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KUWAIT

SELECTED ISSUES

November 4, 2015

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ENERGY PRICE REFORM IN KUWAIT – WHAT CAN BE LEARNED FROM INTERNATIONAL EXPERIENCE[1,2]

Kuwait should take advantage of current low global energy prices to strengthen efforts to reform domestic energy prices. In the longer term, this would benefit growth by increasing efficiency in the economy and creating space for higher public and private investment. In the short-term, one-off effects on inflation should be manageable. Productive activities more sensitive to energy costs, particularly the transport sector, would be able to adjust to higher energy prices more easily if the reform is gradual.

A. Introduction

1. Energy prices in Kuwait are low compared with international and regional benchmarks. Kuwait should take advantage of the current environment of global low oil prices to adopt a comprehensive energy price reform that gradually increases domestic energy prices up to a global benchmark and depoliticizes the mechanism for adjusting energy prices once the benchmark is reached. Energy price reform would create budget space to protect social spending and public investment during a medium-term fiscal adjustment process, and would create incentives for reducing energy consumption and contribute to a better environment.

B. Energy Efficiency in Kuwait

2. Kuwait faces significant challenges on domestic energy prices, consumption, and production. A policy of tight regulation to keep domestic energy prices low, combined with economic growth, has supported expansion in domestic consumption of energy products, particularly refined petroleum products, electricity, and gas. Low domestic prices have also promoted energy intensive industries. This policy crowds out social spending and redistributes resources in favor of higher-income groups. Higher energy consumption also reduces resources available for future generations, besides creating environmental challenges for the country.

Domestic energy prices and energy consumption

3. Energy products in Kuwait are sold at prices well below international references. Gasoline and diesel prices in Kuwait were 66 percent and 41 percent, respectively, below U.S. prices before taxes at end-July 2015. They were also below average prices in the GCC by 20 percent and 6 percent, respectively (Table 1). Electricity tariffs are very low at two fils per kilowatt compared with production costs of 41.43 fils per kilowatt. To cover the cost threshold

[1] Prepared by Sergio Rodriguez.

[2] The Note uses "energy products" generically to refer to fuel products —including natural gas, and electricity.

electricity tariffs would need to increase about 20 times. Average electricity pre-tax tariffs in OECD Europe were about $0.17 in 2014, compared with $0.006 in Kuwait.[3]

Table 1. Retail Prices of Gasoline and Diesel, August 2015

(In US$ per liter)

	Gasoline	Diesel
Bahrain	0.27	0.27
Kuwait	0.22	0.35
Oman	0.30	0.35
Qatar	0.26	0.41
Saudi Arabia	0.14	0.06
UAE	0.59	0.56
GCC average	0.30	0.33
Algeria	0.22	0.13
Iraq	0.39	0.34
Iran	0.33	0.17
United States 1/	0.75	0.71
United States 2/	0.62	0.58

Sources: EIA, GlobalPetrolPrices.com; and country authorities.
1/ Price includes taxes
2/ Gasoline and diesel retail prices exclude taxes of 17 percent and 18 percent, respectively.

4. Low domestic energy prices represent a significant cost for the Kuwaiti economy. Kuwait's on-budget costs of low energy prices (including water) were about KD3.7 billion (7.6 percent of GDP) in 2014; 35 percent of which corresponds to petroleum products subsidies. The government budget for 2015 estimates subsidies on energy products (including water) at about KD2.3 billion—37 percent less than in 2014, but still amounting to 6.5 percent of GDP (Table 2). Budget costs reflect payments made to energy producing companies to compensate for the difference between the production cost and domestic selling price. Budget costs, however, do not include the loss of potential revenue or opportunity cost. A more comprehensive measure of the opportunity cost of low energy prices could be estimated using the difference between a benchmark price—often the U.S. price—and the domestic energy price, scaled by consumption volumes.[4] The opportunity cost for selling energy products (gasoline, diesel, natural gas, and

[3] The Kuwaiti dinar is subdivided into 1,000 fils; 1 KD = US$ 3.3035 (average for July 2015).

[4] See Koplow (2009) and IMF (2013a) for a discussion of the price gap approach, including the attributes that the benchmark price should have. In general, when the energy product is traded internationally the benchmark prices is given by an international price; when the product is not traded internationally, the appropriate benchmark is the cost-recovery price for the domestic producer, with inputs valued at their opportunity costs, including raw materials, labor, capital, and distribution costs.

electricity) at prices below international prices is estimated at $12.7 billion (7.4 percent of GDP) in 2014; lower energy prices in 2015 reduce the estimated cost to $9.3 billion (7.2 percent of GDP).[5]

Table 2. Kuwait: Budget Government Subsidies, 2012–15

	2012	2013	2014	2015 1/
	(Million KDs)			
Total Subsidies	3,931	3,580	3,975	2,700
Food	106	132	242	360
Petroluem Products	643	626	1,289	360
Electricity and Water	3,182	2,822	2,444	1,980
	(Percent of GDP)			
Total Subsidies	8.1	7.2	8.1	7.5
Food	0.2	0.3	0.5	1.0
Petroluem Products	1.3	1.3	2.6	1.0
Electricity and Water	6.5	5.7	5.0	5.5

Source: Ministry of Finance, Kuwait.
1/ Budget

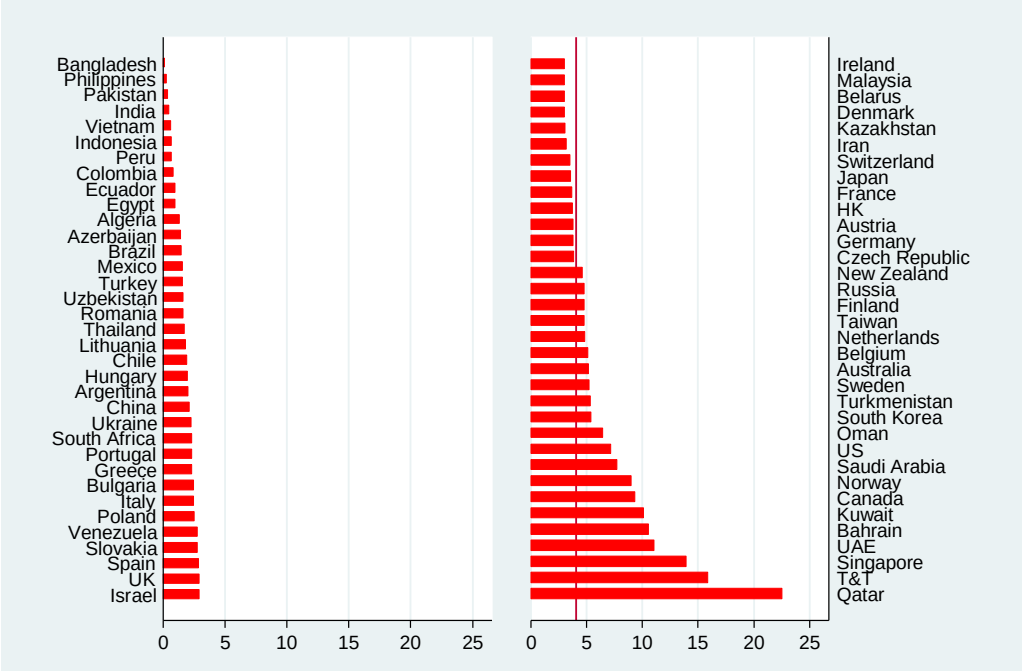
5. Per capita energy consumption in Kuwait is among the highest in the world. Kuwait consumed 10 tonnes of oil equivalent (TOEs) per capita in 2014, which compares with a world average of 4 TOEs per capita. Kuwait is the sixth largest consumer on a per capita basis in a sample of 67 countries, below only Qatar, Trinidad and Tobago, Singapore, the UAE, and Bahrain and ranking above Canada, Norway, Saudi Arabia, the United States, and Oman (Figure 1).[6] Kuwait's energy consumption is not only high, it has also been growing faster than consumption in countries with similar, or higher, income per capita. Energy consumption in Kuwait grew on average 0.9 percent per year during the past 40 years, compared with negative growth in the United Kingdom, Germany, the United States, and Denmark, and growth below 0.9 percent per year in New Zealand, France, Belgium, Finland, Canada, Austria, and Ireland. Energy consumption growth in Kuwait, however, is lower than that in Korea (5 percent), Hong Kong (3 percent), the United Arab Emirates (2.5 percent), and Saudi Arabia (1.9 percent).

[5] The estimated opportunity cost uses as reference, gasoline and diesel US pre-tax prices published by the IEA, Henry Hub gas prices, and average electricity tariff for all sectors published by the US EIA.

[6] Calculations based on energy data included in British Petroleum Statistical Review of World Energy, June 2015.

Figure 1. Primary Energy Consumption Per Capita, 2014

(Tonnes of oil equivalent, TOEs, per person; average in sample is 4 TOEs per person)

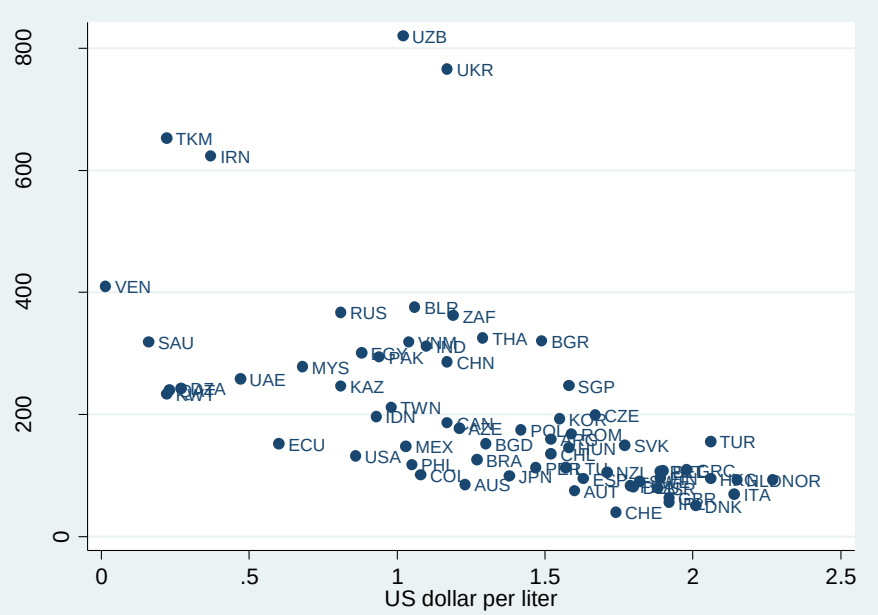


Sources: British Petroleum Statistical Review of World Energy; and IMF staff calculations.

6. Relatively cheap energy has contributed to energy consumption in Kuwait that appears high when compared with other countries. While energy consumption is determined by many variables, including income and climate, there is a clear negative association between energy prices and energy consumption. The correlation between primary energy consumption per dollar of income produced and the price of gasoline and/or diesel (a proxy for the price of energy) is about 57 percent (Figure 2), suggesting that after controlling for income, countries with lower energy prices tend to consume more energy. For instance, Kuwait consumed about 250 TOEs per dollar produced in 2014, with the price of gasoline at $0.22 per liter; however, our analysis show that energy consumption per dollar produced could be halved if gasoline price were increased to $0.62 (US pre-tax).[7]

[7] In fact, regressing energy consumption per income against the price of gasoline (in natural logarithms) produces an estimated price elasticity of minus 0.5, with confidence interval of (-0.62, -0.28) –in line with other estimates in the literature. Note that this estimate imposes income elasticity equal to one, and does not take into account other variables, such as climate. See Charap and others (2013) for a more comprehensive analysis of the elasticities of energy consumption. Data on prices comes from *International Fuel Prices 2014 - Data Preview,* published by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Figure 2. Energy Consumption to GDP and Price of Energy, 2014



Sources: British Petroleum Statistical Review of World Energy, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH; and IMF staff calculations.

Other consequences of low energy prices

7. Higher income households tend to be the main beneficiaries of low domestic energy prices. International experience shows that generalized support programs for energy products do not always reach the most vulnerable segments of the population and are not particularly effective at redistributing income. The World Bank reports that the poorest 25 percent of the population in countries like Egypt, Jordan, Mauritania, Morocco, and Yemen received only 1 – 7 percent of the resources used to support diesel consumption. In Egypt, the poorest 40 percent of the population received only a modest amount of the resources used to support consumption of energy products (3 percent for gasoline, 7 percent for natural gas, and 10 percent for diesel). IMF (2014) reports that in Jordan, the amount of resources to support energy consumption that went to the richest quintile was about 20 percentage points higher than that which went to the poorest quintile. IMF (2013) indicates that this disparity between rich and poor households was most pronounced in the cases of gasoline and diesel, where the richest quintile received nearly 20 (6) times more resources when consuming gasoline (diesel) than the poorest quintile. The IEA (2011) reports that the poorest 20 percent of households received only about one-tenth of the resources to keep prices low for natural gas and electricity.

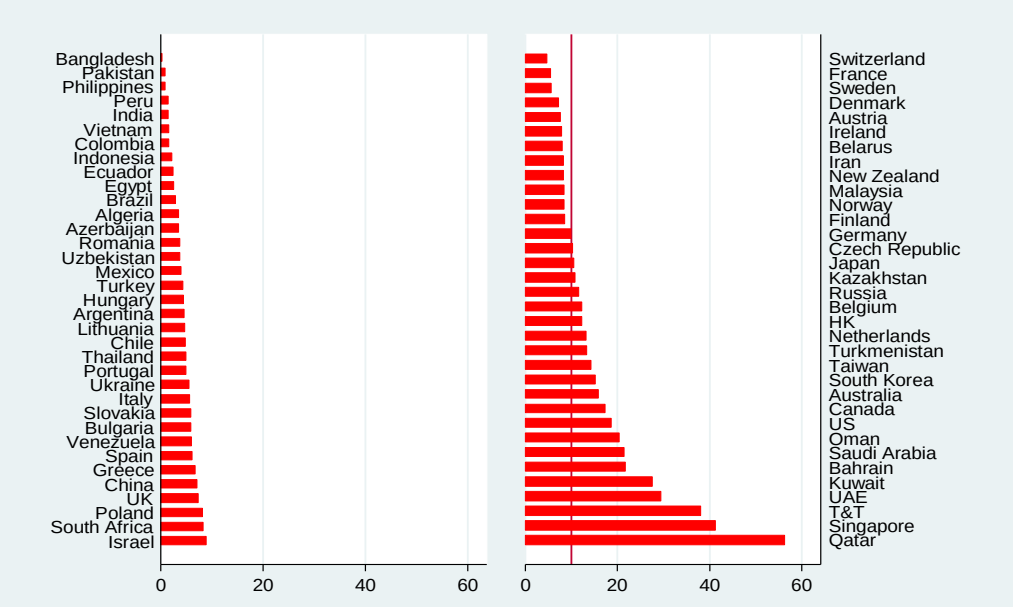
8. The opportunity cost of low energy prices has been lower social spending. Low energy prices lead to high fiscal or quasi-fiscal costs and crowd out budgetary space for productive spending, including social spending and public investment. In Kuwait the implicit opportunity costs of low energy prices (using the price gap approach) is larger than public capital spending in 2014, 7 percent of GDP and 4 percent of GDP, respectively; other things equal, this

would suggests that higher domestic energy prices could support higher public investment. From a sample of 109 countries, Ebeke and Lonkeng (2015) assess whether countries more prone to having low domestic energy prices also tend to have less public social spending. They find that public spending on education and health was, on average, 0.6 percentage point of GDP lower in countries where the opportunity cost of low energy prices was one percentage point of GDP higher; the crowding out increases to 0.8 percentage point of GDP when debt-to-GDP reaches 70 percent or for oil importers; the crowding out is almost one-to-one for countries with weak domestic institutions (countries above the 75th percentile in indicators of corruption and government ineffectiveness, proxy for weak domestic institutions).

9. High-energy consumption makes Kuwait one of the largest emitters of carbon dioxide per capita. Data from British Petroleum indicate that the world average of carbon dioxide emissions per capita was about 10 tonnes in 2014; emissions per capita in Kuwait were 28 tonnes—the fifth largest emitter in the sample (Figure 3). When compared with its GCC peers, and on a per capita basis, Kuwait pollutes less than Qatar (56 tonnes, the largest emitter) and the United Arab Emirates (29 tonnes), but more than Bahrain (22 tonnes), Saudi Arabia (22 tonnes), and Oman (20 tonnes). The magnitude of carbon dioxide emissions per capita points to the existence of significant environmental distortions, which could be reduced through adjustments in domestic energy prices.

Figure 3. Carbon Dioxide Emissions Per Capita, 2014 1/

(Tonnes per person; average in sample is 10 tonnes per person)



Sources: British Petroleum Statistical Review of World Energy; and IMF staff calculations.
1/ For Bahrain and Oman data is for 2012 from CO2 Emissions Statistics (IEA).

C. International Experience with Energy Price Reform: Lessons for Kuwait

10. A number of countries in the GCC and the MENA region have initiated energy price reforms. Several GCC countries have increased some energy prices. Qatar has increased gasoline prices, Bahrain and Saudi Arabia have increased electricity tariffs for industries, Kuwait has increased diesel and kerosene prices and is considering an increase in electricity prices, and Bahrain and Oman have increased natural gas prices for industrial users. Most recently the United Arab Emirates introduced a pricing mechanism for setting fuel prices against an international benchmark. Among non-GCC energy exporters, Iran and Yemen, and among oil importers, Egypt, Jordan, Mauritania, Morocco, Sudan, and Tunisia, have initiated subsidy reforms. Among energy exporting countries outside the MENA region, Malaysia, Nigeria, and Indonesia are successful cases of energy price reforms.

11. International experience has helped to identify the main elements for successful energy price reforms.[8] Country case studies suggest that the elements below can increase the likelihood of energy price reform being a success.

a) A comprehensive energy sector reform plan: the reform strategy should be formulated in consultation with stakeholders, establish clear long-term objectives—including a sustainable approach to energy pricing—assess the likely impact of the reform on various stakeholders, and identify measures to mitigate adverse reform impact.

b) An extensive communication strategy: a well-planned communications campaign is essential to help generate broad political and public support, and should be undertaken throughout the reform process. The campaign should inform the public of the cost of current policies and the benefits of the reform, including the budgetary savings generated to finance high-priority spending on education, health care, infrastructure, and social protection, or to reduce debt. Another key component of the communications strategy should involve strengthening transparency in reporting the costs of low energy prices in the budget and how they are financed.

c) Appropriately phased and sequenced price increases: the appropriate phasing-in and sequencing of price increases across energy products will depend on a number of factors, including the magnitude of the price increase to bring domestic prices to the relevant global benchmark, the fiscal position, the political and social context in which the reform is taking place, and the time needed to develop an effective communications strategy and social safety nets. A phased approach to reform provides time to households and firms to adjust and helps reduce the impact of the reform on inflation, whereas a large increase in energy prices can generate intense opposition to reform. However, a gradual reform reduces budgetary savings in the short term and runs the risk of providing space to build up opposition to the reform.

[8] See IMF (2013a), IMF (2013b) and IMF (2014).

d) **Targeted mitigating measures:** well-targeted measures to mitigate the impact of energy price increases on the poor are critical for building support for reforms. Targeted cash transfers or vouchers are the preferred approach in terms of consumption flexibility for households and lower program costs for the government. When cash transfers are not feasible because of limited administrative capacity, other initiatives, such as public works programs, can be expanded while capacity is developed. The degree to which compensation should be targeted is a strategic decision that involves trade-offs between fiscal savings, the capacity to target, and the need to achieve broad acceptance of the reform.

e) **Depoliticize energy pricing**: successful and durable reforms require a depoliticized mechanism for setting energy prices, which range between full price liberalization (prices are aligned and move freely with international prices) and automatic pricing mechanisms through a pricing formula that reflects international prices. The price mechanisms can include smoothing rules to avoid sharp increases in domestic prices, with technical decisions on pricing delegated to an independent institution (Box 1). Automatic price mechanisms can help reduce the chances of reform being reversed, but are not a panacea for achieving a sustained reform of energy prices. Over the longer term, price reform for energy products should aim to fully liberalize pricing, a regime that tends to be more robust to the reintroduction of price distortions than automatic price mechanisms.

f) **Improve efficiency of state-owned energy producers**: energy producers often receive substantial budgetary resources to compensate for inefficiencies in production and revenue collection. Strengthening the financial position and operational performance of these enterprises can reduce the need for budget transfers. For improving the efficiency of State Owned Enterprises (SOEs), country experiences suggest to strengthen governance, improve demand management and revenue collection, and better exploit scale economies.

D. What to Expect from Energy Price Reform in Kuwait

12. Energy price reforms will impact inflation and the productive sector, particularly in the near term. In the longer term, energy price reform would be positive for growth by increasing efficiency in the economy, creating space for higher public investment, and enhancing incentives for higher private investment. Energy price reform could also increase export revenues and improve equity, across both households and generations. In the short term, however, it will increase prices for consumers and cost of inputs for firms; therefore, subsequently lower real income for households and lower profits for firms may weigh on economic activity. The impact on aggregate demand would depend on the net budget impact of the reform and fiscal multipliers.

Box 1. Automatic Price Setting Mechanisms [1/]

Mechanisms for setting energy prices range between full price liberalization and automatic pricing. Over the longer term, energy pricing reform should aim to fully liberalize the pricing regime, a policy that tends to be more robust to the reintroduction of pricing distortions than other pricing policies, including automatic price setting mechanisms. However, automatic price setting mechanisms could pave the way for a fully liberalized pricing and supply regime.

Automatic pricing mechanisms are intended to fully transmit price fluctuations in the international prices to domestic retail prices and avoid an *ad hoc* approach to fuel pricing where governments change prices at irregular intervals, and could incorporate smoothing rules to avoid excessive price volatility.

Implementing an automatic pricing mechanism requires specifying the price structure (pricing formula) to link international and domestic prices, the timeline for updating the components of the price structure, and a rule determining when retail prices are changed and by how much.

The most common types of smoothing mechanisms include:

Moving Average Mechanisms (MA): Retail price adjustments are based on changes in the average of historical international prices, where the period to calculate averages could be set in days, weeks, or even months. Longer averaging periods tend to reduce the magnitude of prices changes.

Price Band Mechanisms (PB): A maximum limit is set on the retail price variation (a cap). If the required retail price increase is larger than the cap, the maximum allowed increase is implemented. If the implied price increase is below the cap, then the full adjustment is allowed.

A number of countries have adopted automatic price mechanisms. Jordan resumed a monthly fuel price adjustment mechanism in January 2013; Tunisia increased fuel prices on an ad hoc basis in 2012-13 and re-introduced an automatic price formula for gasoline in January 2014 to allow for future convergence to international prices over time; Mauritania adopted a new automatic diesel price formula in May 2012; Morocco started implementation of a partial indexation mechanism for certain petroleum products in September 2013, eliminated regulating gasoline and industrial fuel prices in January 2014, and introduced bimonthly reviews of these prices; and Cote d'Ivoire, which used to have fixed prices for fuel products, adopted an automatic pricing mechanism with smoothing in 2013.

_____

1/ See Baig and others (2007), Bridel and others (2014), Coady and others (2012), and IMF (2014).

Inflationary pressures

13. The pass-through of higher energy prices to overall inflation is determined by the share of energy products in the consumption basket, how well inflation expectations are anchored, and by the magnitude of increase in energy prices. For a given increase in energy prices, the higher the share of energy products in the consumption basket—typically captured by their weight in the consumer price index (CPI), the higher the first-round effects on headline inflation. If inflation expectations are well anchored, they should respond little to higher energy prices, and second-round impact on inflation should also be limited.[9] However, the larger the adjustment in energy prices, the larger the first round effects on inflation and the chances that inflationary expectations may be affected by the energy price reform. If conditions are permissible, a gradual adjustment in energy prices would be preferred to help keep inflation under control and also, as discussed later, to provide time for the productive sector to adjust to the new relative prices in the economy.

14. Cross-country experience suggests that the pass-through of price shocks to headline inflation could be relatively small. While there is limited evidence on the propagation of domestic energy price shocks to headline inflation, the empirical work that assesses the inflationary impact of global energy and food price shocks on the CPI suggests that the impact is relatively small. In particular, the evidence shows that food price shocks have greater second-round effects on inflation than energy price shocks, including after taking into account the relatively higher weight of food in the CPI.[10] In particular, estimation results indicate that a 10 percent increase in global oil prices increases headline inflation between 0.5 and 1.4 percentage points; a 10 percent increase in global food prices increases headline inflation between 1.3 and 2.5 percentage points; IMF (2011) reports that the median pass-through of an oil price shock to transportation prices is 0.13 percent for advanced economies and 0.17 percent for emerging and developing economies (Table 3).

Table 3. Evidence on Impact of Global Price Shocks to Headline Inflation

Ghezzi, Ricci, and Zuñiga (2011)	10 percent increase in oil price (WTI) increases CPI inflation by 0.5 percentage points
	10 percent increase in global food prices increases CPI inflation by 2 percentage points
IMF (2011)	
	10 percent increase in global oil prices increases Transportation prices by 0.13 percentage points for advanced economies and 0.17 percentage points for emerging markets
	10 percent increase in global food prices increases headline inflation by 0.2 percentage points for advanced economies and 1.3 percentage points for emerging markets
De Gregorio (2012)	10 percent increase in global oil prices increases headline inflation between 1.0 and 1.4 percentage points
	10 percent increase in global food prices increases headline inflation about 2.5 percentage points

Source: Papers in references.

[9] See WEO September 2011, Chapter 3 and Subsidy Reform in the Middle East and North Africa, Chapter 5.

[10] Ghezzi and others (2011) indicate that for countries in their study, the average weights of food and energy in the CPI were 15 percent and 9 percent, respectively (a ratio of 1.7). The estimated response of headline inflation to food and energy price shocks was 2 percentage points and 0.5 percentage points, respectively (a ratio of 4).

15. First-round effects from energy price reform on inflation are likely to be low given the weight of energy products in Kuwait's Consumer Price Index (CPI). Disaggregated data for Kuwait indicates that the importance of energy products in the CPI is relatively low (Table 4). For instance, a 10 percent increase in the price of gasoline and diesel would increase inflation by 17.9 basis points (the weight of gasoline and diesel is 1.79 percent in the CPI; in other words, current household spending on diesel is relatively minor). If electricity tariffs were increased 10 percent, CPI will increase 35 basis points. For reference, Table 4 also reports other CPI items relatively intensive in the use of energy, particularly transportation services.

Table 4. Kuwait: Weights in Consumer Price Index (`CPI) 1/

(In percent)

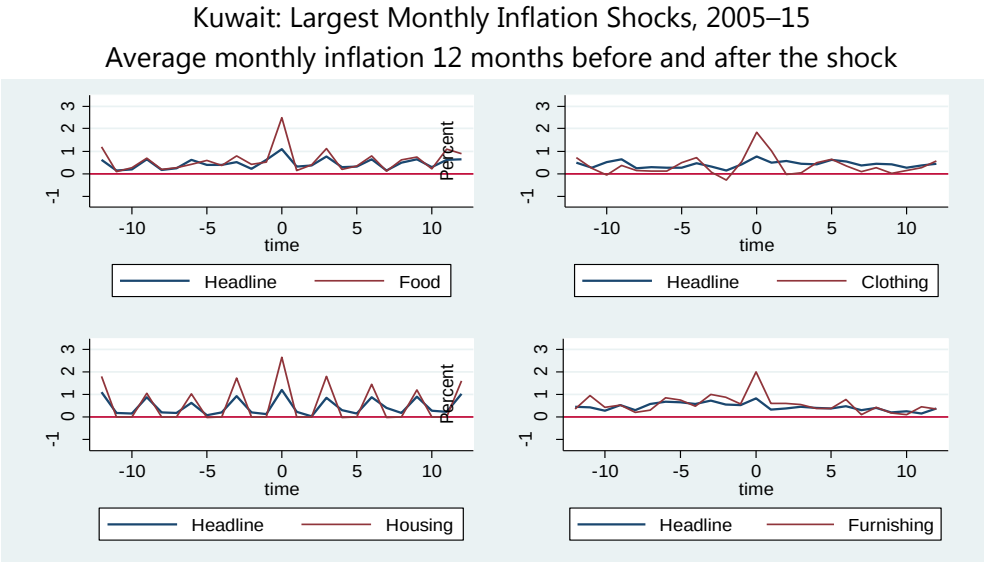
CPI Item	Weight
Housing	
Electricity, gas and other fuels	0.53
Electricity	0.35
Gas	0.12
Other fuels	0.05
Transport	
Fuels and lubricants	2.11
Gasoline/Diesel	1.79
Lubricants	0.31
Energy Products	2.63
Memo items	
Water	0.81
Transport services	1.76
by road	0.22
by air	1.42
by sea	0.01

Source: HAVER.
1/ CPI base 2007

16. The inflation response to previous domestic price shocks also anticipates a modest impact on domestic inflation if energy prices were raised in Kuwait. In particular, monthly inflation shocks to the CPI sub-indices do not seem to translate into higher headline monthly inflation during the 12 months after the shock occurred, particularly with shocks to housing and transport—sub-indices that include energy products. Figures 4 and 5 display domestic monthly inflation shocks to CPI sub-indices during 2005–15, and depicts monthly headline and sub-index inflation during the 12 months before and after the shock occurred.[11] The charts indicate that, for instance, when an inflation shock to transport services occurs, headline inflation remains broadly similar before and after the shock; a similar finding emerges in the case of housing services. The story is slightly different for food products, where a shock appears to increase monthly inflation, particularly when compared with monthly inflation 10–12 months before the shock occurred.

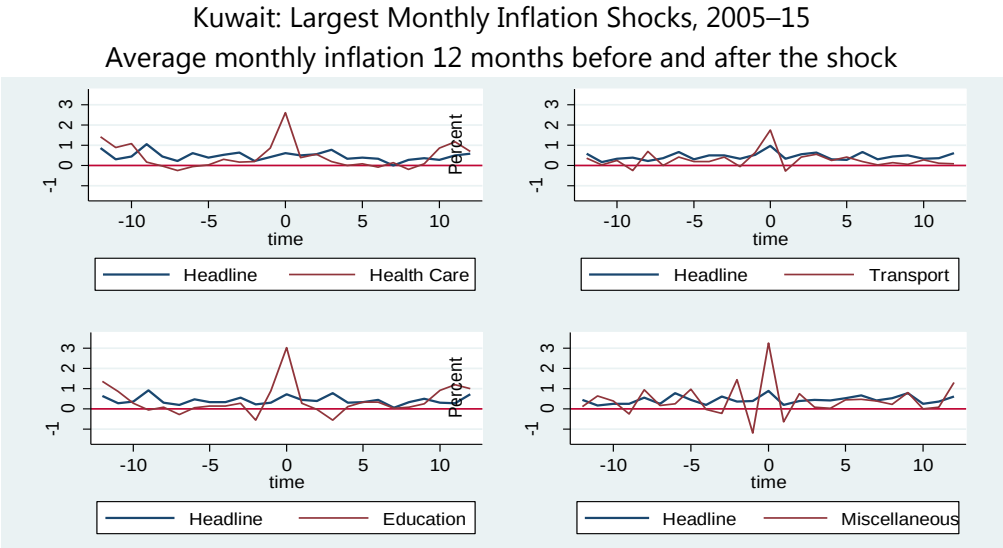
[11] Domestic inflation shocks were selected as follows: monthly headline and sub-index inflation were calculated for the sample period —132 observations per sub-index. Domestic inflation shocks were selected as follows: for each CPI sub-index monthly inflation was calculated during the sample period, which varies between 11 and 6 years, depending on data availability for each country. For each sub-index (e.g. Transport) the 10 percent largest monthly price changes were defined as "shocks". Each shock was compared with monthly headline inflation during the 12 months after and before the price shock occurred. For instance, let's assume that one of the largest monthly price changes in Transport prices occurred in March 2008. To assess whether the shock to Transport prices in Mach 2008 had an impact on headline inflation, the exercise looks at headline monthly inflation between March 2007 – February 2008 (12 months before the price shock) and between April 2008 – March 2009 (12 months after the price shock). If monthly headline inflation is broadly the same before and after the identified shock to transport prices, then the finding would suggest that the shock to transport prices did not propagate into headline inflation.

Figure 4. Impact of Domestic Inflation Shocks to Headline Inflation



Source: IMF staff calculations.
Note: Inflation shock defined as the 10 percent largest monthly inflation in each component of the CPI observed during 2005-2015. Chart displays average of 10 percent largest values.

Figure 5. Impact of Domestic Inflation Shocks to Headline Inflation

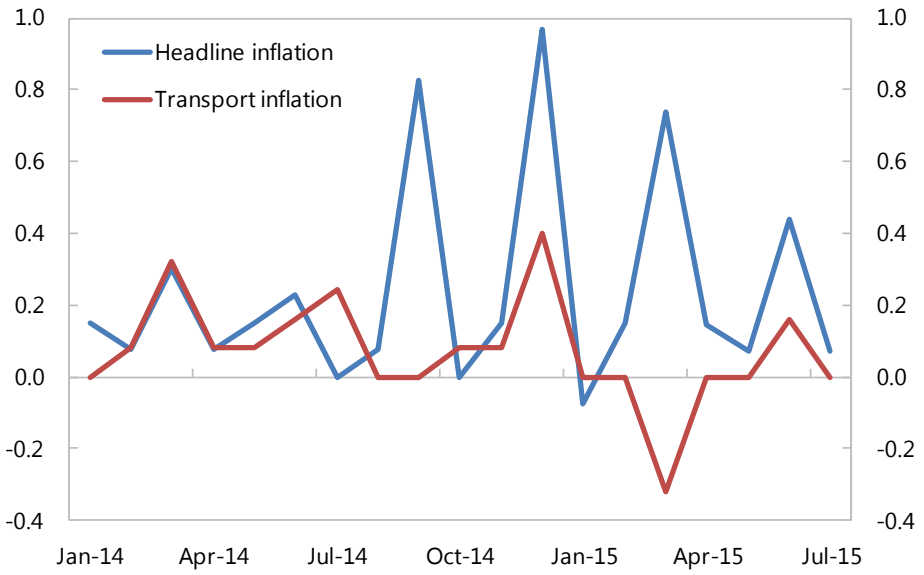


Source: IMF staff calculations.
Note: Inflation shock defined as the 10 percent largest monthly inflation in each component of the CPI observed during 2005-2015. Chart displays average of 10 percent largest values.

17. The increase in diesel prices since January 2015 did not have a noticeable impact on headline inflation. Kuwait initiated diesel price reform in early 2015; a committee determines on a monthly basis the price of diesel based on Kuwait's diesel export price. The reform has been implemented gradually, with reformed prices attached mainly to retail sales while (most) wholesales still carry subsidized prices. While assessing the pass-through of diesel prices to headline inflation requires a more detailed and technical analysis, data as of July 2015 seems to suggest that the 100 percent diesel price increase in January 2015 has not had any significant impact on inflation so far (Figure 6). Transport prices did not increase in January, fell in March, then increased slightly in May (0.16 percent). Headline inflation during 2015 appears to follow the pattern observed during the second half of 2014.

Figure 6. Kuwait: Headline and Transport Monthly Inflation, 2014–July 2015

(In percent)



Source: IMF staff calculations.

Impact on economic growth

18. In the longer term, energy price reform has a positive effect on growth. Lower distortions, higher efficiency of available resource in the economy, rationalization of energy use, increase in export revenues and/or reduction in the import bill, and stronger budget structures create an environment conducive to economic growth. In the short term, energy price reform may be equivalent to a reduction in current spending, which could adversely affect economic activity. The impact on growth could be minimized—or even more than offset—if part of the savings is redirected to other public spending, such as transfers to the poor and/or investment.[12]

[12] See IMF (2014), Chapter 5.

Governments could also use the budgetary savings to redeem government debt, which would improve the country's fiscal profile and free resources that could be used by the private sector, enhancing the country's growth prospects.

19. In the near and medium term, an increase in domestic energy prices would represent a negative shock to the productive sector. The increase in energy prices would increase production costs, particularly in energy intensive sectors such as aluminum, chemicals, metals, mining, plastics, petroleum refining, and steel.[13] Firms in export-oriented sectors, which are price takers in global markets, are likely to be particularly affected since they would find it challenging to pass on to consumer the increase in costs. Affected firms would have to reduce profits and/or increase the efficiency in their production process to compensate for higher energy costs. Overall the increase in relative energy prices would lead to a shift in the production mix away from energy-intensive goods. At the same time, though, lower consumption of energy domestically would permit increased exports of energy products, so overall exports (energy plus non-energy) could increase even in the short and medium term.

Table 5. Productive Sector: Consumption of Electricity and Fuel Products, 2011

(KD millions)

	Electricty	Fuels and Oils	Sum
Non-Financial Services	7.1	423.1	430.2
Water transport	0.1	289.7	289.8
Air transport	0.0	104.3	104.4
Land transport	0.3	16.0	16.3
Hotels and restaurants	1.1	5.3	6.4
Real estate activities	2.3	0.5	2.8
Auxiliary transport activities	0.3	1.8	2.1
Other business activities	0.6	1.5	2.1
Renting of machinery or equipment	0.1	1.5	1.6
Other service activities	0.8	0.7	1.5
Sewage and refuse disposal sanitation	0.1	0.9	1.0
Industry	13.1	20.8	33.8
Extraction of crude petroleum/natural gas	1.4	9.0	10.4
Manufacturing			
Refined petroleum products	7.9	0.4	8.4
Food and beverages	0.8	2.9	3.7
Other non- metallic mineral products	0.4	2.6	3.1
Chemicals and chemical products	0.6	1.0	1.6
Fabricated metal products	0.4	1.0	1.4
Basic metals	0.2	1.0	1.1
Construction	0.7	14.5	15.2
Building of constructions	0.6	12.2	12.8
Building installation	0.1	1.4	1.4
Domestic Trade	6.2	7.0	13.2
Retail in specialized stores	2.0	2.0	4.0
General retail	1.7	0.6	2.3
Sale of motor vehicles	0.2	1.0	1.2
Financial Services	1.8	3.3	5.1
Other financial intermediation	1.0	2.7	3.7
All Sectors	28.9	468.8	497.7

Source: World Bank.

20. The transport sector, particularly air and water, would be the most heavily impacted sectors if energy prices were increased. The transport sector is the largest consumer of fuel and oil products. For instance, if fuel and oil product prices were to increase 10 percent, the increment in energy cost would be about 30 percent of value added for sea transport and 10 percent of value added for air transport. Other activities that could be classified as most affected include: renting of construction equipment, manufacturing of basic metals, nonmetallic products, and food and beverages (Table 5). These findings also favor adopting a gradual

[13] The US office of Energy Efficiency and Renewable Energy reports that for producing aluminum, energy costs account for about 30 percent of total costs, although they vary from about 12 percent in Canada to 33 percent in the USA. For producing steel energy costs account for between 15 and 20 percent of total costs. Energy costs in mining represent about 17 percent of supply costs, while energy cost for producing chemicals could amount up to 85 percent of total production costs. Within the chemicals industry, energy cost in terms of raw material costs are about 73 percent for plastics, 54 percent of cyclic crude, 61 percent for industrial organic chemicals, and 67 percent for nitrogenous fertilizers. http://energy.gov/eere/office-energy-efficiency-renewable-energy

approach for raising energy prices and give time for the productive sector to adjust to a new set of relative prices.

21. Preliminary estimates suggest that in the long-term Kuwait could generate net permanent savings in the range of 1.6–2.2 percent of GDP. Estimated net savings represent the deadweight loss (DW) —the loss for the society, from selling products in the domestic market at prices (Pd) lower than world prices (Pw), which lead to consumption levels (Qd) that are higher than what would be at world prices (Qw) in the context of a demand that responds negatively to prices (Box 2, Figure 7).[14] The estimated net gain assumes that consumers are fully compensated from losses coming from higher prices.[15] The estimate reflects opportunity costs of 7.4 percent of GDP for gasoline, diesel, electricity, and natural gas, and price elasticity for energy consumption in the range of (-0.3, -0.5).[16] The estimate assumes that energy prices are aligned with U.S. pre-tax gasoline prices; due to data constraints, electricity tariffs are inclusive of taxes (but still below pre-tax tariffs in OECD Europe); for natural gas Henry Hub prices are used as reference.

22. If net savings from reforms were invested, Kuwait's GDP could further increase between 0.06 percent of GDP and 0.08 percent of GDP. [17] The return on equity for the corporate sector was about 3.7 percent (average 2013–14).[18] If the estimated net savings from the reform (between 1.6–2.3 percent of GDP) were invested at such rates of return, GDP could increase further between 0.06 and 0.08 percent of GDP, equivalent to about $105 million and $140 million, respectively, using 2014 GDP as reference.

[14] The exercise assumes that the country is a price taker in global energy markets and faces an infinitely elastic supply curve. If supply were upward slopped, the net gain would be (Pw-Pd)*(energy exports before the change in prices) plus (1/2)*(Pw-Pd)*(change in exports).

[15] The policy of lower energy prices generates costs for sellers of (Pw-Pd)*Qd (equivalent to areas B, E and DW) and gains for consumers equivalent to areas B and E; if prices were increased consumers' lose A and B, but sellers win A, B, and DW. The net gain for the economy as a whole is DW.

[16] Elasticity estimates come from Charap and others (2013).

[17] The impact of reforms should be assessed in terms of its effect on the level of income, since the impact measured in terms of growth may be misguided given the subtleties involved. For instance, assume initial GDP is $100 at t=0, an energy price reform occurs at t=1, efficiency gains from the reform amount to $10, the rate of return on investments is 10 percent, and the depreciation rate is 10 per cent. Under these assumptions the economy grows with the reform 10 percent in year t =1 —income increases from $100 in year t=0 to $110 in year t=1. If the extra income is used for consumption, then the economy will have a once-and-for-all increase in income from $100 to $110 only. If the economy invests the income gain ($10), the investment will produce $1 extra of income in year t=2. The income path for the economy would be $100, $110, and $111, with the growth path being 10 percent, and 0.9 percent in t=1 and t=2, respectively; if returns continue to be reinvested, income will continue to grow to reach $159 after 50 years, but the growth rate would have fallen to 0.6 percent per year by then. In other words, over the longer term the reform increased income form $100 at t=0 to 159 at t=50, with the larger impact occurring at t=1 when income increases to $110; the impact on growth is more difficult to assess, with the average impact declining as the period considered increases. If investments depreciate, for instance at 10 percent per year, income after 50 years would reach about $119.9 and the growth rate would have fallen to zero percent per year.

[18] The return on equity for the non-financial corporate sector has been about 7 percent (average 2009–14)

Box 2. Efficiency Costs of Price Distortions: Estimating the Deadweight Loss

The three basic postulates for applied welfare economics are the pillars for assessing efficiency costs and calculating the deadweight loss. The postulates are:[1]

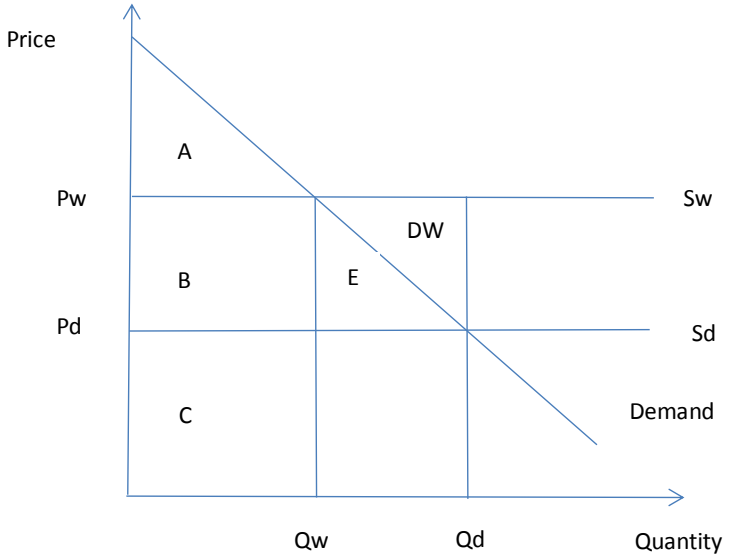
a) The demand price for a given unit measures the value of that unit to the demander;

b) The supply price for a given unit measures the value of that unit to the supplier;

c) When evaluating the net benefits or costs of a given action (program, project, or policy), the costs and benefits accruing to each member of the relevant group should be added.

Assuming a supply curve perfectly elastic—for example, the country is a price taker in global markets, at world prices Pw (international benchmark prices). Market equilibrium is reached when consumers buy Qw (Figure 5). Postulate a) indicates that consumers' valuation for Qw is given by the area below the demand curve (A+B+C); however, from postulate b) we know that for getting Qw individuals pay Pw*Qw equivalent to area B+C. From postulate c), the net gain for the economy is given by A, which in this case (perfectly elastic supply curve) is equal to the consumer surplus.

Figure 7. Efficiency Costs from Domestic Prices Lower than International Prices



If the government decides to sell Q in the domestic market (such as energy products) at a price below international prices Pd, then the amount consumed will increase to Qd. The per unit opportunity cost of this policy is given by the price gap Pw – Pd, i.e. the difference between the international price Pw – the price at which the economy could sell in the international market, and the domestic price Pd –the price the government receives for Q given the price policy; the opportunity cost for the government is given by areas B, E, and DW, commonly referred as "implicit subsidy."

[1] Harberger, A. C. (1971). ''Three Basic Postulates for Applied Welfare Economics: An Interpretative Essay.'' *Journal of Economic Literature.* September, 9:3, pp. 785–97.

Box 2. Efficiency Costs of Price Distortions: Estimating the Deadweight Loss (Continued)

However, higher consumption increases consumer welfare in an amount given by the increase in the area below the demand curve (areas B and E). The difference between the extra benefits for the consumers and the costs for the government provide the net gain or loss for the economy; in this case, the economy as a whole loses DW, also called deadweight lost or excess burden from the policy of relatively lower domestic prices.[2]

DW could be estimated using data on international and domestic prices (Pw and Pd), amounts consumed (Qd), and estimates on the price elasticity of demand.[3] In particular:

$$DW = \frac{1}{2}\left(Pw - Pd\right)(Qd - Qw) \tag{0.1}$$

$$DW = \frac{1}{2}\left(Pw - Pd\right)Qd\,\frac{(Qd - Qw)}{Qd} \tag{0.2}$$

$$Opportunity\,Cost = \left(Pw - Pd\right)Qd \tag{0.3}$$

$$Percent\,Change\,in\,Quantity\,Consumed = \frac{(Qw - Qd)}{Qd} \tag{0.4}$$

For a Cobb-Douglas type demand for Q: [4/]

$$\frac{Qw}{Qd} = \left(\frac{Pw}{Pd}\right)^{\beta};\ \beta\ is\ the\ elasticity\ of\ demand \tag{0.5}$$

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2 Estimation of areas below and above the demand and supply curve is a routine exercise in Cost – Benefit Analysis. Applications of this methodology for assessing efficiency costs in output and input markets, including for labor, capital, and foreign exchange are discussed in Jenkins, G.P., Kuo, C., and Harberger, A.C. (2011) Cost Benefit Analysis for Investment Decisions.

3 For a discussion on the estimation of efficiency costs arising from price distortions see Hines, J. R. (1999). "Three Sides of Harberger Triangles." *Journal of Economic Perspectives.* Volume 13, Number 2, pages 167–188. In particular, note the discussion on general equilibrium consideration:

> "Harberger's papers do not take explicit account of all possible general equilibrium price interactions between markets, relying instead on the assumption that the effects of any unaccounted price changes are unlikely to overturn the qualitative conclusions of his analysis. The general equilibrium work of numerous writers —for example, Shoven and Whalley (1972, 1977), Shoven (1976), Ballard, Shoven and Whalley (1985) and Ballard et al. (1985)—largely supports this assumption."

4/ Charap and others (2013) estimate the price elasticity of the demand for energy products between -0.3 and -0.5.

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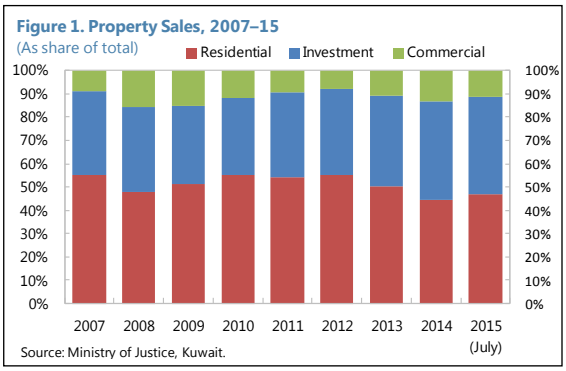
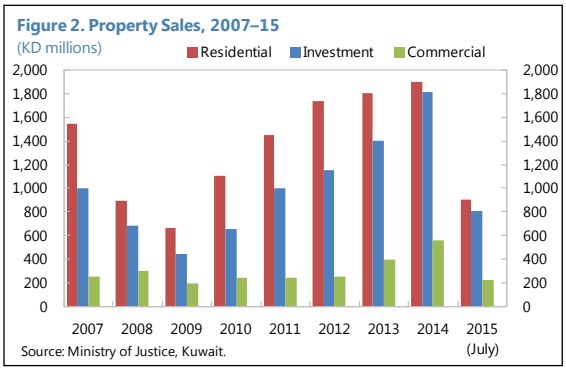
THE REAL ESTATE MARKET IN KUWAIT—AVOIDING POTENTIAL VULNERABILITIES[1]

The exposure of banks to the real estate sector, including through collateral, has increased rapidly in recent years. Nevertheless, they remain in a position of strength to withstand further price shocks. Potential risks posed by rapid credit growth to the real estate sector can be addressed by macroprudential tools, including sectoral capital requirements, and caps on loan-to-value ratios and debt-service-to-income ratios, adjusted at different stages of the credit cycle.

1. Traditionally, the real estate sector has made a sizable contribution to Kuwait's economy in terms of its share in the nominal GDP. In 2014, the share of real estate activities (construction and real estate services) was estimated at 10.6 percent of nonoil GDP.

2. The three key components of Kuwait's real estate market include residential, investment, and commercial real estate properties.[2] Residential and investment segments of the real estate market have constituted, respectively, 47 percent and 42 percent of the total value of deals made so far in 2015, with commercial real estate making up the remaining share. The investment segment activity has been rising in recent years from 34 percent in 2009, while that of the residential sector has gone down from 51 percent (Figure 1). During 2014, total deals worth KD4.3 billion were recorded in the real estate market, registering an annual average increase of 27 percent since 2009. The number of units sold also showed an average annual increase of 11 percent during the same period (Figure 2).

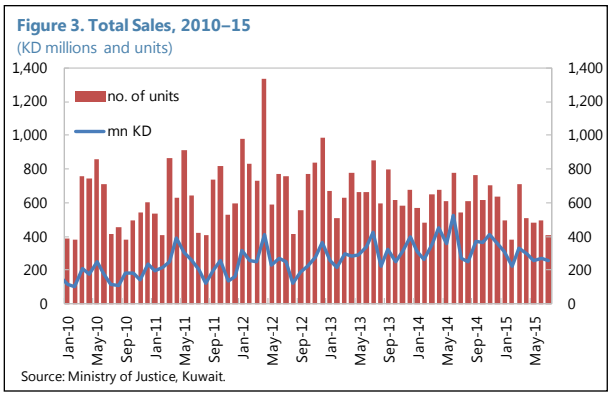




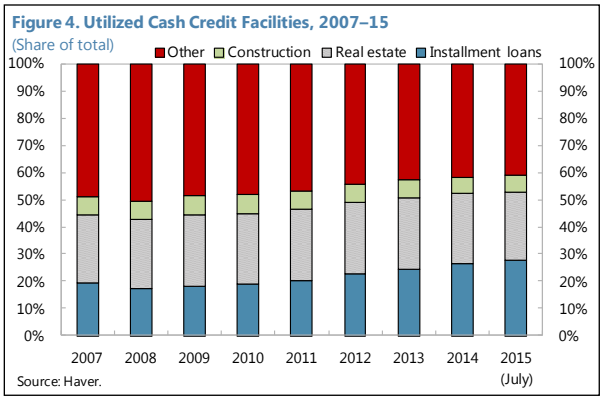
[1] Prepared by A. Prasad and Ben Piven

[2] Investment property is the official classification used for property that is made up largely of multistory apartment buildings for residential use. These are typically owned by landlords who rent out the apartments to households. By contrast, the residential classification typically denotes owner-occupied detached homes, though these are sometimes converted into multiple apartments and rented out.

3. Prices have shown some signs of softening, but there are no signs yet of a correction. Average real estate prices also appear to have been affected by falling oil prices.[3] As of July 2015, prices across the residential and investment property segments have seen average prices fall in year-on-year terms by 6 and 7 percent, respectively, while prices in the commercial segment have increased by 5 percent.[4] As residential prices began to fall in the first half of 2014, average investment property prices began increasing, rising by some 71 percent between March and September. After peaking in September 2014, average investment property prices have fallen by approximately 32 percent as of July 2015. Residential prices bottomed out in October and subsequently recovered by about 44 percent during the same period. These trends, however, do not offer strong evidence of a housing price downturn.



4. Banks have significant direct exposure to real estate markets. The share of local banks' loans to the real estate sector was 25 percent of total loans at end-July 2015. In addition, banks' installment loans to households for purchase of homes constituted 28 percent of total loans (Figure 4). Furthermore, 40 percent of the total collateral of banks is tied to real estate, mainly in the commercial and investment segments. Although the listed real estate companies have been profitable since 2012, 12 of the 46 listed companies recorded after-tax losses in 2014.



[3] The average transaction price, while providing some indication of housing price performance, is imprecise as it does not account for differences in housing size and quality, and needs to be adjusted with information on the area, age, location and other relevant factors to accurately reflect housing price changes.

[4] Six-month moving average of average KWD price per unit sold in each segment.

Table 1. Kuwait: Real Estate Sector, 2009–14

(In billions of U.S. dollars)

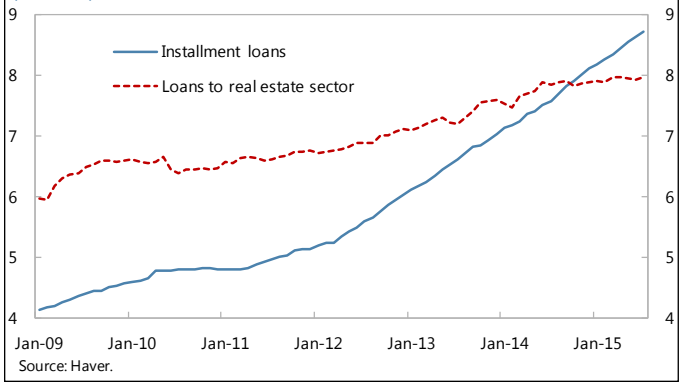
	2009	2010	2011	2012	2013	2014
Total assets	21.7	20.9	21.7	20.6	20.0	21.6
Cash	0.7	0.7	0.6	0.6	0.7	0.8
Equity (Paid up + reserves)	6.9	7.2	7.5	7.3	7.3	7.2
SH Equity	9.7	9.5	9.2	9.4	10.0	10.4
Total Liabilities	10.7	10.4	11.1	9.7	8.6	9.5
Short-term Debt	1.0	0.9	0.7	0.5	0.5	0.7
Gross Revenue	1.1	1.0	1.7	1.3	1.5	1.5
Net Operating Profit	0.3	0.2	0.5	0.4	0.5	0.4
Total Investment Income	-0.4	-0.5	-0.5	0.3	0.4	0.2
Net Profit Before Tax	-0.4	-0.5	-0.4	0.3	0.6	0.5
Net Profit After Unusual Items	-0.5	-0.5	-0.4	0.3	0.7	0.5
Debt equity	1.11	1.10	1.20	1.04	0.86	0.91

Source: Staff calculations based on financials from Zawya.

5. Bank lending to the real estate sector has continued to grow. Real estate-related loans rose 59 percent between 2008 and 2014, nearly twice as fast as overall bank credit growth.[5] In particular, unsecured consumer installment loans (used for housing purchase or renovation) almost doubled during this period, rising to 26.4 percent of banks' total local loans outstanding at the end of 2014, up from 17.3 percent at the end of 2008. Installments loans continued to grow at a fast clip of 15 percent year-on-year in July 2015 (Figure 5).

Figure 5. Kuwait: Bank Credit to Real Estate Sector, 2009–15

(KD billion)



Source: Haver.

[5] Real estate-related loans are defined as the sum total of credit to the real estate sector and installment loans.

6. The Central Bank of Kuwait (CBK) has taken steps to address potential risks in the private residential real estate market. In the residential real estate segment, installment loans are limited by a debt-service to income ratio (DSTI) of 40 percent and a ceiling on loans of KD70,000 with a maximum tenor of 15 years. A capital risk weight of 150 percent also applies to installment loans. In November 2013, the CBK introduced limits on the loan-to-value (LTV) ratio for financing extended by banks, investment companies and finance companies to individuals to purchase or develop residential property. An LTV limit of 50 percent applies to the purchase of undeveloped land, 60 percent to the purchase of existing property, and 70 percent to housing construction in residential areas. The new regulation, however, is not applicable to unsecured installment loans used to buy or renovate first homes. Effective December 2014, the CBK issued regulations to tighten the treatment of real estate collateral by phasing out credit mitigation by 10 percent annually yearly over 5 years.[6]

7. Macroprudential tools can help mitigate potential risks posed by banks' high exposures to the real estate sector. It is important to ensure that macroprudential policies are reviewed constantly to ensure that they do not exacerbate any property price correction, while preempting the buildup of excessive risks related to real estate exposures. Heightened supervisory vigilance will need to be maintained to ensure that real estate exposures are appropriately classified and adequately provisioned for. House price growth is a core indicator to monitor and the authorities should construct indices for residential properties as well as commercial properties. Also, other indicators, such as both the average and distribution of the LTV and DSTI (DSC) ratio, should be collected and analyzed to adjust macroprudential policy measures properly and swiftly.

[6] In 2008, in order to support banks during the financial crisis, the CBK allowed banks to treat real estate collateral as a risk mitigant. For example, if a bank extended a loan for a building for KD2 million, but took a real estate collateral of KD4 million for the loan, the bank would not need to hold any capital against this loan. This treatment of real estate collateral made extending loans for investment real estate and commercial real estate more lucrative than other types of lending. However, as of December 2014, this treatment, which encouraged lending to the real estate sector, is being phased out; the 50 percent credit mitigation is being reduced by 10 percent yearly over 5 years.

THE RESILIENCE OF THE BANKING SYSTEM TO MACROECONOMIC SHOCKS IN KUWAIT[1]

A. Introduction

1. The macroeconomic environment in the GCC has evolved rapidly over the past two years, increasing risks on the financial sector. Oil prices have dropped by 44 percent since June 2014 and equity markets have fallen by 24 percent since 2013. The high level of interconnectedness among banks, industrial and commercial groups, the government, and investment companies (ICs) can carry risks to the financial system and the wider economy during periods of stress. It is, therefore, essential to monitor these risks carefully and implement measures to prevent risks to financial stability.

2. Kuwait's financial regulatory framework has been reinforced to strengthen the resilience of the banking system to large macroeconomic shocks, particularly following the 2009 global financial crisis. The central bank's regulations subject banks to prudential requirements relating to liquidity, leverage, capital adequacy, large exposures, related-party lending, and corporate governance.

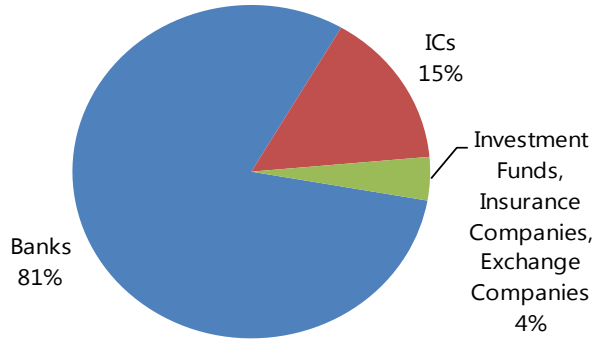
3. This paper assesses the resilience of the Kuwait's banking system to oil-related macro-financial shocks. It analyses the macroeconomic determinants of non-performing loans (NPLs) in the Kuwaiti banking system, and assesses the resilience of banks' capital to shocks in non-oil private sector growth, equity, and real estate prices.

4. The remainder of this paper is structured as follows: Section B provides stylized facts on Kuwait's financial system. Section C analyzes the determinants of NPLs in Kuwait's banking system. And finally, Section D tests the resilience of banks' capital under adverse scenarios of growth and equity and real estate prices.

B. The Financial System in Kuwait: Stylized Facts

5. The Kuwaiti financial system is dominated by the banking sector and is well diversified. In 2014, banks with assets of KD66.4 billion (US$ 226.7 billion, 135.4 percent of GDP) accounted for 80.6 percent of the domestic financial sector and ICs constituted the second largest share in

Figure 1. Financial System Structure, 2014



Source: Central Bank of Kuwait.

[1] Prepared by Dominique Fayad

terms of assets (Figure 1). The domestic banking sector is composed of five Islamic banks, five conventional banks, and one specialized bank. The conventional banks hold more than 60 percent of the total banking system assets on a consolidated basis, a share that has remained broadly stable since 2007.[2] There are 86 investment companies—38 conventional and 48 operating in accordance with the provisions of the Islamic law, with assets of KD10.4 billion at end-2014.

6. The Kuwaiti financial system is characterized by a high degree of interconnectedness.[3] Ownership linkages in the financial system are complex, with close connections among industrial and commercial groups, banks, sovereign, and ICs. Some large industrial and commercial groups have ownership stakes in Kuwaiti banks. The Kuwaiti government—through different government agencies—also has stakes in several banks. Banks in turn own ICs, and also provide industrial and commercial groups and ICs with credit as part of their banking business. ICs also have ownership stakes in banks and industrial and commercial groups. Nevertheless, the risk arising from the direct linkages between local banks and ICs appears limited since banks have been reducing their direct exposures and building up precautionary provisions on standard loans. .

7. Traditional instruments prevail in Kuwaiti banks balance sheets through loans and investments, which account for 61.5 percent and 15.6 percent, respectively. Large corporations accounted for 72.1 percent of total gross loans in 2014. Lending to real estate and households collectively account for 45 percent of total gross loans. Banks' exposure to the equity market remains considerable, notwithstanding the declining trend in recent years; equity investments make up about 23.8% of banks' total investments, and use of firms' shares as collaterals account for 27.4 percent of banks' overall collaterals.

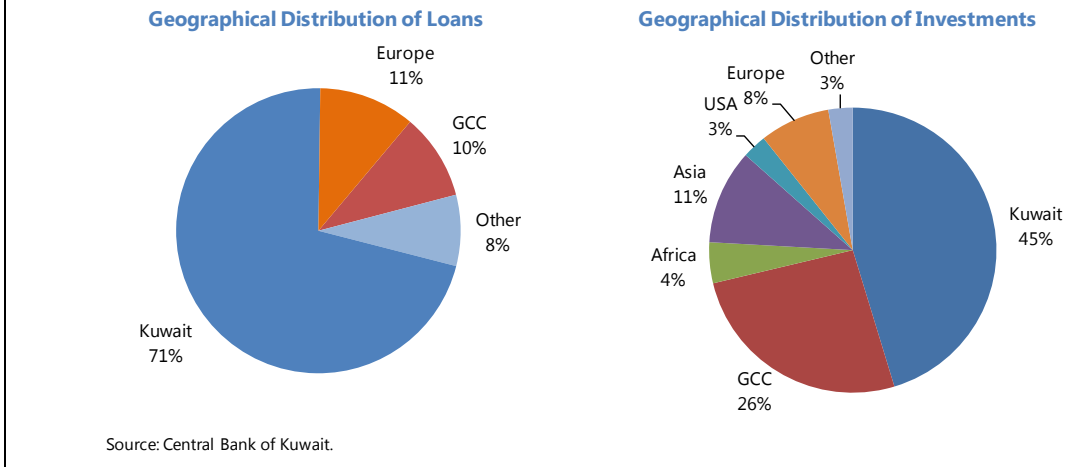
8. Banks' exposure to the real estate sector has increased rapidly in recent years. Real estate-related loans rose 37.4 percent between 2008 and 2014, nearly twice as fast as overall bank credit growth. In particular, unsecured consumer installment loans (used for housing purchase or renovation) almost doubled during this period, rising to 30.2 percent of banks' total local loans outstanding at the end of 2014 from 19.3 percent at the end of 2008. The average transaction price of private residences rose 31 percent in 2013 and another 11 percent in 2014. The share of real estate collateral (excluding residential) in the total has been increasing steadily since 2007, reaching more about 40 percent in 2014.

9. Kuwaiti banks have a large foreign exposure through subsidiaries and branches abroad. Consolidated banking assets abroad accounted for 20.4 percent of total assets at end-2014, of which one-third related to loans in GCC countries, 46 percent of which were in Bahrain. Only 26 percent of total gross loans were in foreign currencies and were covered by strict forex limits (Figure 2).

[2] Due to some limitations in the data breakdown, this number excludes 12 foreign bank branches in Kuwait with combined assets of KD 2.6 billions.

[3] Strengthening Resilience in the Financial System, André Oliveira and Ananthakrishnan Prasad, Kuwait SIP, 2013.

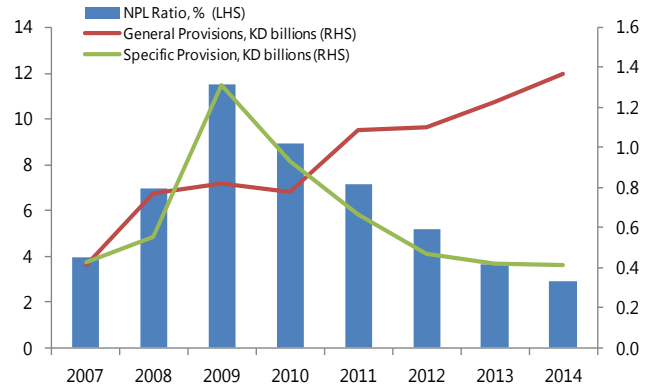
Figure 2. Geographical Distribution of Loans and Investments, 2014



Source: Central Bank of Kuwait.

10. Asset quality of the banking system has improved significantly over the past few years. The gross NPLs have dropped to 2.8 percent of total loans in 2015 compared to the pre-crisis level of 3.8 percent in 2007. Local banks' contribution of domestic NPLs was 61.4 percent in 2014 (Figure 3). Moreover, the coverage ratio (available provisions to NPLs) has reached 164 percent, well above the pre-crisis ratio of 87 percent in 2007. The decline in NPLs has been broadly based. Major sectors have posted a decline in NPLs during 2014 except for the household sector, which recorded a small increase in NPLs. The decline in NPLs has been particularly significant in the case of the real estate and construction sectors, followed by investment companies. However, the share of NPLs in foreign countries grew by 16 percentage points, mainly in the GCCs, Asia, and Europe. As a result of lower NPLs, provision expenses dropped from KD677 million in 2013 to KD511 million in 2014, which contributed to a surge in net income by 26.5 percent on a consolidated basis. Moreover, three conventional banks reported particularly important profit growth with 15 percent of their consolidated net income coming from subsidiaries and branches aboard. Consequently, both the return on equity and return on assets of the banking sector improved in 2014 by, respectively, 13 and 10 basis points.

Figure 3. NPL ratio, General and Specific Provisions, 2007–14



Source: Central Bank of Kuwait.

11. Since the global financial crisis, Kuwait has sharpened its prudential regulation regime by tightening capital and liquidity requirements. The CBK has introduced Basel III capital regulations for both the conventional and growing Islamic bank segments, including a framework for domestic systemically important banks, which will increase the regulatory capital of banks significantly, as well as regulations on liquidity and leverage ratios (Table 1).[4] The main source of vulnerability to the banking system comes from credit concentration to the corporate and real estate sectors, given the structure of Kuwait's domestic market, which the central bank regulates through concentration limits. The main sectoral exposures of banks are in real estate, equity and household lending, the latter two regulated through ceilings on equity investments and debt-to-income limits, respectively. The CBK introduced limits on the loan-to-value (LTV) ratio and the debt service-to-income (DSTI) ratio in November 2013 for financing extended by banks, investment companies, and finance companies to individuals to purchase or develop residential property. An LTV limit of 50 percent applies to the purchase of undeveloped land, 60 percent to the purchase of existing property, and 70 percent to housing construction in residential areas. The LTV limits were accompanied by a DSTI limit of 50 percent of income other than the monthly salary and income from the property to be financed. The new regulation, however, is not applicable to unsecured installment loans used to buy or renovate first homes, to which a DSTI limit of 40 percent has been in place since the mid-1990s (net of the automatic repayment of the government interest free loan) still applies. A capital risk weight of 100 percent applies to installment loans.

12. The interconnectedness among banks, industrial and commercial groups, the government, and ICs can pose a risk to the financial system and the economy during periods of stress. The 2009 crisis, which led to the insolvency of some ICs and placed subsequent stress on the banking system, is a reminder that the current interconnectedness in the financial system can propagate and exacerbate financial and real shocks. The bankruptcy of an industrial or commercial group could lead to a stress in the banking system, underscoring the need for high capital cushions in the banking system.

[4] For more detail and regional comparisons see Prasad, Monem, and Martinez (2005).

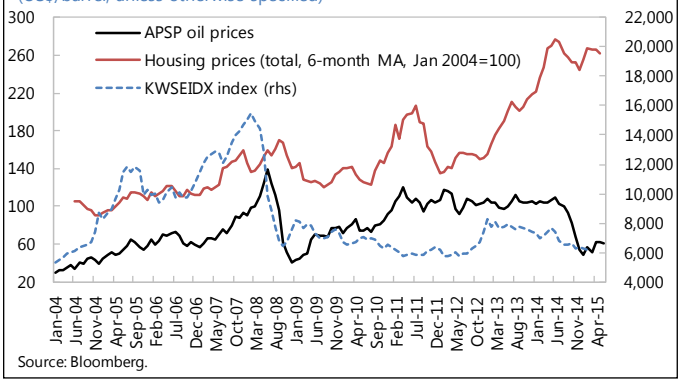
Table 1. Basel III Implementation Schedule in the GCC

	KSA	UAE	QATAR	BAHRAIN	KUWAIT
Capital Adequacy Ratio	2015: Final rule in force: the domestic legal and regulatory framework is already applied to banks.	To be finalized in the near future	Implemented from 2014	6.5 percent	2014: 12.0 percent 2015: 12.5 percent 2016: 13.0 percent
Framework for DSIBs.	2016: The framework for DSIBs has been implemented beginning 2016.	To be finalized in the near future	Implemented from 2016	Number of banks=5 No additional Capital buffer Resolution Recovery Plan submitted to the CBB/ Subject to more intensive Supervision	2016: 0 percent - 2 percent
Liquidity Ratio □	2015: Final rule in force: the domestic legal and regulatory framework is already applied to banks. 2016: Final circular #107020 on amended LCR was issued on 10 July 2013 and in force.	To be finalized in the near future	Liquidity coverage ratio to be 60 percent in 2014, increasing by 10 percent each year and reaching 100 percent by 2018. NFSR to be 70 percent in the current year, increasing by 10 percent each year to reach 100 percent by 2018.	2015: LCR min. 60 percent 2016: LCR 70 percent 2017: LCR min 80 percent 2018: LCR min 90 percent 2019: 100 percent LCR NSFR minimum standard	2015: 100 percent 2016: 100 percent
Leverage Ratio □	2015: Final rule in force: the domestic legal and regulatory framework is already applied to banks. 2016:Leverage ratio is Monitored quarterly at a minimum of 5 percent since January 2011 on the basis of BCBS document of December 2010. Disclosure will start in 2015 as per the BSCS requirements. Any other adjustments to definition and calibration will be made by 2017.	To be finalized in the near future	Already implemented. Ratio set at 3 percent	2017: Disclosure starts 2018: Migration to in 2018	2014: 3 percent 2015: 3 percent 2015: 3 percent

C. The Determinants of NPLs in Kuwait

13. The authorities identify two channels through which an oil price shock can affect the banking sector, both based on the government revenues channel. [4] First, through a shortage in government revenues that could affect the path of government investment projects that would have spillover effects on growth, household disposable income and demand for credit, and second, through the reduced debt servicing capacity of private companies and households if lower government revenues translate to slower growth in salaries. However, given the high correlation between oil, equity, and real estate prices in Kuwait (Figure 4), and the interconnectedness described in Section B, banks' balance sheets can be impacted in a variety of ways: by swings in financial markets, such as real estate (through direct loans, investments, exposure to ICs themselves exposed to real estate, and collaterals), equity markets (through ICs, investments, and collaterals), wealth effects, and spillovers from drops in oil prices that can impact non-oil private sector growth limiting agents' capacity to repay.

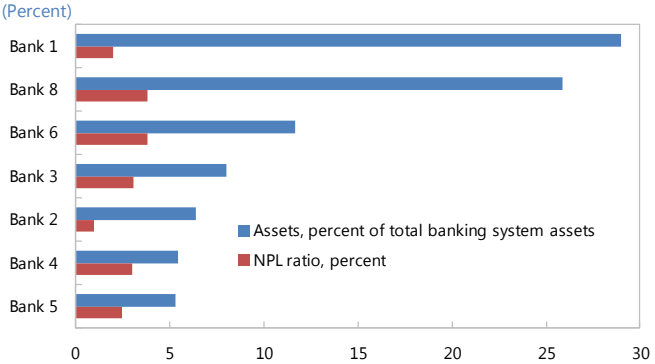
Figure 4. Oil, Equity, and Real Estate Prices in Kuwait, 2004–15
(US$/barrel; unless otherwise specified)



Source: Bloomberg.

14. Staff's macro-credit risk model suggests that some macroeconomic and bank- level variables are key determinants of NPL ratios in Kuwait. We conducted our analysis on seven Kuwaiti banks (five conventional, two Islamic), which account for 91.6 percent of total banking system assets (Figure 5), using a System GMM dynamic panel approach with year dummy variables to control for fixes effects and NPL data from the authorities. The analysis focuses on banks where sufficient data was available from 2000 to 2014. In the specification we chose, the NPL ratio exhibits a strong

Figure 5. Sample of Banks
(Percent)



Source: IMF staff calculations.

Table 2. Results

Determinants of NPLs	Coeff.	
NPL $_{t-1}$	0.961	***
Real Non-Oil Private Sector Growth $_{t-1}$ (%)	-0.027	**
Real Equity Prices Growth $_{t-1}$ (%)	-0.019	***
Real Estate Prices Growth - Investment $_{t-1}$ (%)	-0.011	***

Source: IMF staff calculations.
***p<0.01, **p<0.05, *p<0.1

[4] Financial Stability Report, Central Bank of Kuwait, 2014.

auto-correlation. Non-oil private sector growth is significant with the correct sign. Real equity price growth and real estate price growth (investment) are statistically significant with the correct sign (Table 2).

D. Assessing the Resilience of the Banking System

15. The banking system shows resilience under various stress scenarios, although a few banks would require capital injections under severe stress. Staff's sensitivity analysis is based on two scenarios from 2015 to 2017, characterizing moderate and severe deterioration in combined growth, equity, and real estate prices, based on historical lows in Kuwait (Table 3). The shock in equity prices is based on the largest historical fall in equity prices, at about -58.68 percent from June 22, 2008 to February 28, 2009. The non-oil private sector growth shock of -4.7 percent corresponds to the largest negative growth rate in 2009. Finally, the real estate (investment) price drop of 30 percent and its recovery is based on the 2011 episode.

Table 3. Sensitivity Analysis Scenarios

	Moderate Scenario			Severe Scenario		
	2015	2016	2017	2015	2016	2017
Real Non-Oil Private Sector Growth (%)	-4.7	0.0	0.0	-8.0	0.0	0.0
Real Equity Prices Growth (%)	-22.6	0.0	0.0	-60.0	10.0	15.0
Real Estate Prices Growth - Investment (%)	-20.0	0.0	0.0	-30.0	-10.0	10.0

Source: IMF staff calculations.

16. Stress test results indicate that the banking system, overall, holds sufficient buffers to absorb losses under severe macro scenarios. Overall, the combined capital of banks in the sample would remain above the central bank's regulatory minimum prescribed under the moderate scenario, with the NPL ratio rising to about 6.7 percent and a capital adequacy ratio (CAR) at 17.2 percent two years after the shock. However, under a severe stress scenario, the capital of five out of seven banks would fall below the minimum prescribed regulatory minimum, with CAR falling below 8 percent two years after the shock.[5] The additional capital requirements of the five banks would amount to KD1.26 billion, 2.6 percent of GDP (Table 4). At an aggregate level, the capital adequacy ratio would fall to 9.7 percent, below the regulatory minimum standard.

17. Although the probability of realizing such large shocks is low, this calls for adherence to Basel III capital requirements and strengthening the resolution plans for Domestic Systemically Important Banks (D-SIBs). In particular, the minimum capital requirements and the conservation buffer would ensure that individual banks remain solvent through a period of stress. At

[5] The results can be refined by the exact NPL loss category by banks non-interest income and expenses trends (financial transaction, FOREX operation, commissions).

the same time, the CBK should start thinking of developing a countercyclical capital buffer framework to ensure that the banking sector, in aggregate, has the capital on hand to help maintain the flow of credit in the economy when downturn losses materialize. Further, CBK should initiate recovery and resolution plans for D-SIBs. The Financial Stability Board and the Basel Core Principles for Banking Supervision have favored a three-pillar approach for systemic banks: intensified supervision, improved resolvability, and enhanced loss absorbency.

Table 4. Sensitivity Analysis Results

Bank 1

	Historical	Moderate Scenario			Severe Scenario		
	2014	2015	2016	2017	2015	2016	2017 [1]
NPL (% of total loans)	1.9	2.4	5.7	6.4	2.4	13.1	13.1
Provisions (% of NPLs)	2.5	2.3	1.4	1.4	2.3	1.1	1.1
Capital adequacy ratio	14.5	**15.9**	**16.0**	**16.0**	**15.7**	**11.1**	**11.6**
Recapitalization to achieve 12.5% CAR (Mn KD):						184.9	119.3
% of assets:						1.1	0.7

Bank 2

	Historical	Moderate Scenario			Severe Scenario		
	2014	2015	2016	2017	2015	2016	2017
NPL (% of total loans)	0.9	1.1	2.8	3.2	1.1	6.8	6.9
Provisions (% of NPLs)	6.9	5.8	2.7	2.5	5.9	1.6	1.6
Capital adequacy ratio	18.2	**18.2**	**18.4**	**18.4**	**18.2**	**17.6**	**18.1**

Bank 3

	Historical	Moderate Scenario			Severe Scenario		
	2014	2015	2016	2017	2015	2016	2017
NPL (% of total loans)	3.2	3.9	9.1	9.9	3.9	19.9	19.5
Provisions (% of NPLs)	1.9	1.7	1.3	1.2	1.8	1.1	1.1
Capital adequacy ratio	15.5	**16.7**	**14.1**	**14.5**	**16.6**	**2.9**	**3.4**
Recapitalization to achieve 12.5% CAR (Mn KD):						290.5	275.5
% of assets:						6.1	5.8

[1] Impact and recapitalization needed to achieve 12.5% CAR 2 years after the shock if no corrective measures are taken to meet regulatory requirement in 2016.

Table 4. Sensitivity Analysis Results (concluded)

Bank 4

	Historical	Moderate Scenario			Severe Scenario		
	2014	2015	2016	2017	2015	2016	2017
NPL (% of total loans)	2.8	3.4	8.0	8.7	3.4	17.7	17.4
Provisions (% of NPLs)	2.1	2.0	1.3	1.3	2.0	1.1	1.1
Capital adequacy ratio	23.7	**25.3**	**24.1**	**24.7**	**25.1**	**15.3**	**15.8**

Bank 5

	Historical	Moderate Scenario			Severe Scenario		
	2014	2015	2016	2017	2015	2016	2017
NPL (% of total loans)	2.8	3.4	8.0	8.8	3.4	17.8	16.0
Provisions (% of NPLs)	1.2	1.2	1.0	1.0	1.2	0.9	0.9
Capital adequacy ratio	16.3	**17.7**	**15.1**	**15.2**	**17.4**	**4.1**	**5.3**
		Recapitalization to achieve 12.5% CAR (Mn KD):				148.5	129.0
		% of assets:				4.7	4.0

Bank 6

	Historical	Moderate Scenario			Severe Scenario		
	2014	2015	2016	2017	2015	2016	2017
NPL (% of total loans)	3.82	4.6	10.5	11.3	4.6	22.6	22.0
Provisions (% of NPLs)	0.82	0.8	0.8	0.8	0.8	0.8	0.8
Capital adequacy ratio	16.1	**17.5**	**16.0**	**16.7**	**17.5**	**7.1**	**7.8**
		Recapitalization to achieve 12.5% CAR (Mn KD):				2504.8	2170.5
		% of assets:				3.6	3.2

Bank 8

	Historical	Moderate Scenario			Severe Scenario		
	2014	2015	2016	2017	2015	2016	2017
NPL (% of total loans)	4.0	4.8	11.0	11.8	4.8	23.5	22.9
Provisions (% of NPLs)	1.2	1.1	0.9	0.9	1.1	0.8	0.8
Capital adequacy ratio	16.3	**17.4**	**16.3**	**16.4**	**17.3**	**9.0**	**9.8**
		Recapitalization to achieve 12.5% CAR (Mn KD):				385.8	303.2
		% of assets:				2.5	2.0

Source: IMF Staff Calculations

18. There is further scope to better understand, identify, and mitigate spillovers through the financial sector, and in particular, to build up appropriate buffers and limit excessive leveraging and credit booms in good times. Maintaining financial stability requires flexible and adaptive macroprudential policies. A macroprudential policy framework should ideally encompass: (i) a system of early warning indicators that signal increased vulnerabilities to financial stability; (ii) a set of policy tools that can help contain risks ex ante and address the increased vulnerabilities at an early stage, as well as help build buffers to absorb shocks ex post; and (iii) an institutional framework that ensures the effective identification of systemic risks and implementation of macroprudential policies.

19. The existing institutional arrangement in Kuwait requires adjustments to support an effective macroprudential policy function. Key improvements would involve: (i) assigning a macroprudential policy mandate and a delineation of its powers; (ii) establishing a formal financial stability coordination committee headed by the central bank comprised of all financial system regulators, including the capital markets authority, the insurance supervisor, and the Ministry of Finance; (iii) ensuring appropriate accountability mechanisms; and (iv) elevating to a legal requirement the exchange of information.

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PERFORMANCE AND VULNERABILITIES OF KUWAIT'S NONFINANCIAL CORPORATE SECTOR[1]

The corporate sector in Kuwait appears well positioned to weather shocks, including from the recent fall in oil prices, with most sectors displaying comfortable levels of debt servicing capacity. Ex-post profitability (return on assets) has remained stable at low levels, particularly when compared with other countries, including GCC peers. Companies appear undervalued; price-to-earnings ratios may point to lower expected earnings compared to other markets. Further deepening of asset markets to provide companies alternative means of financing and investment, improving the investment climate in the economy, including reducing costs of doing business in Kuwait, increasing privatization efforts, strengthening corporate governance, establishing bankruptcy procedures, and better data availability to investors would all contribute to a stronger corporate sector.

A. Introduction

1. Kuwait's nonfinancial companies remained profitable in 2014 with comfortable levels of debt servicing capacity. This note explores the performance and vulnerabilities of Kuwait's nonfinancial corporate sector using publicly available information on the balance sheets of listed companies. Companies were profitable in 2014, though at lower levels than in previous years. Supported by higher debt, assets increased in most sectors in 2014, but net profits and return on assets fell with respect to 2013. Companies continued to display comfortable levels of debt servicing capacity as measured by the Interest Coverage Ratio (ICR); if cash holdings are taken into account, debt servicing capacity improves even further. When compared with other countries, including GCC peers, Kuwait's companies observed lower rates of return and ICRs. Stress tests applied to ICRs show limited, but not trivial, aggregate risks from interest rate shocks.

B. Nonfinancial Corporate Sector Performance

2. Corporate sector profitability has remained modest since 2009, with the exception of a spike in 2010 (Table 1). Compared globally, Kuwait's corporations have generated relatively low returns on assets—about 4 per cent per year between 2009 and 2014—compared with 10.9 percent in 2007, just before the global crisis. Related to this, corporations have not been able to sustain asset growth, both in absolute values and relative to GDP. Total assets to GDP were 41 percent in 2014 (110.9 in percent of non-oil GDP), substantially below the ratio observed in 2009—69 percent of GDP and 142.6 percent of non-oil GDP.

[1] Prepared by Sergio L. Rodriguez and Juan Carlos Flores.

Table 1. Kuwait: Corporate Performance, 2009–14

	2009	2010	2011	2012	2013	2014
Companies	128	128	130	130	130	130
	(Billions of U.S. dollars)					
Total assets	72.8	66.3	69.0	66.4	67.5	70.9
Cash	3.5	4.4	4.0	3.6	4.3	4.1
Total liabilities	36.0	28.2	30.5	29.0	28.9	30.9
Short-term debt	6.4	5.3	5.9	5.3	4.5	4.5
Net profits	1.6	4.2	2.6	2.4	2.9	2.5
	(Percent)					
Assets to GDP	68.7	57.5	44.8	38.2	38.4	41.1
Assets to Non Oil GDP	142.6	140.0	132.1	119.6	111.3	110.9
Liabilities to Equity	97.7	73.9	79.2	77.6	75.1	77.0
Return on Assets	2.2	6.3	3.7	3.6	4.3	3.5
Return on Equity	4.4	10.9	6.6	6.5	7.5	6.3

Source: IMF staff calculations based on Zawya balance sheets.

3. Lower ex-post returns in Kuwait's corporate sector point to the need to remove structural impediments to improve profitability. Companies in Kuwait have underperformed—in terms of return on assets—when compared with companies in other markets.[2] Average returns in Kuwait were 7.9 percent during 2007-2014, lower than returns in all other GCC countries, such as Qatar (14.5 percent), Oman (13.3 percent), and Bahrain (10.7) (Table 2). Average returns in Kuwait are also below returns observed in the U.S. and Canada (8.4 percent), emerging markets in America (9.4 percent), Asia (10 percent), and Europe (10 percent). The relatively modest performance appears to be broadly based across sectors, except for telecommunications and food and beverages companies (Annex Table 1).

4. Kuwait's corporate sector appears to be undervalued based on the price per earnings ratio (PE). When compared with the corporate sector in the GCC (Table 3), the average PE ratio in Kuwait (13.5) is higher than in Bahrain (8.8) and Oman (10.8), but lower than in Qatar (15) and Saudi Arabia (16.9). Kuwait does not score well when compared with advanced markets—which have PE ratios between 15.7 and 17.7, or emerging markets in the Americas (17.9) and Asia (24.8). Low PEs indicate low expected profits (relative to equity), high risk perceived by investors and hence require a higher rate of return, and/or investors expect a low dividend growth.[3] In principle, relatively lower

[2] Cross-country comparisons come from the Corporate Vulnerability Utility (CVU) developed by the IMF Research Department. The CVU provides corporate vulnerability indicators for 74 countries starting in 1990; during the early 90s data is available for only 53 countries. Indicators are based on firm-level data from annual reports of publicly traded companies.

[3] The PE ratio could be written as:

$$\frac{P}{E} = \left(\frac{Dividends}{E}\right)\left(\frac{1}{r-g}\right)$$

Dividends measures expected dividends next year, *r* is the return that investors require from similar investments, and *g* is the expected rate of dividend growth.

PEs also point to the need to reform the corporate business environment for companies to be able to increase expected profitability.

Table 2. Non-Financial Corporate Sector: Return on Assets, 2007–14

(In percent)

	2007	2008	2009	2010	2011	2012	2013	2014	Average 2007 - 2014
GCC									
Bahrain	17.0	15.1	7.3	8.0	13.4	8.8	7.7	8.3	10.7
Kuwait	12.2	5.6	4.9	12.6	8.6	7.0	6.8	5.7	7.9
Oman	18.3	14.3	14.5	12.5	11.1	12.3	12.2	11.5	13.3
Qatar	19.3	18.4	11.7	13.3	14.5	13.8	13.9	11.3	14.5
Saudi Arabia	14.7	7.6	6.9	8.4	9.9	10.2	10.1	9.1	9.6
UAE	7.6	10.8	8.0	7.3	6.6	8.0	7.5	8.7	8.1
Developed Markets									
Americas	8.2	7.8	7.8	9.2	9.1	8.5	8.5	8.3	8.4
Asia	7.8	6.5	4.8	6.1	6.1	5.7	5.9	6.2	6.1
Europe	10.0	7.5	6.4	8.2	7.8	7.4	7.6	8.1	7.9
Emerging Markets									
Americas	11.5	10.6	9.0	10.2	10.3	9.0	6.9	7.8	9.4
Asia	13.0	9.9	9.3	9.8	9.9	9.7	9.2	9.2	10.0
Europe	13.7	10.6	8.7	10.2	11.3	10.0	8.8	6.6	10.0
Global	9.3	8.0	7.1	8.5	8.5	8.0	7.9	8.0	8.2

Source: IMF Corporate Vulnerability Utility (CVU).

Table 3. Non- Financial Corporate Sector: Price to Earnings Ratio, 2007–14

	2007	2008	2009	2010	2011	2012	2013	2014	Average 2007 - 2014
GCC									
Bahrain	10.6	8.5	6.6	7.6	6.9	9.0	11.2	9.9	8.8
Kuwait	16.1	11.0	12.8	17.3	11.2	13.3	13.3	13.4	13.5
Oman	12.3	9.8	10.1	11.4	11.4	6.5	13.0	11.9	10.8
Qatar	25.8	17.8	17.0	13.1	9.6	9.9	13.3	13.9	15.0
Saudi Arabia	20.3	9.9	21.8	19.3	10.1	15.3	22.4	16.4	16.9
UAE	14.4	8.5	15.1	13.6	11.5	10.9	14.7	15.2	13.0
Developed Markets									
Americas	18.6	11.2	17.3	18.8	16.3	18.1	19.8	21.7	17.7
Asia	19.3	13.6	12.6	17.8	14.6	15.6	16.1	16.0	15.7
Europe	16.8	11.7	18.0	14.8	13.1	15.2	19.3	20.0	16.1
Emerging Markets									
Americas	17.2	13.2	18.8	17.6	12.8	19.0	21.3	23.6	17.9
Asia	28.3	19.4	26.0	28.1	22.2	22.4	23.8	28.4	24.8
Europe	14.2	5.2	10.0	12.2	8.5	8.7	10.7	9.8	9.9
Global	18.5	12.3	17.0	18.4	15.5	17.1	19.2	20.7	17.3

Source: IMF Corporate Vulnerability Utility (CVU).

C. Corporate Vulnerability Analysis

Interest coverage ratios

5. The corporate sector in Kuwait appears well positioned to weather shocks, including those produced by the fall in oil prices. In particular, most sectors display comfortable levels of debt servicing capacity measured by the Interest Coverage Ratio (ICR).[4] Data from Zawya place the corporate sector ICR at 5.3 in 2014, indicating that the sector generates enough profits to cover 5.3 times the interest payments on debt, with mean and median ICR at 15.6 and 4, respectively; mean values are affected by very high ICRs for companies in the agricultural sector (152 in 2014), which have very small debt and interest payments (Table 4).

Table 4. Kuwait: Interest Coverage Ratio, 2009–14

	Number of Companies 2014	2009	2010	2011	2012	2013	2014
Total	130	3.5	3.4	4.3	4.6	5.4	5.3
Agriculture	1	1.5	12.5	59.2	53.4	79.6	152.1
Media	3	2.7	2.6	4.7	6.4	13.0	14.5
Food and Beverages	9	4.1	5.5	6.1	7.5	10.5	12.7
Telecommunications	6	5.4	8.4	14.4	15.3	15.5	12.4
Education	5	0.7	0.6	2.3	4.0	6.2	10.1
Information Technology	2	2.9	2.6	1.8	3.2	5.0	6.6
Transport	10	5.6	3.2	2.7	3.9	4.9	5.8
Industrial Manufacturing	18	3.1	2.6	3.8	3.5	3.7	4.0
Leisure and Tourism	5	2.0	1.5	3.2	3.3	4.5	4.0
Health Care	6	4.1	2.3	3.1	3.8	4.3	3.5
Oil and Gas	7	1.7	2.0	2.3	2.6	3.6	3.4
Construction	8	1.4	1.6	2.0	2.0	1.8	2.3
Real Estate	46	1.0	0.6	1.5	1.2	1.8	1.8
Services	2	-2.3	0.0	4.5	7.5	3.2	1.3
Retail	2	1.0	-0.1	-1.5	0.0	0.3	-0.7
Mean		2.3	3.0	7.3	7.8	10.5	15.6
Median		2.0	2.3	3.1	3.8	4.5	4.0

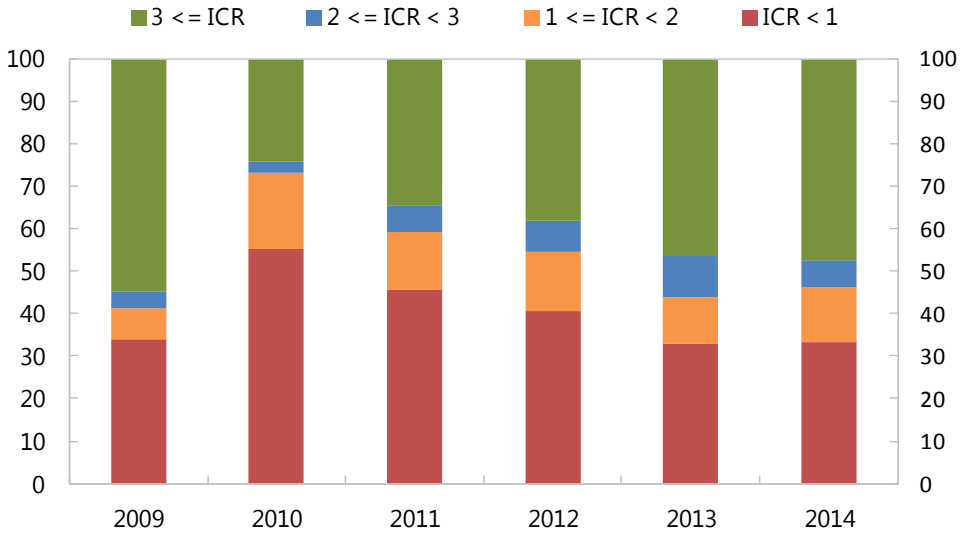
Source: Staff calculations based on Zawya balance sheets.
Note: Interest Coverage Ratio (ICR) is defined as earnings before interest and taxes over interest expense. A negative ICR indicates negative profits.

6. Debt servicing capacity has improved during the past several years (Figure 1). The percentage of debt held by companies that does not generate enough profits to service its debt (companies with ICR less than one) has been falling in recent years, while companies with ICRs greater than three have been holding an increasing share of debt to the nonfinancial corporate sector. Furthermore, when cash cushions are taken into consideration, ICRs improve further in all sectors.

[4] The ICR is defined as earnings before interest and taxes over interest expenses, and measures a firm's debt servicing capacity. Firms with ICRs below 1 are unable to generate enough income to cover interest payments and their debt could be classified as distressed.

Figure 1. Kuwait: Companies Debt and Interest Coverage Ratio (ICR), 2009–14

(Percent of Corporate Debt by Companies according to their ICR)



Source: IMF staff calculations with data from Zawya.

7. While corporations in Kuwait do not seem to display vulnerabilities, the degree of coverage is lower than for corporations in other markets. In particular, Kuwait's ICR is lower than in other GCC countries except the United Arab Emirates, and is also lower when compared with ICRs for companies in advanced and emerging markets (Table 5). Lower ICRs could result from lower profits and/or higher debt (higher debt translates into higher interest payments and lower ICRs). Data on leverage, however, suggest that it is not higher debt (and higher interest payments), but lower profits which explains lower ICRs. Kuwait's average debt to equity ratio (2007–14) is lower than in the rest of the market comparators, including advanced and emerging markets (Annex Table 2).

8. The extent of risk, however, varies by sector (Table 6). In particular, for 2014, 68 out of 130 companies accounting for 66 percent of the debt had an ICR greater than 1; the average ICR for these companies is a healthy 7.9. The two retail companies in the database report negative profits, with debt equivalent to 2.8 percent of debt by the nonfinancial corporate sector. Other sectors with potential risks are oil and gas, services and real estate, where companies with an ICR greater than 1 only account for 5 percent, 7 percent, and 54 percent of the total debt in the respective sectors. When cash holdings are included, the number of companies with an ICR greater than 1 increases to 90 (out of 130 in the sample), accounting for 85 percent of the debt.

Table 5. Non-Financial Corporate Sector: Interest Coverage Ratio (ICR), 2007–14

	2007	2008	2009	2010	2011	2012	2013	2014	Average 2007 - 2014
GCC									
Bahrain	30.1	20.8	55.0	232.8	137.9	44.6	15.3	22.1	69.8
Kuwait 1/	--	--	3.5	3.4	4.3	4.6	5.4	5.3	4.4
Oman	59.0	49.3	44.0	95.5	50.8	71.9	52.3	34.5	57.2
Qatar	46.2	29.4	26.1	23.6	33.2	24.2	66.8	40.6	36.2
Saudi Arabia	36.3	19.5	18.5	35.9	17.3	19.5	32.8	31.5	26.4
UAE	19.6	28.8	14.6	18.0	9.6	17.5	18.9	10.9	17.2
Developed Markets									
Americas	28.8	24.2	31.5	27.6	29.9	28.8	41.0	29.9	30.2
Asia	57.1	46.4	50.6	52.1	56.6	64.1	69.4	78.0	59.3
Europe	22.8	16.5	16.6	23.2	25.1	31.3	27.6	30.6	24.2
Emerging Markets									
Americas	15.9	41.1	12.0	16.9	19.8	21.7	18.0	13.6	19.9
Asia	57.4	35.1	37.1	49.2	50.5	52.6	59.8	50.6	49.0
Europe	29.5	27.0	33.5	39.2	46.6	51.1	28.0	18.9	34.2
Global	33.8	27.8	30.9	33.5	36.4	38.8	43.8	39.7	35.6

Source: IMF Corporate Vulnerability Utility (CVU)

1/ Data from Zawya, based on a sample of 130 companies. Data from the IMF CVU, which for Kuwait includes around 80 companies (the number of companies varies by year), suggest an average ICR of 11.6 for 2007 – 2014. The difference may reflect the impact of smaller firms on the calculated ICR, suggesting that smaller firms display lower ICRs.

Table 6. Kuwait: Extent of Risk by Sector, 2014

(Companies with ICR > 1 or ICR plus Cash > 1)

Sector 1/ 2/	ICR	Number of Firms	Percent of Debt /3	ICR with Cash	Number of Firms	Percent of Debt /3
Construction	3.8	4	80	8.6	6	92
Education	8.9	3	100	19.1	3	100
Food and Beverages	12.9	6	100	26.2	5	96
Health Care	3.7	5	99	6.5	5	99
Industrial Manufacturing	5.3	11	63	6.6	13	81
Information Technology	2.8	1	100	10.1	1	100
Leisure and Tourism	4.3	3	98	8.6	5	100
Media	14.7	2	98	35.8	2	98
Oil and Gas	9.4	2	5	6.9	4	97
Real Estate	3.7	19	54	5.6	30	82
Retail	---	0	0	6.2	1	1
Services	5.4	1	7	9.2	2	100
Telecommunications	12.6	3	100	21.4	4	100
Transport	8.0	7	68	28.9	8	69
Total	7.9	68	66	13.1	90	85

Source: IMF staff calculations with data form Zawya.

1/ The only company in the agricultural sector reports interest payments, but zero debt for 2014. Not reported in the table.

2/ The database include two companies in the retail sector, both with negative profits. After considering cash one of the companies increases its ICR above 1.

3/ Percent of Sector Total Debt.

Interest rate stress tests

9. Stress test applied to ICRs show limited but non-trivial aggregate risks from interest rate shocks (Table 7). A shock that increases the interest rate by 200 basis points (bps) reduces the number of firms with an ICR greater than 1 to 57 (compared to 68 in the baseline), dropping the average ICR from 7.9 to 6. In other words, with a 200 basis points shock, companies owning 45 percent of total debt would not generate enough operating profits for servicing their debt. The situation naturally improves when cash holdings are brought into the picture. The number of companies with an ICR > 1 increases to 84 (compared to 90 in the baseline); these companies hold 78 percent of total debt. As expected, a 500 bps interest shock reduces the number of firms with an ICR larger than 1 to 52; these companies hold 50 percent of total debt. If cash holdings are considered, the amount of debt held by companies with an ICR greater than 1 is about 73 percent. In this scenario, companies owing 27 percent of debt would not generate enough profits for servicing their debt.

10. The most vulnerable sectors are retail, real estate, manufacturing, oil and gas, and transport. In the extreme shock scenario (500 bps), even considering cash holdings, real estate companies would generate profits for servicing only about 60 percent of their debt, with industrial manufacturing, oil and gas, and transport companies sharing a similar position. The rest of the corporate sector would have the resources to service at least 90 percent of their debt.

Table 7. Kuwait: ICR Performance Under Interest Rate Shocks, 2014

(Companies with an ICR greater than 1)

Sector 1/ 2/	Interest Rate Shock					
	200 basis points			500 basis points		
	ICR	ICR with Cash	Percent of Total Debt 3/	ICR	ICR with Cash	Percent of Total Debt 3/
Construction	2.2	5.2	92	2.1	3.3	92
Education	8.4	14.3	100	6.9	10.3	100
Food and Beverages	10.0	20.4	96	7.5	15.4	96
Health Care	2.6	4.5	99	2.3	3.0	99
Industrial Manufacturing	3.4	4.4	81	2.3	3.7	63
Information Technology	1.7	6.3	100	1.1	4.0	100
Leisure and Tourism	3.1	6.2	100	2.2	4.3	100
Media	9.9	24.1	98	6.6	16.2	98
Oil and Gas	8.0	4.5	100	4.7	3.7	68
Real Estate	4.0	4.3	64	2.8	2.8	61
Retail	---	4.3	1	---	3.0	1
Services	3.5	4.2	100	2.2	2.3	100
Telecommunications	8.1	13.8	100	5.3	9.0	100
Transport	6.1	18.1	69	4.0	11.9	69
Total	6.0	8.9	78	4.2	6.2	73

Source: IMF staff calculations with data form Zawya

1/ The only company in the agricultural sector reports interest payments, but zero debt for 2014. Not reported in the table.

2/ The database include two companies in the retail sector, both with negative profits. After considering cash one of the companies increases its RCA above 1.

3/ Percent of Sector Total Debt considering cash holdings.

D. Concluding Remarks

11. Other things constant, increasing ex-post returns would require companies to increase profits by increasing sales and/or reducing costs. Diversifying the financing sources for the real economy, further deepening the domestic asset markets to provide companies alternative channels for financing and investing, improving the investment climate—including by reducing the costs of doing business in Kuwait—increasing privatization efforts, strengthening corporate governance, establishing bankruptcy procedures, and better data availability to investors would all improve the performance of Kuwait's corporate sector.

12. While the corporate sector is well positioned to address global shocks, policy makers should remain vigilant. Most sectors in Kuwait display comfortable levels of debt servicing capacity measured by the ICR, although coverage is lower than in other countries, including GCC peers. Interest rate stress tests suggest that, while the number of companies that would not be able to service their debt would increase if interest rates increase, even in the worst case scenario about 50 percent of the debt would be serviced. For instance, in 2014, 68 (out of 130) companies accounting for 66 percent of the debt had ICR >1. A shock that increases the interest rate by 200 basis points (bps) reduces the number of firms with ICR > 1 to 57. A 500 bps interest shock reduces the number firms with ICR > 1 to 52; these companies hold 50 percent of total debt. Debt servicing capacity improves if cash holdings are taken into account—for instance, under a 500 bps shock, the share on non-serviceable debt would fall to about 27 percent. While such an outcome may not pose system risks to the Kuwaiti economy, it points to the need for contingent measures, including the need for a bankruptcy framework.

Annex Table 1. Kuwait: Corporate Performance, 2009–2014

	2009	2010	2011	2012	2013	2014	2009 -2014	2010 - 2014
	Assets, in billions of U.S. dollars						Average annual growth, percent	
Total	72.8	66.3	69.0	66.4	67.5	70.9	-0.5	0.1
Real Estate	21.7	20.9	21.7	20.6	20.0	21.6	-0.1	0.1
Telecommunications	23.5	17.1	18.2	16.8	17.8	18.3	-4.9	0.4
Transport	9.8	9.7	9.6	9.6	9.7	10.2	0.9	0.6
Industrial Manufacturing	5.6	6.2	5.9	5.9	6.0	6.4	2.8	0.5
Food and Beverages	2.7	2.8	3.2	3.2	3.5	3.7	6.5	10.7
Oil and Gas	2.7	2.9	3.4	3.2	3.2	3.1	3.2	2.7
Construction	2.3	2.4	2.5	2.5	2.7	2.8	4.4	7.0
Others	4.6	4.3	4.4	4.5	4.6	4.8	1.0	2.5
	Liabilities, in billions of U.S. dollars						Average annual growth, percent	
Total	36.0	28.2	30.5	29.0	28.9	30.9	-3.0	0.3
Real Estate	10.7	10.4	11.1	9.7	8.6	9.5	-2.5	-0.9
Telecommunications	11.9	4.7	5.8	6.1	7.1	7.4	-9.1	10.2
Transport	5.0	4.8	4.7	4.5	4.5	4.8	-0.8	0.0
Industrial Manufacturing	2.3	2.3	2.2	2.2	2.2	2.5	1.7	4.1
Food and Beverages	0.9	0.8	1.0	1.0	1.2	1.2	5.8	60.1
Oil and Gas	1.5	1.5	2.0	1.7	1.5	1.5	0.2	-3.0
Construction	1.3	1.4	1.4	1.4	1.6	1.7	5.6	15.8
Others	2.4	2.2	2.3	2.3	2.3	2.3	-0.9	0.5
	Net Profits, in billions of U.S. dollars							
Total	1.6	4.2	2.6	2.4	2.9	2.5		
Real Estate	-0.5	-0.5	-0.4	0.3	0.7	0.5		
Telecommunications	1.1	4.0	2.3	1.2	1.1	1.0		
Transport	0.5	0.2	0.2	0.2	0.3	0.3		
Industrial Manufacturing	0.2	0.4	0.3	0.2	0.2	0.2		
Food and Beverages	0.2	0.2	0.2	0.2	0.2	0.3		
Oil and Gas	0.0	0.1	0.1	0.1	0.1	0.1		
Construction	0.0	0.0	0.0	0.1	0.0	0.0		
Others	0.1	-0.1	-0.1	0.1	0.2	0.2		
	Return on Assets, Percent						Change in percentage points	
Total	2.2	6.3	3.7	3.6	4.3	3.5	1.3	-2.7
Real Estate	-2.1	-2.5	-1.8	1.5	3.4	2.3	4.4	4.7
Telecommunications	4.5	23.4	12.6	6.9	6.2	5.3	0.8	-18.0
Transport	5.6	2.0	1.8	2.5	3.4	2.7	-2.9	0.6
Industrial Manufacturing	3.6	5.8	4.6	3.8	3.5	3.6	0.0	-2.2
Food and Beverages	6.5	6.5	6.3	5.3	6.6	7.0	0.6	0.5
Oil and Gas	1.4	2.2	1.6	3.1	3.6	3.3	1.9	1.1
Construction	0.5	0.2	0.7	2.3	1.6	-0.8	-1.4	-1.0
Others	1.1	-2.9	-1.4	3.3	3.8	4.1	3.0	7.0

Source: Staff calculations based on Zawya balance sheets.
1/ "Others" include companies in the following sectors: Health Care, Retail, Education, Media, Leisure and Tourism, Services, Information Technology, and Agriculture.

Annex Table 2. Non Financial Corporate Sector: Debt to Equity

(In percent)

	2007	2008	2009	2010	2011	2012	2013	2014	Average 2007 - 2014
GCC									
Bahrain	36.2	20.7	40.6	66.0	27.6	19.0	27.0	19.6	32.1
Kuwait	80.3	72.8	72.9	41.7	44.7	49.8	46.4	46.5	56.9
Oman	55.8	88.0	78.9	65.9	111.4	71.4	93.0	86.8	81.4
Qatar	49.1	94.2	131.3	149.6	184.1	138.4	65.9	74.5	110.9
Saudi Arabia	63.4	81.3	87.6	94.6	90.5	77.7	65.4	67.0	78.4
UAE	25.8	41.5	87.7	94.2	91.1	76.8	105.9	108.3	78.9
Developed Markets									
Americas	111.1	101.5	107.5	92.7	168.2	157.0	131.3	171.4	130.1
Asia	76.1	77.7	95.4	71.2	72.6	70.5	72.3	69.3	75.6
Europe	111.1	122.0	139.5	94.1	90.6	90.8	81.7	91.2	102.6
Emerging Markets									
Americas	72.0	114.2	81.4	74.0	74.7	81.5	82.6	86.2	83.3
Asia	70.2	86.9	86.1	116.7	88.4	82.7	87.8	79.2	87.3
Europe	47.5	62.4	56.3	52.4	59.1	56.9	62.8	80.8	59.8
Global	98.1	99.6	109.1	89.2	112.0	109.9	98.7	118.1	104.3

Source: IMF Corporate Vulnerability Utility (CVU).

LABOR MARKET STRUCTURE AND REFORM[1]

Current labor market structures lack the right incentives for creating a dynamic, skilled workforce able to sustain an expansion of Kuwaiti nationals joining the private sector. Current policies to address labor market distortions, and keep unemployment among nationals low through public employment, quotas, and permanent wage subsidy programs in the private sector are neither effective nor sustainable in the long run. They need to be underpinned by educational and training reforms and labor policies to improve skills, pay, and productivity in the private sector. Empirical analyses suggest the existence of complementarities between expatriate and national labor that underscore the importance of treading gradually in any efforts to cap expatriate labor.

A. Introduction

1. Kuwait's heavy reliance on foreign labor has been a significant pillar of its economic structure. Expatriate workers have played a crucial role over the past decades by helping address shortages in workers and skills, and cushioning the economy from overheating from wage pressures. The availability of cheap, low-skilled workers has, however, locked the economy in a low productivity growth pattern, and affected the skill development, career choices, and growth prospects of nationals. Over time, a dual labor market emerged in which expatriate workers predominately occupied private sector jobs, while the vast majority of nationals worked in the public sector. The labor market has also been divided along gender, age, and nationality lines, with striking wage gaps.

2. The authorities recognize that the current labor market model is neither sustainable nor conducive to supporting long-term economic development. Given the small size of the native labor force, unemployment has been kept low through public employment, although rates among youth and females have remained high. However, demographic imbalances continued to widen as rising numbers of educated Kuwaiti youth could no longer be absorbed in the public sector at the same rates of past years. Curtailing the growth of the foreign labor force is being considered and the long standing nationalization of jobs programs intensified in the recent year as part of what seems to be a paradigm shift not only in Kuwait but across other GCC countries.[2]

3. Changing the current labor market structure will have important economic implications. This paper provides stylized facts on Kuwait's labor market to highlight the current demographic and labor market imbalances. It then gives an overview of the initiatives taken by government to address labor market imbalances. The next section analyzes the macroeconomic implications of continuing with current labor policies. It then makes an empirical assessment of

[1] Prepared by Gazi Shbaikat and Ali Al-Reshan.

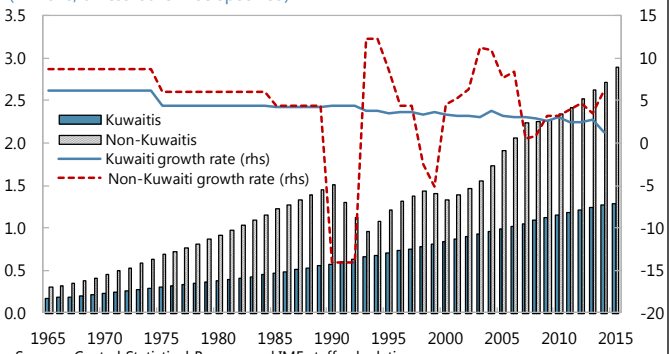
[2] Addressing the demographic challenge is a strategy adopted at the GCC level in 1998; see "The Closing Statement of the Nineteenth Session of the GCC Supreme Council" (1998). Opinion surveys in the GCC including Kuwait show that restricting inflow of expatriates to address imbalances is top priority; see UN survey UN (2006) and IPSOS, Demographics Survey (2007).

the complementarities between expatriate labor and the employment of nationals. The last section presents policy recommendations.

B. Stylized Facts

4. Demographic imbalance. More than two-thirds of Kuwait's 4.2 million population are foreign nationals residing there on a temporary basis. Except for a few years during and after the first gulf war, the share of foreigners has been rising constantly with the growth of expatriates outpacing that of nationals. Since 2000, the total population grew at an average rate of 3.9 percent, driven by annual growth of 4.6 percent in the expatriate population, compared to the national population growth of 2.9 percent (Figure 1). The age and gender structure of the two populations also varies markedly; about 37 percent and 64 percent of nationals are below 15 and 30 years old, respectively, compared to only 14 percent and 37 percent for expatriates in these age groups. And whereas females represent half of Kuwait's population, expatriate females make up only one-third of the total expatriate population. Two economic implications of these facts are worth highlighting. At this size, expatriates are a key determinant of the economic structure not only in the labor market but also in the production and consumption of goods and services in the economy. For nationals, the age structure assures a continuous influx to the labor market in the years to come. This young population will exert pressures on physical and social infrastructure and on the government to generate more jobs.

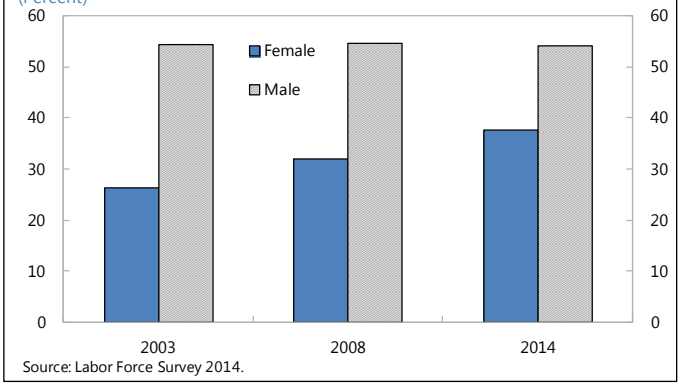
Figure 1. Population Dynamics in Kuwait, 1965–2015
(Millions; unless otherwise specified)



Sources: Central Statistical Bureau; and IMF staff calculations.

5. Rising labor force size. The increase in the labor force has been driven by the rise in the working age population, which doubled over the past 10 years to reach 3.3 million in 2015, compared to 1.6 million in 2005. This represents a robust annual growth rate of 7.2 percent. Expatriate labor contributes 5.6 percent of this growth, while the remaining 1.6 percent is due to growth in the national population. However, rising participation among nationals, especially among females, is taking on a greater role in driving labor force growth in recent years. While the participation rate of Kuwaiti females—37 percent–is high by regional standards, it remains significantly below 54 percent for males (Figure 2). Gender

Figure 2. National Labor Force Participation Rate, 2003–2014
(Percent)

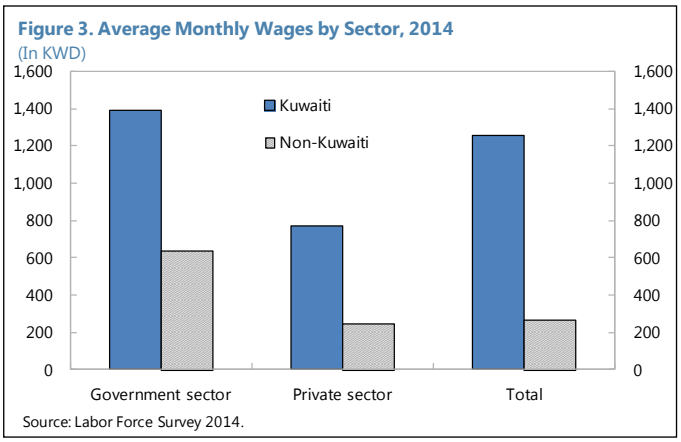


Source: Labor Force Survey 2014.

gaps are more apparent in lower education groups given the nature of jobs offered at these levels, which are either unattractive to females or prohibited completely.[3] This suggests that there is ample room to expand the size of the national workforce and reduce dependence on expatriates if more females can become more active in the labor market.

6. Highly segmented labor market. The labor market is highly segmented along sectoral, nationality, and gender lines. About 85 percent of working Kuwaitis are government employees, and those in the private sector are concentrated in a few highly paid sectors such as the finance, insurance, and mining sectors. The private and household sectors are the main employers for the non-Kuwaiti workforce. Expatriates are mostly unskilled with more than two-thirds having only intermediate or primary education, in contrast to employed nationals who are mostly above secondary education. However, about 69 percent of Kuwaitis enrolled in universities are majoring in humanities and arts, and only 31 percent are specializing in science, technology, engineering, and mathematics (Kuwait University). This indicates that Kuwaitis are acquiring skills that qualify them for government employment, rather than the private sector.

7. Striking wage gaps. The average wage of nationals is 5.7 times that of foreign workers, although the gap narrows the higher the education levels (Figure 3). For example, the average wage of Kuwaitis with a primary education is 8.2 times the average wage of non-Kuwaitis with the same level of education, while the average wage of Kuwaitis with a university education is 2.7 times the wage of expatriates with the same level of education. The distribution of workers by wage bracket shows that more than 90 percent of non-Kuwaitis are paid less than KD600 per month, compared to less than 2 percent for nationals (Figure 4). Moreover, wage levels in the public sector, for both expatriates and nationals, are much higher than in the private sector. It should be noted, however, that expatriates, especially in the lower skilled category in the private sector, usually enjoy other benefits, such as housing, that are not reported as part of their salaries, so gaps including such benefits would be somewhat smaller.

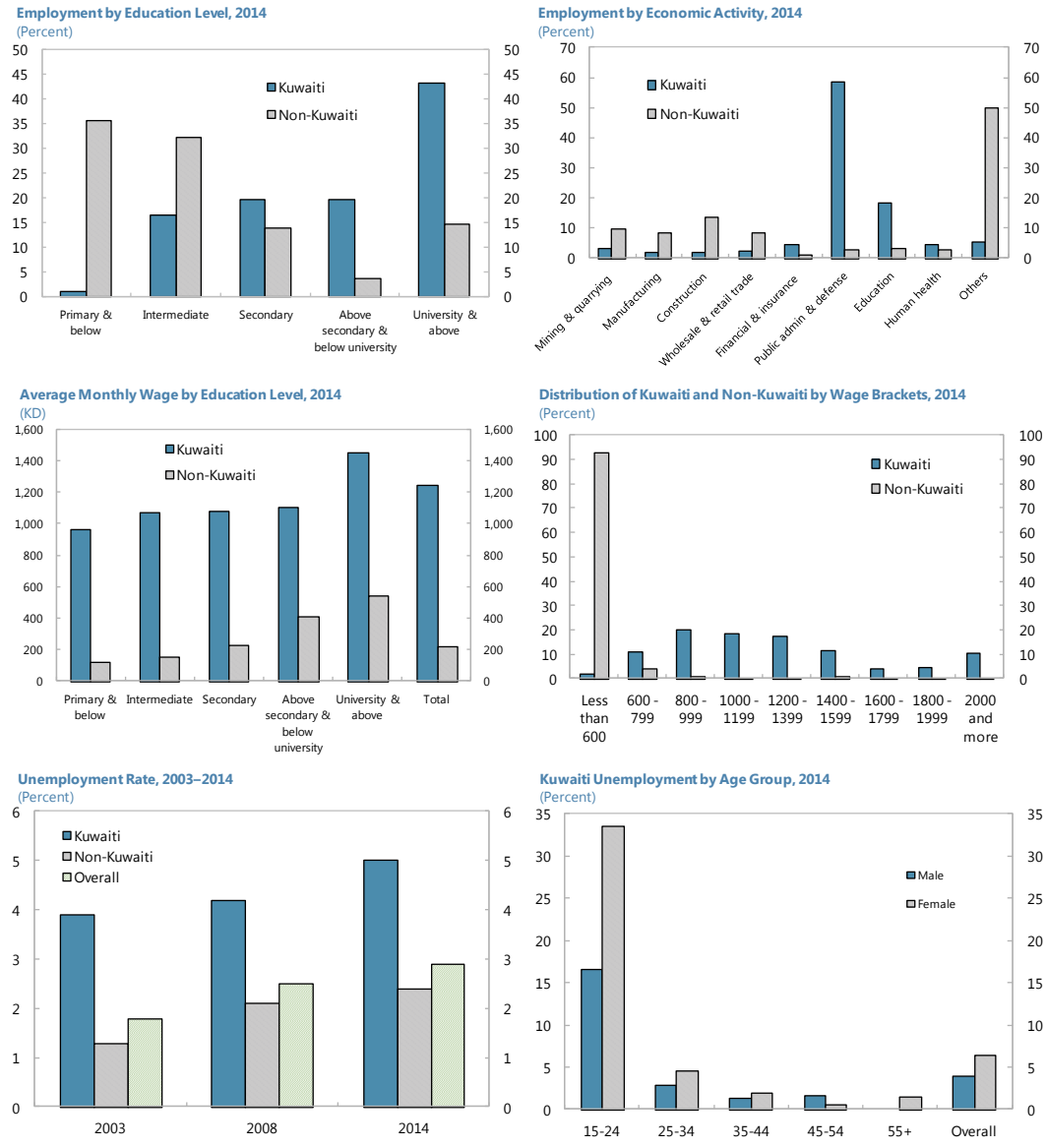


8. Low unemployment. The unemployment rate stands at 5 percent for Kuwaiti nationals and at 2.4 percent for expatriates. National unemployment is considerably low but it conceals significant age and gender discrepancies. Unemployent is as high as 22.9 percent among

[3] With the exception of a few professions, women are legally forbidden from working at night, as well as from working in the industrial sector, or working in occupations deemed hazardous to their health.

youth between the ages of 15 and 24. It significantly declines to 3.6 percent for the age bracket of 25 to 34. Young female unemployment stands at 33.5 percent while its male counterpart is 16.6 percent. In general, unemployment is higher among less educated nationals and decreases with higher levels of education. It is more pronounced among females with lower educational attainment. For example, the unemployment rate for Kuwaiti females with only primary education is 23.5 percent (Figure 4).

Figure 4. Labor Market Segmentation

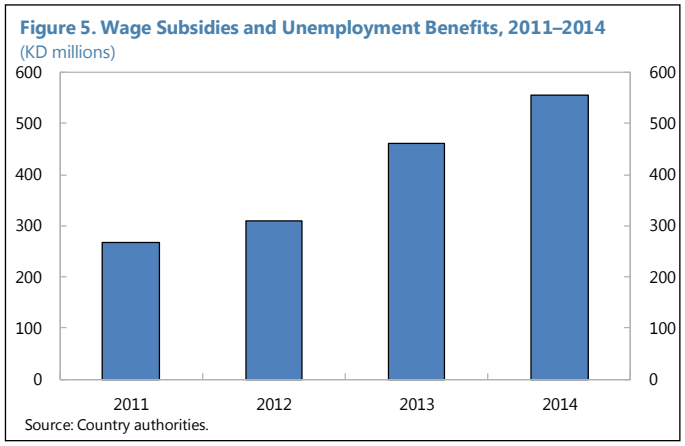


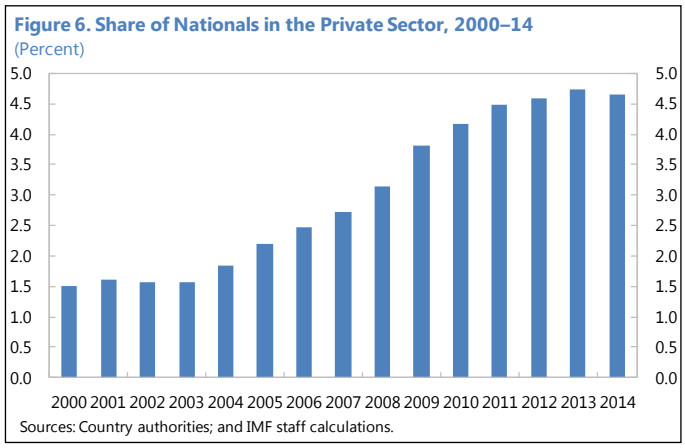
Source: Labor Survey 2014.

C. Government Initiatives to Address Labor Market Imbalances

9. The lack of a diversified skilled-based national workforce and wage differentials are major impediments to increasing private sector job creation for nationals. Policies were implemented to address these distortions focusing mainly on reducing the wage gap through a generous subsidy program and quota system to impose minimum employment standards for nationals in the private sector. To date, efforts to reforms the education and training programs in the replacement strategy have been limited.

10. The quota and wage subsidy programs to increase private sector jobs for nationals have achieved mixed results. Since 2001, the government has provided wage subsidies and unemployment benefits, which vary according to one's education attainment and marital status (could reach up to $4900 a month for a university level education employee with a family of six). Kuwaitization (minimum share of Kuwaitis in total firms' employment) programs have also been implemented during past decades with varying degrees of enforcement. Quotas in the private sector range from 3 percent in the agriculture sector to as high as 64 percent in the financial sector. While subsidies have bridged part of the wage gap, and the share of Kuwaitis in the private sector has increased over time, private sector absorption of nationals remains small and inadequate to reduce reliance on public employment, which continues to expand rapidly (Figures 5 and 6). The effectiveness of these programs could be undermined by potential abuse by both employers and employees and may have contributed to ghost employment and higher bargaining power and salaries of nationals.





11. Evidence regarding the effectiveness of wage subsidies in economic literature is mixed. Hamersma (2008) estimated the effects of the two U.S. employer subsidy programs—the Work-Opportunity-Tax-Credit (WOTC) and the Welfare-to-Work Tax Credit (WtW)—on the

employment outcomes of disadvantaged workers.[4] The study provides mixed evidence for the effectiveness of WOTC and WtW as there are positive effects in the short run but very little evidence of improvement in the long run employment rates of the target population or in job tenure. Another study evaluating the U.K. Government's New Deal for unemployed youth found the productivity effects to be relatively modest compared to the size of the subsidies deemed necessary to get the group into jobs (Bell and others, 1999).

12. Wage subsidies work best if they are combined with training and skill enhancement programs.[5] A better perspective of wage subsidies is to allow workers to acquire skills that improve their employability and labor market opportunities through work experience and on-the-job training. This will sustain the effect of wage subsidies even after they expire. In addition, wage subsidies should be targeted to first time job seekers or workers who have experienced long periods of unemployment (Almeida and others, 2014). A study in South Africa found that wage subsidy schemes had positive effects on employment compared to welfare programs due as wage subsidies drew more people into work and allowed them to gain experience, which raised the future employability of workers and increased labor productivity in the economy. However, wage subsidies might not be the most effective tool to create short-term job growth as the effect of wage subsidies on employment rates are modes and there can be important substitution effects. In general, empirical findings underscore the importance of overhauling education and vocational training systems to boost employment and not relying only on wage subsidies as permanent solutions to unemployment (Burn and others, 2010).

13. Subsidies can be made more effective in Kuwait. The generous and unlimited duration of wage subsidies, while still a cheaper option than public employment, are expensive, amounting to KD550 million ($2 billion) in 2014.[6] Currently, subsidies increase with education levels, so high-skilled nationals receive higher subsidies despite having higher salaries in the private sector. The program can be usefully redesigned to support youth and female employment and affect nationals' choices for education and the acquisition of certain skills; for instance, by providing larger subsidies for those in the technical and engineering fields.

[4] The Work Opportunity Tax Credit (WOTC) is a Federal tax credit available to employers for hiring individuals from certain target groups who have consistently faced significant barriers to employment. The Welfare-to-Work Tax Credit (WtW) is designed to assist welfare recipients to obtain employment. These two programs are designed to encourage employment by reimbursing employers for a portion of wages paid to certain welfare and food stamp recipients.

[5] Wage subsidies can be classified as employee-side or firm-side programs. The former grants workers a subsidy once they successfully obtain a job and is aimed to increase participation in the labor market when low-wages discourage labors from seeking employment. Firm-side wage subsidy scheme provides the firms with subsidy to lower the cost of employment and incentivizes firms to raise employment and output. This policy is deemed appropriate when labor is underutilized and there is high unemployment where job seekers cannot find employment opportunities

[6] Subsidies are partly financed by a 0.5 percent tax on listed companies' profits but this remains far less than the total cost of subsidies.

Box 1. Initiatives to Encourage Kuwaitis to Work in the Private Sector

In 1997, the government merged "Manpower Restructuring Project" and "Government Restructuring Project" into a unified program titled Manpower and Government Restructuring Program (MGRP) with the mandate of supporting the employment of Kuwaiti nationals in the private sector. Since 2001, MGRP has been successful in providing jobs in the private sector for more than 71,000 Kuwaitis.

In 2000, the government introduced Law No. 19, which regulates and encourages the employment of nationals in the non-government sector. This law has been the basis for other laws and regulations, including wage subsidies, other allowances, and a quota system. Article 12 of this law imposes a 2.5 percent tax on the profits of all listed companies to finance wage subsidies, allowances, and unemployment benefits.

In 2001, social and child allowances were introduced for technicians and artisans in the private sector. The social allowance varies based on qualification and marital status, while the child allowance is fixed at KD50 per child up to seven children.

In 2003, a teachers' cadre was introduced, which is an allowance for teachers in the private sector to reduce the gap in the financial benefits between teachers in the private sector compared to their peers in the public sector.

Quota by Economic Activity, 2014

Economic Activity	Percent
Banking	64
Communication	60
Finance and investment companies	40
Petrochemical and refining	30
Nursery	30
Real estate	20
Insurance	18
Money exchange	13
Arab private schools	10
Business services	5
Foreign private school	5
Agriculture, forestry, and fishing	3
Manufacturing	3

Source: Country authorities.

In 2014, the quota system was revised to introduce new quotas for the employment of Kuwaitis in each sector and profession. The highest quota is in the banking sector with 64 percent and the lowest is 3 percent in the agriculture and manufacturing sectors. In addition, there are quotas for certain professions within each economic activity. For example, in the hotel industry, 17 percent of managers must be nationals and 20 percent of clerical jobs must be filled in by Kuwaitis. These quotas are different between economic activities and professions.

In 2012, the Council of Ministers introduced wage subsidies for nationals working in the private sector. This subsidy varies based on qualifications.

The total support for non-government employees therefore includes wage subsidies, child allowances, social allowances, cost of living allowances, and other increases. This support could reach up to KD1400 a month including the child allowance, while the lowest level is KD534 a month, still a significant sum.

Unemployment benefits were introduced in 2001, which varies based on qualifications and marital status. This benefit could reach up to KD200 for married unemployed with a bachelor degree.

Financial Support for Non-government Employees (in KD)

Qualification	Social allowance		Increase, reward, cost of living allowance	Children allowance (KD 50 child up to 7 children)	Wage subsidy	Extra allowance (25%)		Total financial support (without children allowance)	
	Single	Married				Single	Married	Single	Married
University degree in (medicine, pharmacy, engineering)	190	278	220	350	330	50	70	790	898
University degree in (law, accounting, information systems, statistics, economy, nursing, finance, foreign trade, teaching)	190	278	220	350	280	50	70	740	848
University degree in (other disciplines)	190	278	220	350	230	50	70	690	798
Diploma or high school with two years of training	169	250	220	350	190	50	63	629	723
High school with one year training or intermediate school with 3 years training	161	242	220	350	140	50	61	571	663
High school or intermediate school with on year training	147	222	220	350	100/140	50	56	517/557	598/638
Intermediate school	141	216	220	350	100	50	54	511	590
Below intermediate school	136	211	220	350	50	50	53	546	534

Source: Country authorities.

D. Macroeconomic Implications of the Current Labor Market Model

14. The availability of low-wage expatriate labor has played an important role in shaping macroeconomic outcomes over the past decades. Like other GCC countries, Kuwait has adopted a liberal expatriate labor policy as part of its economic development model since the oil price booms in the 1970s. During the early stages of development, this model helped remove constraints to private sector growth, while containing wage and price pressures during upswings in the oil cycle. It has, however, created a pattern of low productivity and disincentives for nationals to build the skills needed in the private sector. Further, public sector employment has not only resulted in high fiscal burden but also reduced incentives for nationals to seek jobs in the private sector.

15. Expatriates play a shock absorber role. Access to low-cost expatriates has helped maintain low inflation rates compared to other non-GCC oil-exporting countries. In addition, the remittance outflows decrease domestic demand for non-tradable goods and services. Recent empirical work has shown that the above-trend growth has little impact on inflation and employment growth of foreign workers partially offsets the inflationary impact of fiscal spending in the GCC countries (IMF, 2014). Analyzing a group of oil exporting countries, Espinoza and others (2013) provide evidence on the role of expatriates in containing real exchange rate appreciation, through remittance outflows.

16. Low productivity pattern. The current labor market structure is not conducive to supporting economic diversification and moving to a higher value added economic structure. The majority of the labor force is low-skilled; one-third of the workforce is illiterate or has an elementary-level education and two- thirds have less than a secondary-level education. A growth accounting exercise, augmented with human capital, shows that non-oil growth in Kuwait has been driven by factor input while the role of total factor productivity (TFP) has been negative. Labor productivity growth was negative, reflecting the abundant supply of low-skilled workers and lack of incentives for firms to invest in capitalization and for workers to invest in skill upgrading. Since 2000, the increased capital-labor ratio has improved labor productivity, while the role of human capital—measured by years of schooling of the national workforce—remains small despite increased investment in education (Box 2). This underscores the importance of increasing investment in physical and human capital and focusing on improving the quality of education.

Table 1. Average Contribution to Non-Oil Sector Growth and Labor Productivity
(Percent)

	1990-1999	2000-2014
Non-oil Sector Growth		
Growth	6.6	6.0
TPF	-3.1	-0.8
Capital	3.6	4.1
Labor	6.1	2.7
Labor Productivity		
Productivity growth	-2.7	1.3
TPF	-3.3	-1.5
Capital labor ratio	-0.2	2.2
Human Capital	0.7	0.7

Source: IMF staff calculations.

17. High fiscal burden. Nationals have a strong preference for public jobs given the higher wages and better work conditions (such as job security, shorter work hours, and longer holidays) compared to the private sector. This has increased the reservation wage and distorted skill development by creating a disincentive for nationals to invest in skills that are important for the private sector. More nationals are acquiring education and training in areas to allow them to enter the public sector, mainly in human and social specializations.

Box 2. Growth Accounting Exercise

The decomposition of output and productivity growth is based on Cobb-Douglas production function, Solow (1957).

$$\Delta \ln(Y_t) = \Delta \ln(A_t) + \alpha \Delta \ln(K_t) + (1-\alpha)\Delta \ln(L_t), \quad (1)$$

where $\Delta Ln(Y_t)$ is output growth in period t, $\Delta ln(k_t)$ is the capital accumulation rate in period t, $\Delta Ln(L_t)$ is employment growth in period t, and $\Delta Ln(A_t)$ is the TFP growth. The cost share of capital, α is assumed to equal 0.4, a value that is commonly used in empirical work. The initial capital stock is estimated using perpetual inventory method (Harberger, 1978).

To estimate the role of education, an augmented Solow growth model with human capital is used, Mankiw (1994). The production function that includes human capital can be written as:

$$Y = A * K^{\alpha} * (LH)^{1-\alpha} \quad (2)$$

Where H is human capital, measured by average years of schooling as a proxy for skills. By dividing equation (2) by L, labor productivity growth can be presented as a function of physical capitalization as measured by growth in capital-labor ratio and human capital as measured by improvement in years of schooling (similar to presentation in Espinoza et al. (2013):

$$\Delta Ln\ (y_t) = \Delta Ln(A_t) + \alpha\ \Delta ln(k_t) + (1-\alpha)\Delta Ln(H_t) \quad (3)$$

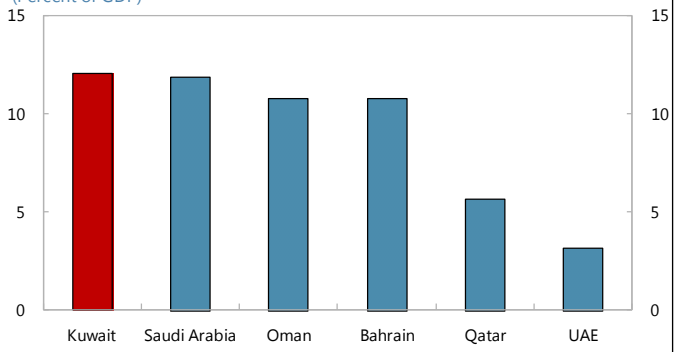
Espinoza, R., G. Fayad, and A. Prasad, 2013, "The Macroeconomics of the Arab Countries of the Gulf," Oxford University Press and the International Monetary Fund.

Mankiw, N. Gregory, David Romer, and David Weil. 1992. "A Contribution to the Empirics of Economic Growth." Quarterly Journal of Economic Growth 107, no. 2 (May): 407-38.

Solow, R. M., 1957, "Technical Change and Aggregate Production Function", Review of Economics and Statistics, Vol. 39 (3), pp. 312-20

18. Unsustainable public employment policy. The government employs more than 85 percent of the national workforce, resulting in a high wage bill of 12.4 percent of GDP, the highest in the GCC (Figure 7). Staff estimates that the actual wage bill could be in the range of 15-18 percent of GDP under proper classification of wages in the budget.[1] Keeping unemployment low among nationals through public employment will entail a high fiscal cost given the rising work-age population and participation rates among Kuwaitis.

Figure 7. Government Wage Bill, 2014
(Percent of GDP)



Sources: Country authorities; and IMF staff calculations.

19. Staff projections, under certain assumptions, indicate that the number of new labor market entrants would be 136,000 during 2015–20, of which, under current policies, only 31,000 would be employed in the private sector. The government will face a trade-off between absorbing a small fraction of the remaining entrants to keep the wage bill under control at 12.7 percent of GDP, and therefore see the unemployment rate among Kuwaitis rise to more than 16 percent by 2020 (Scenario 1), or absorb a larger proportion to keep the unemployment constant but allow the wage bill to increase to more than 15 percent by 2020 (Scenario 2). While the current fiscal position would allow the government to choose Scenario 2, this would increase fiscal risks, unless the increase in the wage bill is offset by a reduction in other spending items, notably subsidies. But even if such a policy is fiscally sustainable, the government should be mindful of the long-term implications of public employment on the structure of the labor market and the development of national human capital. Labor market reforms that increase the employment of nationals in the private sector could help address these tradeoffs.

Table 2. Kuwait: Labor Market and Wage Projections for Nationals

	2014	Scenario I: Higher Unemployment* 2020	Scenario II: Higher Wage Bill** 2020
Labor Force	433	569	569
Employed in Public	320	350	416
Employed in Private	91	124	124
Unemployed	22	94	29
Unemployment rate (in percent)	5.0	16.6	5.0
Wage Bill/GDP	12.4	14.4	16.9

Source: IMF staff calculations.

* Assumptions: Labor force grow by 4.6 annually, as in previous years, public employment grow by 1.5 percent and wage by 3.3 percent, and share of Kuwaitis in the private sector increases by 2 percent annually as in previous years but at a slower pace given the more recent slowing trend.
** Same as in baseline except public employment of nationals increases to 4.5 percent annually to keep unemployment constant.

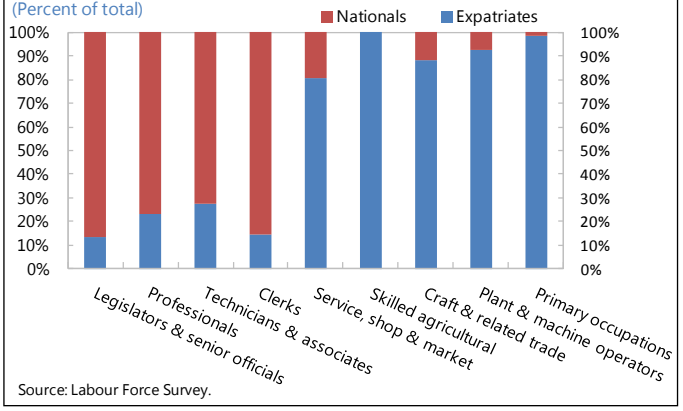
[1] Military and independent central government bodies like the judiciary and parliament are misclassified in other items in the budget.

E. Do Expatriates Support Job Creation for Nationals?

20. Most discussions on the GCC labor market, including Kuwait's, have focused on the demographic and labor market imbalances created by the inflow of expatriate workers. The main economic concern arises from the lack of adequate and decent jobs for nationals despite strong economic growth. Wage levels are kept too low given the nearly perfectly elastic supply of unskilled labor, crowding out nationals who have high reservation wages. Labor import restrictions, quota systems, wage subsidies, and other active labor policies implemented by Kuwait and other GCC countries to address these imbalances are partly based on this understanding of labor market dynamics. They are implicitly based on the notion that there is some degree of substitutability between nationals and expatriate workforces. Indeed, labor market developments over the past decades—namely the growing size of immigrants in the population, widening wage gaps, and the declining share of nationals in the private sector—support these views. Government policies to reverse these trends have achieved some success in recent years.

21. However, the labor market structure has an element of complementarity between national and expatriate workers, suggesting that restricting the inflow of foreign workers could hurt growth and job creation for nationals in the private sector. Striking differences between expatriates and nationals across skill compositions, wage structures, and sectors suggest a low degree of substitutability. Kuwaitis with certain occupations like primary, plant, and machine operations, and skilled agriculture represent less than 5 percent of the total number of those employed with these skills, which are filled mainly by expatriates. Kuwaitis are concentrated mainly in clerical, managerial, and other government-focused occupations. Moreover, more than 90 percent of expatriates earn less than KD600, compared to less than 5 percent of Kuwaitis, suggesting little potential for substitution, especially given high reservation government wages (Figure 8).

Figure 8. Employment by Occupational Skills, 2014
(Percent of total)



Source: Labour Force Survey.

22. Expatriates support investment and growth and therefore help create jobs for nationals. Kuwait has been able to expand its economy well beyond the size of its native population. This has a number of important economic implications. At shares of 68 percent and 83 percent of the population and workforce, respectively, expatriates are the main driver of growth, which in turn creates jobs for nationals. The availability of cheap labor facilitates the expansion of investment and keeps production and service provision costs low. They also create a considerable share of demand for non-tradable goods and services in the country, which help to create more jobs for both national and foreign workers. This scale effect could lead to higher

employment for nationals, even in sectors where the degree of substitutability between nationals and expatriates is high.

23. The net impact of immigrants on local labor markets remains theoretically uncertain. Immigrants lower the price of factors with which they are perfect substitutes and raise the price of factors with which they are complements. However, besides this labor supply impact, immigrants are factors of input and consumers who increase demands and production and could therefore shift labor demand upward, leading to higher wage levels and employment in the economy (scale effect). The impact will depend on whether the host economy is open or closed to international trade and the degree of substitutability between immigrants and natives, Okkerse (2008) and Hunt (1995). In most countries, native workers and immigrants are imperfect substitutes as they are different in human capital, language fluency, professional networks, and social and cultural knowledge. Another reason why foreign workers do not displace native workers is that expatriates do not have access to the same jobs as native workers.

24. Empirical research does not provide much support to the general perception that immigrants have negative effects on native labor market outcomes. A study on the effects of immigration in the U.S. finds that there is little evidence of the effects of immigrants' inflow on the employment or unemployment rates of less-skilled natives Altonji and Card (1991). Hong (2015) studies the effects of immigrants on local labor demand in U.S. cities, due to the increase in consumer demand for local services created by immigrants and finds that immigrants can raise native workers' real wages. Grossman (1982), however, finds significantly negative effects of immigrants on the wages of natives. In Australia, Pope and Withers (1993) and Addison and Worswick (2002) concluded that there is no evidence of immigration raising the unemployment rate, while Chang (2003) finds that when separating immigrants into skilled and unskilled groups, unskilled immigrants have the potential to take jobs from local unskilled labor in Australia. Using data for Malaysia, a study by Wagner and Ozden (2014) finds that the scale effect outweighs the substitution effect and each immigrant could create more than one job. For a review of theoretical empirical research, see Friedberg and Hunt (1995).

25. Using GCC data, there seems to be varying short- and long-term effects of expatriates on the employment of nationals. To empirically assess the impact expatriates have on the employment of nationals, we construct a model relating employment of nationals in the private sector (EN) to the size of expatriate employment in the private sector (EXP), and non oil growth (GDP) to capture the impact of growth on total employment. We also add public sector employment of nationals (EG) as an explanatory variable given its importance in the employment of nationals in the GCC. In the absence of a long series on employment in Kuwait, we use panel data estimation techniques for four GCC countries (Bahrain, Oman, Saudi Arabia, and Kuwait where a complete set of data is available) to ensure enough observations and consistent estimates.

26. A VAR approach is used to addresses the endogeneity problem by allowing the endogenous interaction between the variables in the system. Unit root and cointegration tests using data during 1993-2014 indicate that these variables are non stationary of degree I (1) and cointegrated—one cointegrated relationship exists. A panel Error Correction Model (ECM) is

therefore appropriate to estimate the model in difference and level forms. The ECM has the advantage of estimating short and long terms relationships between the variables and has been widely used in time series analysis of labor market and immigration.

We use the following ECM form:

$$\Delta (EN_t) = a + \beta_{1i} \times \Delta (EN)_{t-i} + \beta_{2i} \times \Delta (EXP)_{t-i} + \beta_{3i} \times \Delta (GDP)_{t-i} + \beta_{4i} * \Delta (EG)_{t-i} + \gamma_i \times (ECMi) + \mu_1 \quad \text{.....(1)}$$

Where a and βi are the short term coefficients, and γ measures the speed of adjustment to the long term equilibrium relationship, and ECM is the error term from the long term relationship in levels, and is the given by:

$$\varepsilon = EN_t - \alpha_1 \times (EXP_{t-1}) - \alpha_2 \times (GDP_{t-1}) - \alpha 3 \times (EXP_{t-1}) - \alpha_3 \times EG_{t-1} \quad \text{... (2)}$$

Substituting 2 in 1 allow the presentation of the ECM equation with the short term coefficients β_i ,and long term coefficients which are given by:

$\delta_1=\alpha_{1*}\beta_{4i}$, $\delta_2=\alpha_{2*}\beta_{4i}$, $\delta_3=\alpha_{3*}\beta_{4i}$, and $\delta_4=\alpha_{4*}\beta_{4i}$

The model is estimated using OLS method with a lag structure of 3 on data for the period 1993-2014. All data are expressed in log form, so differences represent growth rates in the variables.

27. Results indicate that expatriates significantly and positively affect the growth of employment of nationals in the private sector in the short term (coefficient of the EXP in difference form)**.** The estimation results and the impulse response functions derived from the model are presented below. The positive impact may reflect the complementarities between the two workforces. It could also reflect institutional arrangements such as the sponsorship and quota system, which directly links the size of employment of nationals to that of expatriates in the private sector. The coefficient of EXP in level is however negative, indicating an inverse relationship between the size of expatriates in the labor force and annual growth of employment of nationals. This seems to be a logical result given that expatriates kept wage levels low and gradually crowded out nationals, leading to a largely segmented labor market over time, where nationals are predominantly employed in a small number of highly-paid

Table 3. GCC: Estimation Results from the ECM

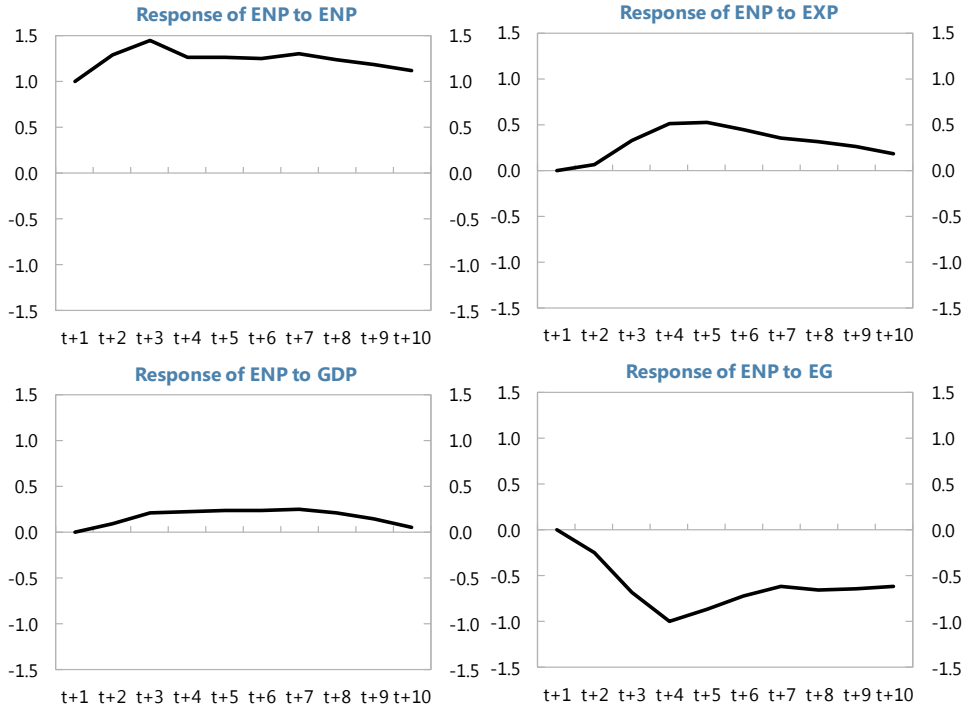
Conitegrating Equation		**ECM: Final Short and Long-term Coefficients**	
Dependent Variable EN		Dependent Variable Δ (EN)	
Independent Variables	Coefficient	Independent Variables	Coefficient
EXP (-1)	4.98*	EC term	(-0.009483**)
GDP(-1)	2.62*	Substituted coeffciencts	
G(-1)	-5.5**	EXP(-1)	-0.047
Trend	-0.31***	GDP(-1)	-0.025
Intercept	6.19**	GE(-1)	0.052
		Δ(ENP(-1))	0.301*
		Δ(EXP(-2))	0.271**
		Δ(GDP(-1))	0.121*
		Δ(G(-2))	-0.467*
		C	0.654**

Source: IMF staff calculations.
***, **, and * indicate significance at 1, 5, and 10 percent.
Table reports significant lags.

private sector jobs and in the public sector. Over time, training and education preferences of nationals becomes tilted toward public sector-focused occupations away from the technical skills needed by the private sector. It is expected that, in addition to the wage effect, other social and cultural factors play a role in dividing the labor market, as nationals usually withdraw from occupations and sectors that are predominately occupied by expatriates.

28. The results also show a significantly negative relationship in the short term between the employment of nationals in the public and private sectors. This is consistent with recent international econometric evidence (Behar and Mok, 2013) which shows that, on average, the creation of a public-sector job comes at the cost of a private-sector job and therefore has no impact on total employment. This crowding-out effect can occur for three reasons: (i) reduced private sector economic activity; (ii) incentives for individuals to take public instead of private sector jobs; and (iii) skills acquisition by the labor force becoming geared toward what is needed to get a job in the public sector.

Figure 9. Response to Nonfactorized One Unit Innovations



Source: IMF staff calculations.

29. The impulse response functions quantify the impact of a positive shock (one percent increase) in the variables on job creation for nationals. A 1 percent increase in expatriate growth leads tomore nationals being employed in the private sector by half a percentage point, while a similar shock in government employment reduces growth of jobs for nationals in the private sector by close to 1 percent after 4 years. Shocks to GDP growth have a small impact on the employment of nationals, confirming the weak link between growth and job creation for citizens in the GCC.

F. Policy Recommendations

30. Policies to address distortions and imbalances in the labor market structure should be implemented gradually to avoid negative implications on growth and hence, job opportunities for nationals in the short term. The results also confirm the need to control growth in public sector compensation and employment to encourage more nationals to take jobs in the private sector.

- **Heavy reliance on expatriate workers will continue** and should be reduced gradually in tandem with growth in the national population and size of the labor force and development of skills of nationals. Staff projects that the size of the Kuwaiti labor force would double to about 0.8 million by 2034, which would represent just one-third of the 2014 total labor force level, implying that Kuwait would need to continue to depend on expatriate labor to achieve economic growth.[2]

- **Improving expatriate labor regulations can help reduce wage differentials** between nationals and expatriates by improving the quality of imported labor and therefore enhancing productivity and increasing wage levels. This can be achieved by targeting specific skills through varying fees and visa issuance and renewal regulations. Allowing more mobility for expatriates, abolishing the sponsorship system, and improving work conditions would increase productivity and wage levels for expatriates.[3]

- **Public employment and may have reached its limits**. Containing growth in compensation and public sector employment is crucial for encouraging more nationals to work in the private sector. Nationals have a strong preference for public jobs given the superior wages and work conditions (such as job security, shorter work hours, and longer holidays) compared to the private sector. This has increased the reservation wage and distorted skill development by creating disincentives for nationals to invest in the skills required by the private sector. More nationals are acquiring education and training to allow them to enter the public sector, mainly in human and social specializations. Recent international evidence shows that, on average, the creation of a public-sector job comes at the cost of a private-sector job, and therefore, has no impact on total employment.[4]

- **Civil service reforms currently being considered by the government should be carefully designed** to address the fiscal and labor market challenge of public employment.

[2]Average growth in the labor force for the period 2020-2034 is projected at 2.5 percent annually. Calculations are based on national labor force projections in paragraph 6 and assuming labor force growth will start to decline over time as the improvement in participation reaches limits and work-age population growth stabilizes with a relatively more mature demographic structure.

[3] A sponsor acts as a guardian as well as guarantor and must undertake all administrative work on behalf of the foreigner, including applying for a work and residence visa, opening a bank account and signing a rental accommodation contract. Changing jobs within the country is not allowed without the consent of the sponsor.

[4] Behar, A., and J. Mok, (2013), "Does Public-Sector Employment Fully Crowd Out Private Sector Employment?" IMF Working Paper WP/13/146, (Washington: International Monetary Fund.

The proposed new civil service law aims to standardize pay structures across government agencies and increasing control and monitoring of wage growth in the public sector. While these reforms could increase average wages in the public sector in the short term, they could lower the wage bill in the long term. The new system could be further enhanced to address labor market segmentation by implementing a merit-based incentive system that aligns public and private sector employment and pay practices, rationalize entitlements to reduce reservation wage among nationals, and change the preference away from public sector jobs.

- **Improving the targeting of wage subsidies for nationals working in the private sector** will reduce the fiscal cost, and provide incentives for skills development and make private sector employment of nationals self-sustaining.

- **Reforming the education system to improve the quality of education, and better match its outcome with private sector needs**—especially for technical and vocational skills—would increase the employability of nationals and support a knowledge-based economy.

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