is driving LFP and not the other way around in the sense that working-age individuals, especially women, tend to enter and exit the labor force as job availability expands or contracts.

***The slow recovery of the economy after 2014 has been associated with very rapid return of women to the labor market and improvements in their employment outcomes.*** For men, the job market recovery has helped speed up employment growth somewhat, but not nearly as much as the case for women. In 2015 and 2016, female labor force grew by 730,000 and male labor force by 960,000, but each group gained 620,000 jobs. This is quite a remarkable development given that until recently in the economy as a whole, women were holding less than 19 percent of all the jobs.

***A notable development that has had effects on the Iranian labor market, particularly for women, is the tremendous rise in the supply of educated labor (Salehi-Isfahani, 2009; Haddad and Habibi, 2017). However, most of them joined the ranks of the unemployed.*** Between 2008 and 2015, the share of women with tertiary education among economically active women has risen tremendously, meaning that they comprise the bulk of active women. However, educated women mostly joined the ranks of the unemployed, suggesting that the pace of high skilled job creation is not enough to absorb the increased number of women with college and graduate degrees. Between 2008 and 2015, the share of women with higher education among the ranks of the unemployed has increased from 51 percent to about 62 percent for those with bachelor's degrees and from 1 percent to 12 percent for those with graduate degrees. This finding is consistent with other MENA countries. In Egypt, LFP rates among tertiary educated women reached 62 percent in 2015, with very high unemployment rates among this group at 32 percent.

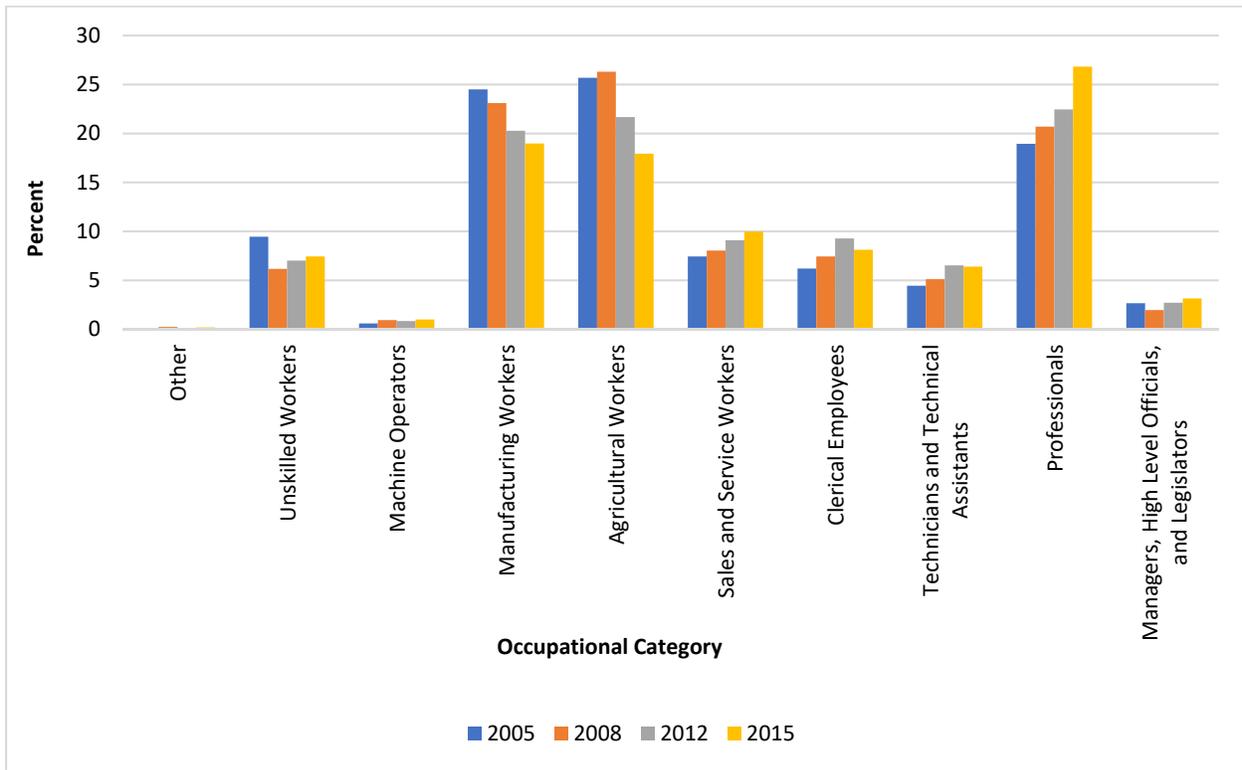
***For men, education has had somewhat similar, though much weaker, effects on the LFP and employment compared to the case of women.*** The share of men with higher education among economically active men has increased in the past decade, although it remains much smaller than that of women. Between 2008 and 2015, the share of men with higher education among the ranks of the unemployed has increased from around 14 percent to 25 percent for those with bachelor degrees and from 1 percent to about 3 percent for those with graduate degrees.

***Increased education among Iranian women amidst the stagnation in the job market prior to 2014 seems to also suggest that educated women ended up substituting the less educated ones among the employed.*** The substitution of many unskilled jobs by skilled ones is reflected in occupational distribution of employment between 2005 and 2015 (Figure 15). Unskilled positions had diminished in the 2000s for women from 9 percent in 2005 to 7 percent in 2015, and they appear to have been replaced by professional positions that have become the biggest occupational category of female employment. Managerial, technical, and sales and service positions have also grown robustly for women. For men, the most visible occupational shift is a move from specialized agricultural jobs to unskilled and, to a lesser extent, to machine operator (including driver) and professional positions.

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<sup>19</sup> The discussion on informality is missing from this section due to the lack of data availability.

Figure 15: Occupational Distribution of Employed Women



Source: The Statistical Center of Iran.

**Consistent with the decline in unskilled jobs, the number of unpaid family workers has witnessed a sharp drop, from 2.62 million in 2005 to 1.05 million in 2014. They appear to have been replaced by better quality jobs in the formal sectors.** For women, the decline in unpaid family workers was from 1.44 million to 605 thousand, and for men, from 1.18 million to 450 thousand. The category of unpaid family worker appears to have been replaced by employment in the private sector for both women and men, which is a key development as those jobs are likely to be of higher quality. The share of private sector employment increased from 19 percent in 2005 to 31 percent in 2015 for women, and from 34 percent in 2005 to 41 percent in 2015 for men. The share of public sector jobs in total female employment has also somewhat risen from 23 percent in 2005 to 26 percent in 2015. For men, on the other hand, their employment in the public sector has declined from 18 percent in 2005 to 15 percent in 2015. Men’s employment as independent workers has increased while it decreased for the employer category. The decline in employer positions and the shift towards employee positions is in line with evidence presented below regarding the decline and possible exit of small firms and micro enterprises from the market.

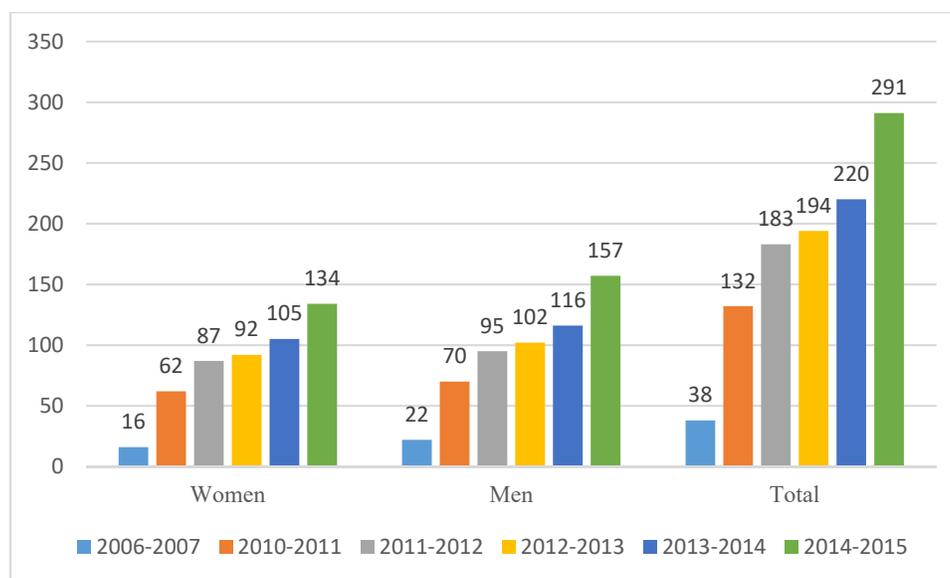
**Looking at the highly educated only, the public sector is the major source of employment, suggesting the presence of a high wage premium, similar to what is observed in other MENA countries.** While the share of employees with university and graduate degrees in the private sector employment has been about 7 percent in 2005 and rose to about 12 percent 2014, among public sector employees that share was about 47 percent in 2005 and rose to about 65 percent in 2014. The common belief is that there is a wage premium

for those with higher education in the public sector.<sup>20</sup> Without micro-data on wages, this Special Focus cannot assert whether the persistence of education wage premium is explained by labor regulations and public sector practices that reward diplomas or by higher productivity of educated workers and better technical/soft skills relative to their less educated counterparts in similar positions.

*Although female employment has somewhat recovered post-2013, females continue to face a lower probability of successfully completing their transition into the labor market, when compared to their male peers.* Female unemployment has historically been more persistent than male unemployment (Figure 14). While male unemployment spiked in 2010/11, it has returned to its 2005 levels in 2016, at 10.5 percent. Female unemployment remained high, at 20.7 percent in 2016, and further increased for those aged 15-24.

*The challenge of unemployment will persist over the next several years, particularly for the educated entrants, as the stagnation of the job market has motivated young people to acquire more schooling as a means of avoiding unemployment and to better positioning themselves for future job opportunities.* The demand for master's level and PhD education has continued to rise in recent years, as indicated by the trend in new enrollments (up from 220,000 in 2013/2014 academic year to 291,000 in 2014/2015 academic year) (Figure 16). Graduation rates at the master's level and above will thus continue to rise for some time, placing more pressure on the labor market.<sup>21</sup>

Figure 16: Enrollment in Higher Education by Gender, 2006-2015 (Thousands)



Source: The Statistical Center of Iran.

<sup>20</sup> Asadbeigi, Naderi, and Entezari (2013) examine the perceptions of Iranian university students and show that they expect substantial returns to education. Haddad and Habibi (2017) find that the education premium has persisted in both public and private sectors, though it has been declining gradually in the private sector.

<sup>21</sup> The fact that enrollment in higher education is increasing, while the share of NEET, as reported earlier, is also high warrants further investigation to reconcile both results.

## 2.2 Sectoral Employment Trends

**Worsening female labor market outcomes in the 2000s were associated with the decline in agricultural employment (Table 4), which have historically constituted a large share of female employment.** Consistent with earlier evidence on the drop of LFP rates among women in rural areas and the decline in the number of unpaid family workers, agricultural employment among women witnessed a sharp decline during 2005-2014. In 2005, a third of female employment in the economy was in agricultural activities. That share declined to less than 22 percent in 2014.

*Table 4: Share of Agriculture, Industry, and Services Sectors in Total Employment in Iran*

Year	Women						Men					
	2005	2009	2010	2012	2014	2016	2005	2009	2010	2012	2014	2016
Employed in Agriculture 10+ (millions)	1.330	1.118	0.966	0.890	0.677	0.853	3.770	3.262	3.003	3.112	3.135	3.208
Share in Employment 10+ (%)	33.6	30.5	28.0	25.2	21.8	22.0	22.6	18.8	17.5	17.6	17.2	17.1
Employed in Industry 10+ (millions)	1.123	0.935	0.844	0.894	0.754	0.977	5.134	5.740	5.808	6.212	6.437	6.224
Share in Employment 10+ (%)	28.3	25.5	24.4	25.4	24.3	25.2	30.8	33.1	33.8	35.2	35.4	33.3
Employed in Services 10+ (millions)	1.507	1.613	1.646	1.742	1.668	2.051	7.750	8.330	8.388	8.311	8.629	9.272
Share in Employment 10+ (%)	38.0	44.0	47.6	49.4	53.8	52.8	46.5	48.1	48.8	47.1	47.4	49.6

Source: Calculated based on the data published by the Statistical Center of Iran

**Men's share in agricultural employment also dropped, but appears to have been somewhat compensated by a rising share of employment in the industrial sector.** Men's share in agricultural employment dropped from 22.6 percent to just over 17 percent during the same period. The rise in the male unemployment rate due to agriculture's contraction seems to have largely gone away by 2014. For women, in contrast, the unemployment rate did not return to its pre-2005 rate (Figure 14). Some of the decline in agricultural employment for men appears to have been somewhat compensated by a rising share of industry in their total employment, from 30.8 percent in 2005 to 35.4 percent in 2014 (Table 4), whereas females witnessed a decline in their industrial employment, from 28 percent in 2005 to 24 percent in 2014.

**Employment growth in the industrial sector between 2005 and 2014 was modest, mostly driven by the growth in the construction sector.** Disaggregating employment growth in the industrial sector between 2005 and 2009 reveals that employment mostly expanded in construction, real estate & professional services, retail & wholesale trade, and transportation & communications. However, except for construction, employment growth declined in those sectors between 2009 and 2014.

**Employment in the manufacturing sector witnessed a consistent decline from 2005 to 2014.** The number of small manufacturing firms (with 10-49 workers) between 2006-2013 declined. This is also true about the number of medium firms (with 50-249 workers) during 2008-2012. On the other hand, the number of large (250+ workers) firms remained largely unchanged between 2005-2012 (Table 5).<sup>22</sup> Figure 17 shows a decline in the share of small and medium sized enterprises (SMEs) in total manufacturing employment from

<sup>22</sup> The source of this data is the Survey of Manufacturing Firms with 10 or more workers in Iran (SMF).

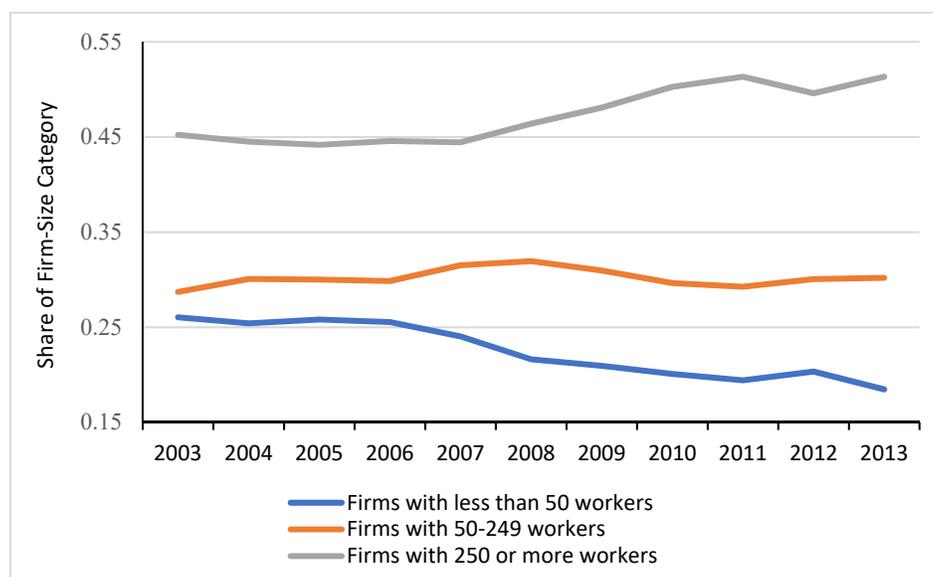
2006 and 2008 onwards respectively. For large firms, the share in total employment rose steadily after 2007. This suggests a possible shift away from small and, to some extent, medium enterprises towards larger ones. As SMEs are considered the engine of job creation, the net result of these changes for the total employment in manufacturing has been a notable decrease between 2006 and 2012.

*Table 5: Number of Firms in Different Size Categories*

Year	Small Firms	Medium Firms	Large Firms
	Less than 50 workers	50-249 workers	250 or more workers
2003	15622	3449	796
2004	15939	3767	850
2005	15777	3707	855
2006	15687	3822	904
2007	14460	3880	939
2008	12303	3843	923
2009	12550	3771	918
2010	11868	3678	912
2011	11567	3566	915
2012	11805	3601	851
2013	11082	3774	955

Source: Survey of Manufacturing Firms with 10 or more workers in Iran (SMF)

*Figure 17: Shares of Small, Medium, and Large Firms in Total Manufacturing Employment*



Source: Survey of Manufacturing Firms with 10 or more workers in Iran (SMF).

**For both genders, the service sector, particularly in the public administration, became the major source of employment between 2005 and 2014.** In 2014, the service sector comprised 54 percent of total female employment and 47 percent of total male employment. Employment up until 2014 grew in government

jobs, such as education, public administration, and social security. However, these increases hardly compensated for the decline of employment witnessed during that period in labor-intensive and employment-generating sectors, such as manufacturing and agriculture.

***After 2014, with the slow recovery of the economy, the service sector continued to be the main source of growth in job opportunities for both men and women (more than a million jobs, or almost 5 percent per annum).*** These jobs remained concentrated in non-tradable sectors, such as public administration defense and social security, education, and health and social work. Less prominent sectors, such as tourism also witnessed an increase in employment growth. While men have been more successful in obtaining jobs, women have still captured a sizeable share of positions in the sector, 37 percent of the net increase in services employment (Table 4), given that the public administration tends to be intensive in female employment.

***The industrial sector hardly grew after 2014, as the net job growth rate of industry as a whole has been less than 0.5 percent per year.*** The jobs that seemed to experience a modest recovery were wholesale, retail trade, and motor vehicle repair. Retail trade in particular, seems to have been boosted by sales and services associated with technology products (e.g. sales, installation, and repair of electronic equipment). Interestingly, though, between 2014 and 2016, male employment in industry diminished by about 213,000 jobs. During the same period, female employment in the sector increased by about 223,000 jobs (Table 4). In other words, women seem to have replaced men in the industrial sector, though not necessarily in the same types of jobs. For example, as men exited construction activities, women may have taken up positions in company headquarters and factory labs. This trend bears some similarities to what other countries, such as the United States, witnessed in 1960s, although it needs to be examined in more depth in Iran.

***In contrast to what was witnessed during the 2000s, the agricultural sector began to recover between 2014 and 2016.*** The sector grew by about 7 percent annually in terms of output and 3.8 percent in terms of employment (Table 4). This helped add almost 250,000 jobs to that sector in two years, with 70 percent of those jobs going to women.

***In terms of the growth of employment in the oil sector, available data from the mining sector indicates that its share of total employment between 2005 and 2012 was very small, amounting to only 0.3 percent of total employment in 2012.*** Following sanctions relief and the resumption of oil production and exports, that share slightly increased to 0.4 percent in 2014. This might suggest that the limited contribution of the oil sector to employment growth, partly due to its capital intensity but also due to international sanctions on exports, have likely increased the demand for labor in the non-oil, albeit non-tradable, sectors.

***The main sectors contributing to non-oil GDP growth are the services sector (around 60 percent) and the non-oil industrial sector (around 30 percent).*** This is consistent with what is observed earlier with regards to trends in sectoral employment. Tradable and employment-generating sectors, namely manufacturing and agriculture, contributed to only around 20 and 12 percent respectively to non-oil GDP growth from 2001 to 2016.

### **3. Hypothesized constraints to employment and job creation**

***Addressing the challenge of employment requires an understanding of why economic growth in the 2000s, especially in the non-oil sector, was accompanied by limited employment growth.***<sup>23</sup> Without

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<sup>23</sup> In the MENA region, limited employment creation in the formal sectors has led to the generation of low quality informal work (especially in oil poor countries) as new entrants were coping with subsistence needs and had few

empirical evidence, it is not possible to accurately identify the most binding constraints facing job creation in Iran. However, several hypotheses are presented on constraints that may potentially be important to consider. Further investigation and empirical validation are needed before any conclusions can be made.

***From the demand side, one hypothesis is that policies in the 2000s may have harmed the competitiveness of tradable industries and may have led to stronger employment growth in non-tradable goods such as service and construction.*** With regards to the agricultural sector, the reduction in employment may have been partly due to increased competition from imports. In the few years before the summer of 2012, Iran was experiencing a boom in foreign exchange revenues and the government was pursuing expansionary fiscal and monetary policies, which proved inflationary. There were massive surges in oil revenues during 2005-2008 and 2010-2012, which led to boosted expenditures and an appreciation of the Iranian Rial. The government then expanded its imports, especially capital goods, and put low caps on interest rates. Part of the oil revenues may have been used to increase agricultural imports to keep food prices low as a means of fighting inflation and poverty. The increase in agricultural activity after 2014 could potentially be explained by increased government support (in the form of input provision, technical assistance, and reduced import competition), which may have raised the returns to agricultural activities.

***A possible explanation for the observed trend in the decline in the share of manufacturing SMEs in total employment is that these expansionary policies in the mid-2000s that temporarily boosted growth could not be sustained and their reversal might have proved costly for investment and employment.*** In 2005, the government implemented a massive low-interest credit expansion, particularly through the “Quick>Returns Firms Expansion Program” (QRFEP).<sup>24</sup> This program went into effect in 2005 and was meant to help increase employment by removing credit constraints on small firms through lending mandates on the banking system. Table 3 shows a non-negligible jump in the number of medium sized firms between 2005 and 2006, just as the QRFEP program went into effect. This could have been prompted by removing some of the financing constraints on SMEs. Comparing the interest rates during 2006-2012 on loans to manufacturing and mining firms with the contemporaneous or forward inflation rates indicates that the real interest rates must have been significantly negative most of the time, averaging less than –6 percent. However, low interest rates, combined with expansionary fiscal policies that kept the exchange rate constant, proved highly inflationary and by 2008 the government had to reverse course and induce a recession in late 2008 and early 2009 to stabilize the economy.

***This suggests that while strong stimulation of aggregate demand boosted growth between 2005 and 2007, inflation, perceived uncertainties and risks posed by government policies, and intensifying international sanctions may have discouraged firms from investing or committing to employing workers.*** Smaller firms possibly reduced their workforce and some may have exited the market after 2006. The number of medium sized firms was significantly reduced after 2007. Only larger firms, which are mostly directly or indirectly under the control of the government, were more able to survive and employ more workers.<sup>25</sup>

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other opportunities. On the other hand, what was observed in Europe and Central Asia Region was that after economic transition, structural reforms shed a lot of employment in privatized companies but at the same time worker productivity was rising. Lack of data on both informality and worker productivity in Iran prevents this paper from further examining this point.

<sup>24</sup> In Persian, *Tarh-e Gostaresh-e Bongahha-ye Kuchak-e Zood-bazdeh*. A summary of the program is available in Persian on the website of Iran’s Parliament Research Center, <http://rc.majlis.ir/fa/law/show/127481>.

<sup>25</sup> Please note that this is one possible explanation among many others. Without panel data, we are unable to investigate this further and clearly rule out the possibility that some of those small firms might have grown into medium or large firms. Additionally, without productivity data, we are unable to rule out the possibility that the shift towards larger firms was productivity enhancing as larger firms tend to be more productive.

***The contraction of the manufacturing and agricultural sectors provides a compelling insight into why female unemployment witnessed a big surge while their LFP rates were considerably reduced in the 2000s to below 15 percent.*** In this regard, trends in female labor market outcomes in Iran bear a similarity to what is witnessed in other MENA countries, such as Egypt and Morocco. Assad & Arntz (2005) argue that the appreciation of the real exchange rate that occurs in MENA oil-exporting countries, or in countries receiving remittance income related to oil, reduces the international competitiveness of tradable industries, which are the ones that used to hire more women, leading to ‘defeminization of labor force’. As those sectors contracted in Iran throughout the 2000s, employment for females went up in other non-tradable sectors, particularly in government jobs, such as health and public administration. However, these were hardly sufficient to compensate for the loss in tradable sectors, especially amid the increasing supply of educated females in the labor market. As a result, female unemployment as indicated earlier has not recovered to its pre-2005 levels. There are likely other supply side hypotheses that may explain female labor market outcomes, such as social norms and level of agency, as well as high reservation rates possibly in response to the implementation of a universal cash transfer program at the end of 2010. However, such hypotheses warrant further evidence and validation.

***Other factors related to structural issues in the labor market include the significant rise in wages, particularly at the lower end of the skill spectrum that has accompanied governments’ redistributive policies, as well as labor market regulations and rigidities.*** A dramatic increase in the wage index for construction services along with the indices for unskilled and semi-skilled workers in that industry took place from 2004 onwards. This may have increased labor costs. Other labor market regulations and rigidities may have also affected hiring, such as severance payments that tend to protect tenured workers. For instance, currently employers are required to obtain third party notification and approval before dismissing a redundant worker. Severance payments for redundancy dismissals are more than double the cost for tenured workers of 10 years compared to those of 5 years (payment of 43.4 salary weeks compared to 21.7 salary weeks respectively) (Iran Doing Business Report, 2018).

***Additional barriers on the demand side include a challenging business climate and noticeable state presence in manufacturing and financial services.*** The business environment in Iran remains restrictive with the country ranking 124 out of the 189 countries in the 2018 Doing Business. Protecting minority investors, ease of paying taxes, trading across borders and resolving insolvency are the areas in which Iran is below the MENA average in terms of distance to the frontier. In addition, there remain concerns about lack of competition and the role of state in the economy. In particular, the Iranian state continues to play a key role in the economy with large public and quasi-public enterprises dominating to some extent the manufacturing and commercial sectors. The financial sector is also dominated by public banks (World Bank, 2017).

***Recent trends suggest that GDP growth and employment may be converging closer between 2013Q2 – 2017Q1. However, domestic reforms are needed to help economic recovery.*** In the medium term, non-oil industrial production is expected to be main contributor to growth. In particular, agriculture and service sectors are projected to grow by around 4 and 3 percent respectively. This could help increase employment due to the job elasticity of those sectors. Nonetheless, for non-oil sector activity to fully pick up, foreign direct investment (FDI) must recover, the economy has to reconnect with the international banking system, and more progress needs to be made in implementing domestic reforms (World Bank, 2017).

#### **4. Conclusion**

***This Special Focus compiles available evidence on recent trends in the labor market and provides several possible explanations as to why economic growth was accompanied by limited employment growth.*** Gaining a better understanding of the employment-to-growth elasticity is imperative to the central challenge of absorbing the masses of new entrants into the labor market in Iran. More in-depth empirical analyses are

needed to validate hypotheses highlighted in this Special Focus and to develop a better evidence-based understanding of the main policies needed to alleviate those constraints.

***It documents one of the main challenges facing the Iranian economy today, which is facilitating much needed job creation, especially for the country's young and highly educated workforce.*** The slow recovery of the economy after 2014 has been associated with improvements in labor market outcomes. However, the tremendous rise in the supply of educated labor in recent years, especially among females, presents a new challenge in ensuring that high skilled job creation is sufficient to absorb the increased number of educated labor market entrants.

***It highlights the role that the service sector has played in generating employment from 2005 through 2017, as employment in tradable sectors significantly declined.*** For example, the share of female employment in agriculture declined from 30 percent in 2005 to less than 22 percent in 2014. While men's share in agricultural employment also dropped, it appears to have been somewhat compensated during that period by a rising share of employment in the construction sector. With the slow recovery of the economy, the service sector, particularly in government jobs, continued to be the main source of growth in job opportunities. The industrial and agricultural sectors appear to have somewhat recovered after 2014, with jobs primarily going to females in those two sectors.

***Finally, it notes that small and medium sized enterprises appear to be not contributing enough to job creation.*** Data from manufacturing firms indicates a decline in the number of SMEs between 2006 and 2013, resulting in a decline in the manufacturing share in total employment during the same period. Possible hypotheses include expansionary policies that may have reduced the competitiveness of tradable industries, the presence of labor market rigidities, and a challenging business environment.

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