

"Non-oil Growth in the GCC: Estimating the Impact of Structural Reforms"

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Abstract:

This paper has two parts. The first part investigates the impact of economic structural reforms on non-oil growth in GCC countries by using a general equilibrium model. Four reforms are analyzed: reducing the size of informal employment; reducing fixed cost of entry regulations; increasing access to finance; and deepening equity market. The results indicate that reducing informality in the labor market has the largest positive impact. Also, reducing both fixed cost of entry regulation and informality always increase economic activities whereas financial reforms have a hump shape. The importance of labor market reforms found in part one has led to part two of this paper, which is to investigate GCC labor market even further, particularly, whether wage levels for both nationals and expatriates in GCC countries are aligned with macroeconomic fundamentals. Regression analysis is the method used here. The results indicate that wage levels in the region do not seem to be aligned with economic fundamentals and that wage differentials between nationals and expatriates exist. COVID-19 pandemic has disrupted the world economy, including the economies of GCC countries. Therefore, to avoid getting skewed results, this paper will focus on the period prior to the coronavirus pandemic, up until 2019.

Keywords: GCC countries, structural reforms, informal employment, wage differentials.

Introduction:

For more than fifty years, one of the main objectives of GCC countries has always been to reduce their dependency on oil and diversify their sources of national income. And indeed, GCC economies have evolved significantly over time by implementing many reforms to support this goal. For instance, since 2000, the growth rate of non-oil real GDP has been generally higher than real GDP and because of that, GCC countries have witnessed steady increase in the share of non-oil output in GDP (IMF REO, 2019). Also, GCC economies have witnessed improvements over time in different areas such as the business environment, infrastructure, health outcomes, educational outcomes, among other areas.

But while these improvements are real, more reforms are still needed. The GCC economies are oil-based, and with the ongoing climate change concerns as well as the expectation of weakening oil demand in the near future—the IMF has estimated that global oil demand will reach its peak in 2040 (Mirzoev et al., 2020)—they add extra pressure on GCC countries to diversify their economies. Also, international experience shows that diversifying away from oil is very difficult and it fails more than it succeeds (Callen et. al., 2014). All these challenges make the economic outlook for GCC countries uncertain.

In addition, while the share of GCC non-oil output in GDP has increased steadily as I mentioned earlier, it has been highly correlated with oil prices as Figure-1 shows. Another issue with GCC countries is related to export and fiscal revenues, particularly, the progress with export and fiscal diversification has been more limited. Other issues include distorted labor market in which the public sector is the main employer of nationals, large wage differentials between public and private sectors, declining and/or stagnating labor productivity, and limited credit access for small and medium-sized enterprises (SME). All these issues combined make non-oil growth reforms for the GCC a very urgent issue.

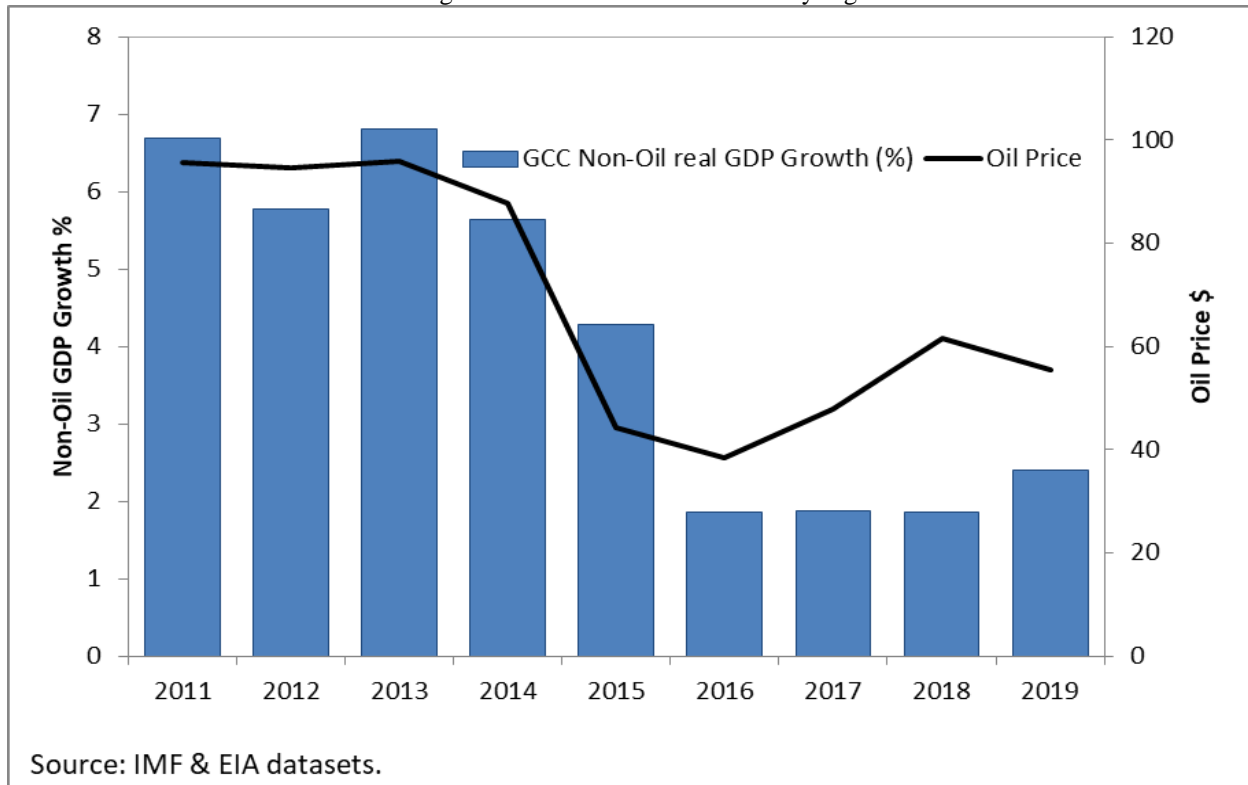


Figure-1

Besides the oil-dependence issue, there are other labor market issues that amplify the challenge for GCC countries even further. First, the labor market in GCC countries is led by the public sector, and second, most of the private sector jobs are filled by low-skilled foreign workers. In addition, while the authorities in GCC countries have repeatedly emphasized the importance of SME as a strategic tool to achieve more

diversified economy, SMEs do not enjoy the same level of credit access as larger companies. These labor-market and financial-system issues together pose significant challenges to GCC countries.

By nature, informality is difficult to measure, and for GCC countries, there is no official data that is accessible (Schneider & Savasan, 2007). This is the reason why I end up using the IMF working paper data by Medina and Schneider (2018). There are wide-spread informal practices in the GCC countries, such as the illegal transfers of money by expats to home country. This happens because expats cannot access legal banking services and face financial constraints to remit their money home. Another example of informality is the corruption in the illicit trade of visas of foreign workers. The way this works is that national citizens apply to business license, and depending on the nature of their business, they will be granted a certain number of visas. The trick is that these nationals have no intention to start any business. Rather, they just want to make quick profit by selling their visas to other businesses who need them for a reduced price. This would put the migrant worker in an illegal status since legally he or she is not allowed to work for anyone other than the sponsor. Again, this type of visa trading has become widespread in GCC countries. Another example for the informal practices in the GCC region is the relatively large volumes of cash transaction by both nationals and expats, and cash is always the method used to finish illegal transaction since it is more difficult to track. Thus, both nationals and expatriates are involved in these informal practices, most informality appears to be mainly among the expats and arise because of the absence of their human rights.

Such informality can be a barrier facing GCC authorities to tackle unemployment. Illegal immigrants avoid paying legal fees and hence can accept low wages and be very attractive in the market place. These illegal immigrants might enter the GCC illegally—which is very rare or come to GCC countries legally and then overstay after their legal residence expires—which is very substantial or take up employment for a person other than the sponsor—which is very substantial. Informality also deprives governments from tax revenues and forces them to spend more on policing.

This paper investigates two questions. First, what are the potential medium-term effects of structural reforms on economic activities in the GCC countries? Specifically, the paper investigates the effects of four structural reforms on four economic activities. The four reforms are reducing informality in the labor market, reducing fixed cost of doing business, increasing access to finance, and deepening financial markets. The four economic activities are non-oil output per worker, consumption per worker, investment per worker, and total factor productivity (TFP) in the formal sector. General equilibrium model is used here to answer this question. Second question, are wage levels in the GCC countries aligned with macroeconomic fundamentals, especially comparing nationals with expatriates? A regression analysis is used to answer the second question.

The findings for the first question indicate that reducing informality has the largest positive impact. Also, reducing both fixed cost of entry regulations and informality always increase economic activities whereas financial reforms have a hump shape. The findings for the second question indicate that wage levels in the GCC do not seem to be aligned with fundamentals and that wage differentials between nationals and expats exist.

Literature Review:

Many studies confirm that diversified economies perform better than single-product economies over the long run (e.g., Lederman & Maloney, 2007; Hesse, 2008; Cherif et al., 2016). Structurally, the government plays a central role in the GCC economies. Oil and gas constitute most of the fiscal revenue; the government then uses this revenue to spend on the different sectors of the economy. Thus, the whole structure of GCC economies heavily depends on oil and gas. The volatility in oil prices has caused rising budget deficits and challenged economic growth in the GCC countries. The current economic situation whether globally (e.g., volatile oil prices and rising competition) or locally (e.g., widening fiscal deficits and high youth unemployment) creates a challenging economic environment for the GCC countries.

Improving fiscal balances alone is not sufficient for GCC countries to achieve sustainable economic growth away from oil. Instead, major economic and social reforms, such as labor and financial markets reform, business regulations reform, education reform, ... etc., must be implemented. With respect of labor market, GCC countries suffer from high level of informality—i.e., illegal workers. Financial markets are not well developed, and business regulations need improvement.

The public sector in GCC countries have invested heavily in physical capital by financing massive physical infrastructure investment using oil receipts. Miniaoui and Schilir (2017) argue that the distribution of oil revenues within the economy has tended to force out non-oil tradable production. Moreover, the production of non-tradables has proved less risky and more convenient for companies because companies here can benefit from both the rapid growth in government spending and the availability of low-wage low-skill foreign workers. All of this has helped companies to extract larger profits. Such an economic model unfortunately prevents GCC countries from moving closer to a more knowledge-driven economy where skills and technical capabilities are the real driver of economic growth.

In addition, the wide availability of public-sector jobs has discouraged GCC nationals from pursuing private sector employment and entrepreneurship. Strategies such as the expansion of the private sector and the diversification of the economy away from oil, which are needed to absorb the growing workforce, have so far achieved limited success in many cases. Though some progress has been made, most GCC economies are still deeply dependent on the capital-intensive hydrocarbon sector, which generates limited direct employment. The government-dependent private sector needs to become self-sustaining by increasing its competitiveness in the international markets. Thus, it is crucial to change the incentive structure within GCC economies to create the necessary shift towards vibrant non-oil private sector (Callen et al., 2014; Cherif et al., 2016). Nationals must be stimulated with appropriate incentives to improve their skills and making these skills more relevant to the private sector. Empirical analysis and experience show that diversification effort usually takes a long time, and it becomes a serious and urgent matter just as revenues from oil start to decrease (Callen et al., 2014).

The success or failure of diversification effort will depend upon whether the government implements specific and appropriate economic and social policies. Callen et al. (2014) suggest several targeted measures to improve the business environment to alter the current incentives that avoid the production of non-oil tradable goods. Among these measures, they propose reorienting public spending, strengthening the role of private sector competition, developing backward and forward linkages across sectors with a comparative advantage, and implementing labor market reforms to incentivize private sector employment of nationals and improvements in productivity.

Mitra et al. (2016) emphasize the need of reducing excessive bureaucracy and streamlining business regulations to significantly lower the cost of doing business and raise the efficiency of government services. These authors highlight the importance of developing financial markets for fostering the accumulation of physical capital in the private sector—also critical for economic diversification, since financial market development hinges on improving access to finance.

Hamdi and Hakimi (2015) conduct a significant empirical analysis about financial market developments and growth for the Middle East and North Africa (MENA) region. They underline the crucial role of financial markets and banks for economic growth. Their results reveal the existence of a positive relationship between financial development and growth, and between banking development and economic growth through improvement of financing to the private sector. Thus, Hamdi and Hakimi (2015) suggest changes, reforms, and modernization of financial markets in the MENA region.

Most of the GCC countries have changed the structure of their economies in the last decade or so, making large investments in education, health, tourism, entertainment, and infrastructure, and implementing business environment reforms. The GCC countries have also adopted long-term economic

and social development strategies that emphasize the importance of economic diversification. The goal of these strategies is to promote sustainable development, reduce dependence on oil revenues, and increase private sector job creation for nationals. This explains why most GCC countries have introduced long-term national economic plans—or visions—to achieve this objective, such as the Vision 2020 in Oman, Vision 2021 in the United Arab Emirates, Vision 2030 in Bahrain, Vision 2030 in Qatar, and the new Vision 2030 in Saudi Arabia. While some variation exists across countries' visions, economic diversification, labor market reforms, and economic growth are at the heart of each plan.

Methodology:

The main tool used in this paper is the IMF Macrostructural toolkit. First, a brief background on what this toolkit is, how to use it, and what its limitations are. So, the goal of this toolkit is to quantify gains of structural reforms. Four structural reforms are analyzed: Reducing the size of informal employment, reducing fixed cost of entry regulations, increasing access to finance, and deepening equity market.

The toolkit's model-based outcomes or gains are always larger than empirical analysis gains since by design it is a controlled environment. This tool, which is written in MATLAB, replicates the model analysis in the IMF's 2019 October World Economic Outlook found in Chapter three. The toolkit uses general equilibrium model for a small open economy with heterogeneous entrepreneurs facing various regulation frictions. There are no aggregate shocks and so the toolkit cannot be used to analyze the impact of exogenous shocks on the economy. There are two types of agents in the model: workers and entrepreneurs, and workers cannot transition into entrepreneurship.

All new entrepreneurs must start in the informal sector where they produce output Y with only labor L . Then, entrepreneurs in the informal sector, motivated by higher potential profit " π " from the use of K and higher TFP in the formal sector, can formalize at the end of any period by paying a sunk regulatory entry cost. This is exactly where the product market reform comes into play. Also, the entrepreneur who enters the formal sector can finance this entry cost using either internal funds or by issuing equity claims or both. The former is related to access to finance reform while the latter is related to deepening equity market reform.

Reducing informality impacts the macroeconomy in two ways: 1) Directly: through higher profit and TFP, and 2) Indirectly: through remembering the fact that the other reforms simulated by the toolkit cannot benefit entrepreneurs working in the informal sector. And so, reducing informality will affect economic outcomes even further through 3 transmission channels: First, it will facilitate entry from the informal sector to the formal sector; second, it will incentivize formal firms to invest and grow; and third, it will reduce misallocation of resources between formal firms.

So, how to set up the toolkit? The tool has twelve macro parameters and seven micro parameters. The macro parameters are growth rate and here I use the average real non-oil GDP growth over 2013–2018 from the World Bank, then the discount rate, return to scale, labor elasticity of production, TFP advantage of formal over informal firms are all standard values often used in the literature and taken from Midrigan and Xu's 2014 American Economic Review article titled: Finance and Misallocation: Evidence from Plant-Level Data. Capital depreciation data is taken from Penn World Table. GCC payroll tax is zero. And then due to data limitation, the data for fixed cost of joining the formal sector, probability of employed workers keeping their job over a year, probability of unemployed workers staying unemployed over a year, average cost of employment protection legislation to formal firms, and cost of corruption for formal firms are all taken from the IMF World Economic Outlook Chapter 3.

Then for the seven micro parameters, the toolkit has private debt to GDP and market capitalization to GDP, and for both I use the data from the World Bank Financial Structures Database. Then, cost of entry regulations and here I use the data from the World Bank cost of starting business as percentage of GDP per capita. Then, the informal employment share, and here I use the data from the IMF 2018 working paper by Medina and Schneider titled: Shadow Economies Around the World: What Did We Learn Over the Last 20 Years? Finally, the parameters of dispersion of employment, dispersion of employment growth, and serial correlation of employment, and all their data are taken from the World Bank database.

Next, how to produce the toolkit estimates? Now that I have all the data required to run the toolkit, I need first to solve the baseline model to be compared later with the actual outcomes. The way to solve for the baseline model is by feeding in all the parameters with the data values I gathered and then finding the wage rate such that the economy's labor market clears. After that, I start implementing structural

reforms by using a benchmark economy to imitate. The benchmark chosen is the best performing GCC economy in each of the four reform areas. The rationale behind this approach is that GCC countries are very similar and so achieving the outcomes of the best GCC economy seems reasonable in the medium-term. Then, I need to modify calibrated parameters to reflect the implementation of structural reforms and solve the model again the same way I did with the baseline model. Thus, the toolkit has produced two model outcomes: The baseline outcomes and the reformed outcomes. Finally, I compare both outcomes to estimate the impact of reforms.

As helpful as it is, the toolkit has its limitations. First, the toolkit simulation model is static, not dynamic. This means that the toolkit compares two steady states without showing us the dynamics of how we move from the 1st equilibrium to the 2nd equilibrium. Thus, we really do not know how long it took to reach the new equilibrium to reap the benefits from reforms, nor we know what negative side effects the reform could produce along the way. The second limitation is that it does not give us sequencing. This means that the toolkit will not provide us with any kind of reform priority—that is, which reform should come first, and which one should come second and so on and so forth. Third, the toolkit's results are 2nd best equilibrium, meaning we will get equilibrium with distortions.

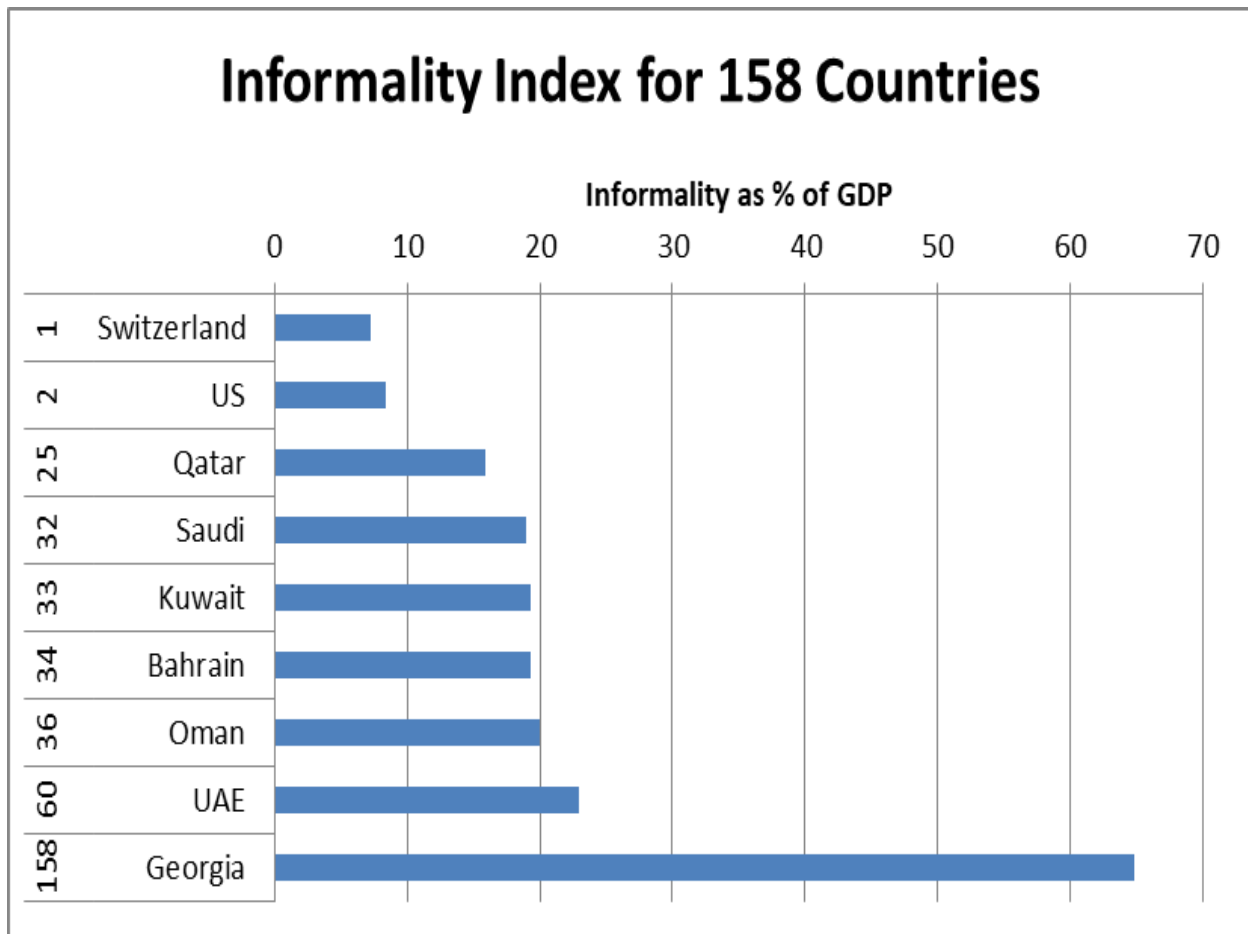
For the product market reform (or reducing the fixed cost of entry regulation reform), I use the World Bank's "Ease of Doing Business" indicator. The ranking ranges from 0 to 100. A high ranking means the regulation environment is more conducive to the starting and operation of a local business. The rankings are determined by sorting the aggregate score on 10 topics (e.g., starting a business, dealing with construction permits, getting electricity, registering property, getting credit, paying taxes). Each area consists of several indicators with an equal weight (e.g., procedures, time, cost). And finally, the rankings for all economies are benchmarked to May 2019.

The "Ease of Doing Business" indicator has its limitations too. First, the index assumes that entrepreneurs have knowledge of and comply with applicable regulations. In practice however, entrepreneurs may not be aware of what needs to be done or how to comply with regulations and may lose a lot of time trying to figure it out, which will negatively impact the economy's score. They may intentionally avoid compliance altogether too. Second, "Ease of Doing Business" indicator does not measure the full range of factors, policies, and institutions that affect the quality of an economy's business environment, such as macroeconomic stability, development of the financial system, market size, bribery and corruption, or the quality of the labor force. Third, there were some issues raised in the news on the repeated changes in statistical methods the World Bank was accused of and how this might have had negative impacts on some economies' rankings (e.g., Chile).

The second part of this paper analyzes the wage gap between nationals and expatriates. I gather actual wage data for various groups in GCC countries. I use Al-Waqfi and Alfaki's econometric model in their paper "Gender-Based Differences in Employment Conditions of Local and Expatriate Workers in the GCC Context" published in 2015 to estimate predicted wage, and then compare the predicted wage with the actual data. Therefore, regression analysis is the method used here.

Results and Discussion

This is the first structural reform result out of the four reforms: Reducing informality in the labor market. Figure-2 below shows the informality index for 158 countries based on data from the IMF working paper by Medina and Schneider (2018). Switzerland for example has the lowest informality size whereas Georgia has the largest. The US ranked second and the GCC countries are somewhere in between. Qatar has the smallest informality among the GCC and so I chose it to be the benchmark in this reform. United Arab Emirates has the largest informality in the GCC and so we should expect the UAE to gain the most from this reform. And indeed, looking at Figure-3, the GCC economies on the X-axis excluding the benchmark of course, and for each GCC economy there are four economic outcomes measured: non-oil output per worker, consumption per worker, investment per worker, and formal sector TFP. The Y-axis shows the values of these economic outcomes in US dollar. Each country has the baseline results as well as the reformed results. UAE has the largest gains: non-oil output jumps 30% compared to the baseline, investment jumps 105%, and TFP 16%. Saudi Arabia is the second most benefited from this reform, Kuwait is third, Oman fourth and Bahrain last.



*Source: Author calculations.

Figure-2

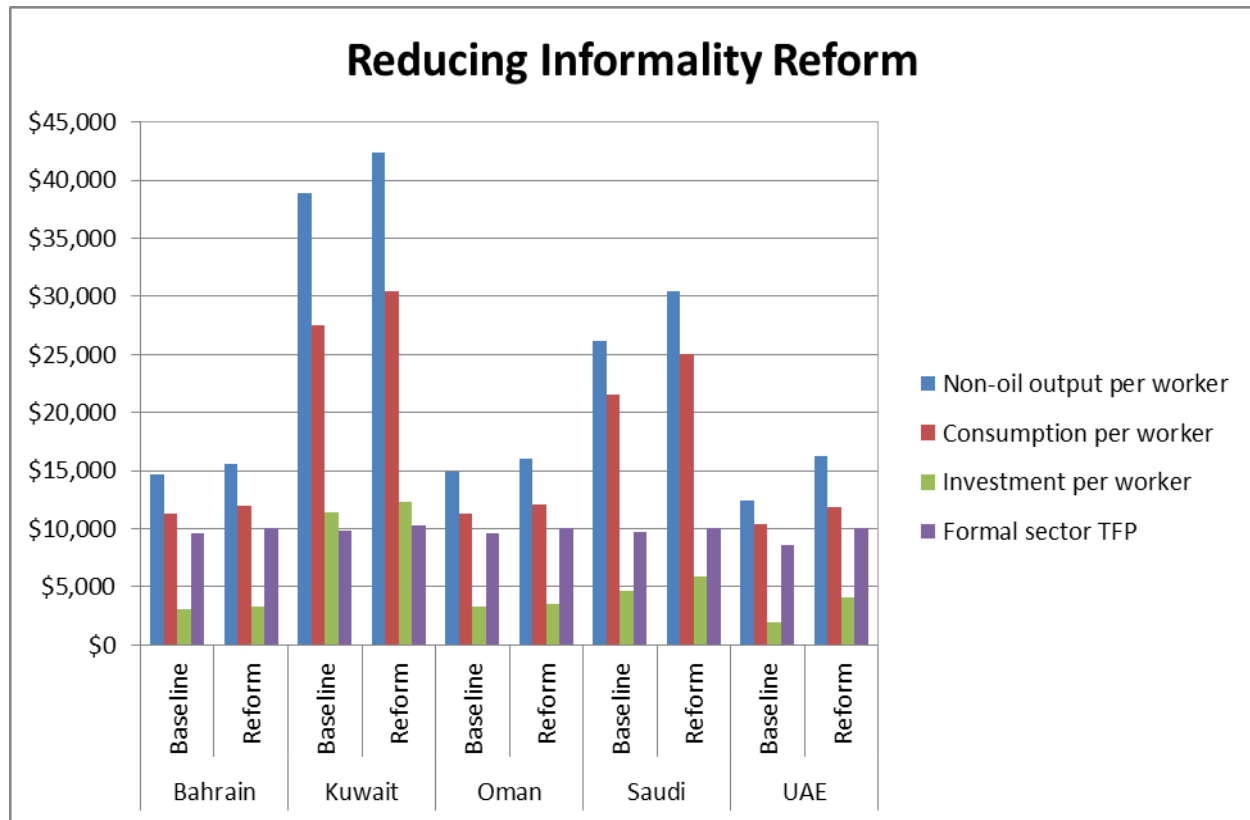


Figure-3

Next is the results of the second reform: reducing fixed cost of doing business. Figure-4 shows the “Ease of Doing Business” index. The score is from 0 (the worst location to start a business) to 100 (the best location to start a business). New Zealand is ranked first globally in 2019 and Somalia is at the bottom. The US is ranked 6th globally, and the GCC is somewhere in between. UAE has the highest index score among the GCC and so I chose it to be the benchmark for this reform. Kuwait on the other hand has the lowest score among the GCC and so we should expect Kuwait to gain the most from this reform, but it only leads in gains in consumption with very modest increase of 2% as Figure-5 shows. Qatar is ranked second to last in the ease of doing business index and so we should also expect large gains relative to other GCC economies. And indeed, Qatar has the largest gains in non-oil output with 7% increase, in investment with 28% increase, and in TFP with 3% increase.

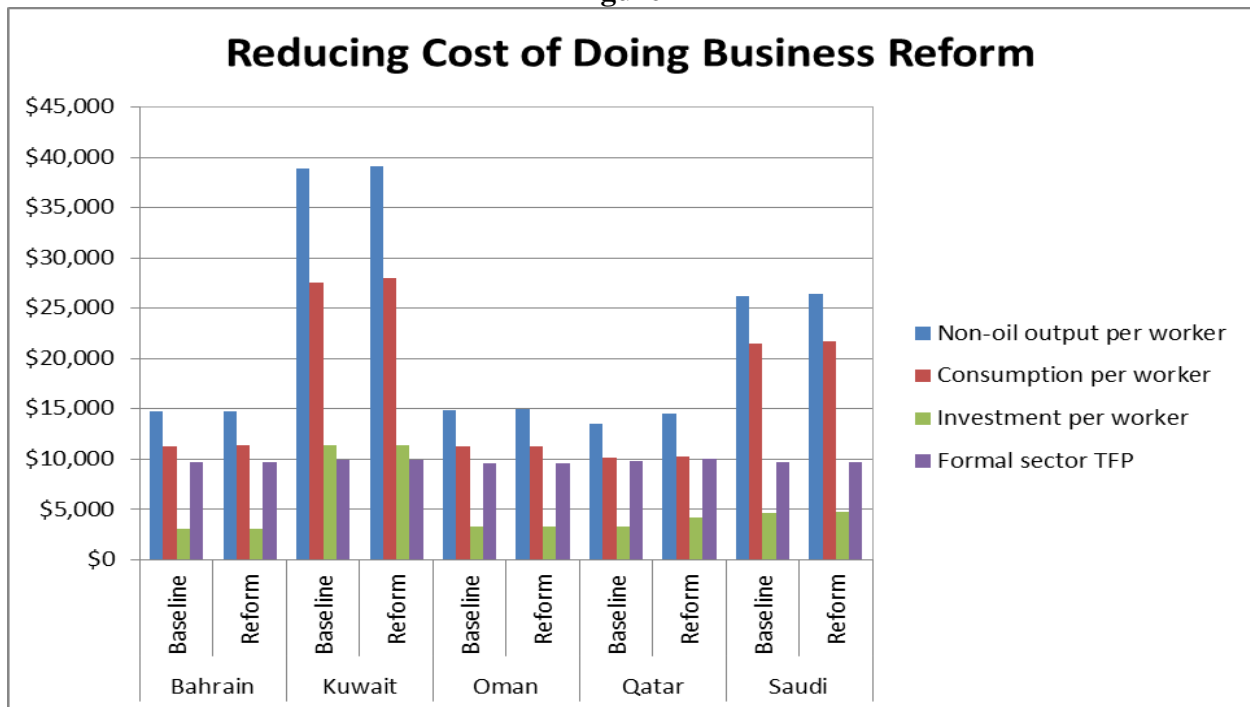
The third reform is improving access to finance. Figure-6 shows the ranking of GCC economies based on private credit to GDP. Kuwait has the highest score and so it is our benchmark and Saudi Arabia has the lowest score and so we should expect Saudi to gain the most from this reform. Looking at Figure-7, Saudi Arabia indeed is the most economy benefit from this reform with huge jumps in non-oil output by 53%, consumption by 22% and investment by 131%. Other GCC economies witnessed very modest gains if any. But in this reform, we start to see negative impacts of reforms. Increasing access to finance reforms drag down UAE’s all four economic outcomes.

The last structural reform is deepening equity markets. Figure-8 shows the ranking of GCC economies based on stock market cap to GDP. Qatar has the highest score and so it is our benchmark and Oman has the lowest score and so we should expect Oman to gain the most from this reform. Figure-9 shows the baseline outcomes versus the reformed outcomes. Indeed, Oman has the largest gains from this reform relative to other GCC economies in non-oil output which modestly increases by 1%, investment by 3%, and TFP with less than 1%. Other GCC economies did not witness any gains, and once more UAE’s investment and TFP decline as result of this reform, though UAE’s consumption gains the most by 8% compared to other GCC economies.



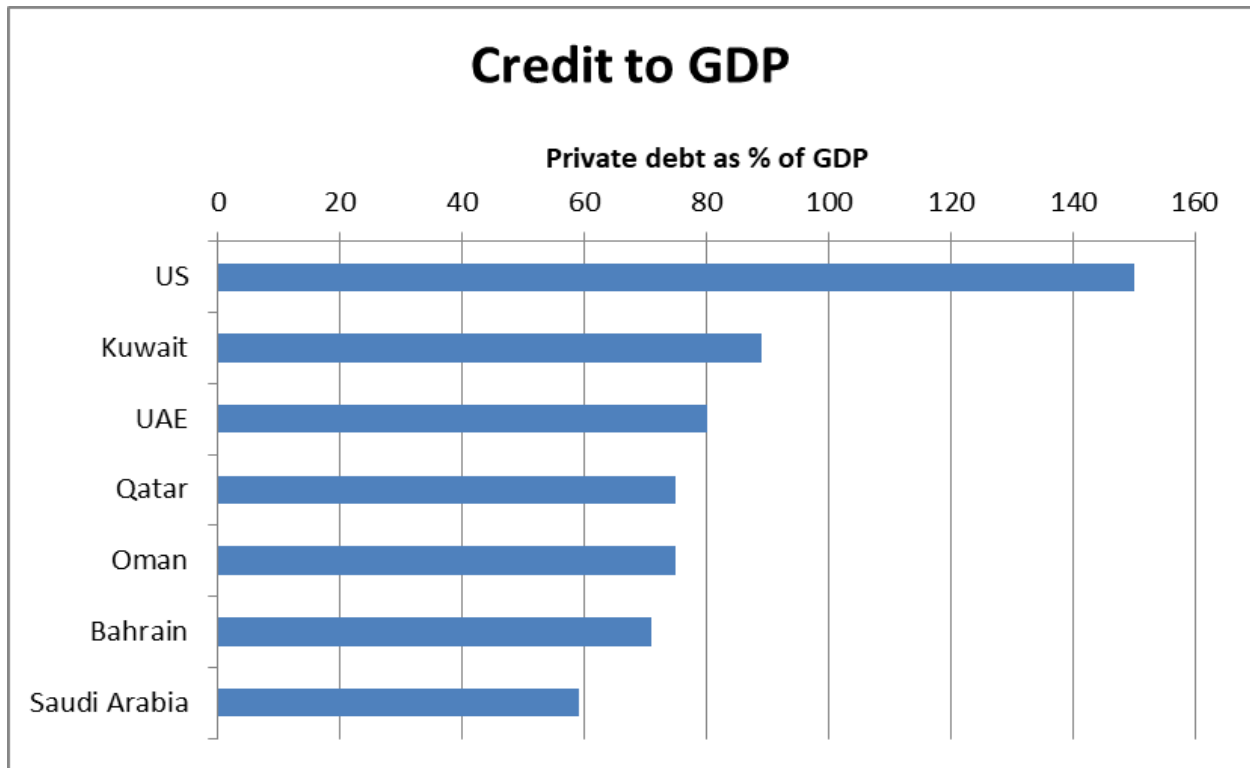
* Source: Author calculations.

Figure-4



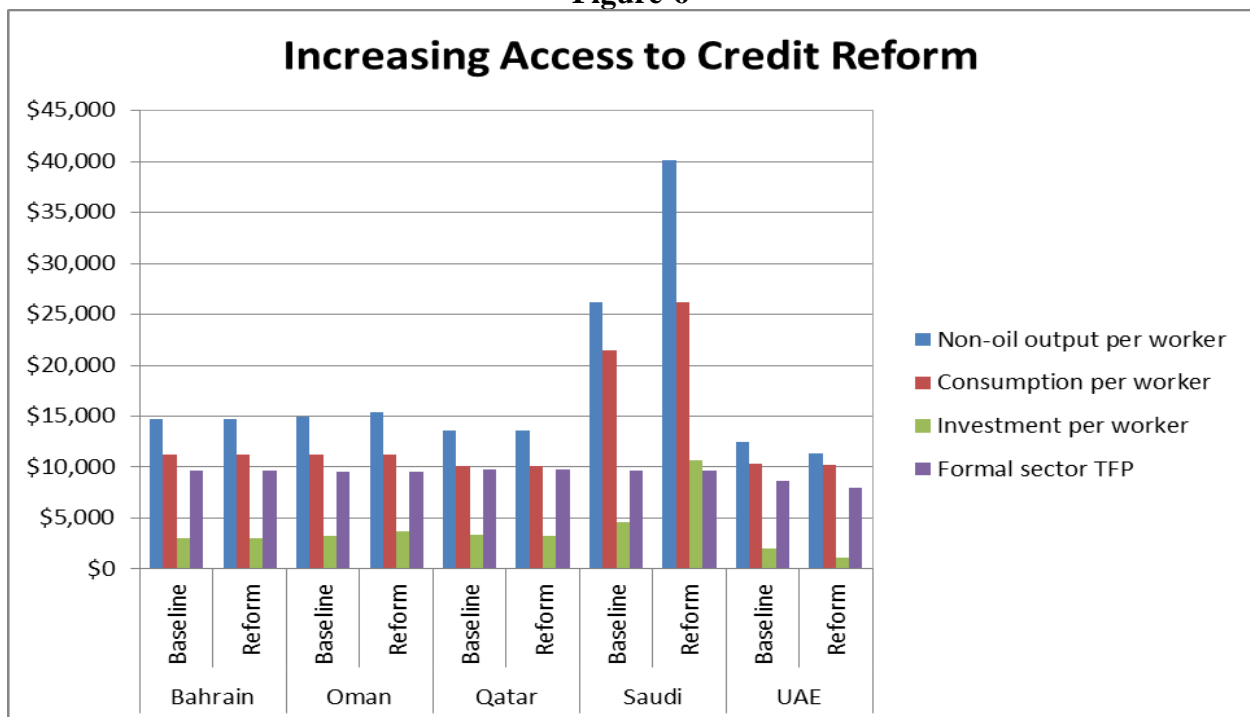
* Source: Author calculations.

Figure-5



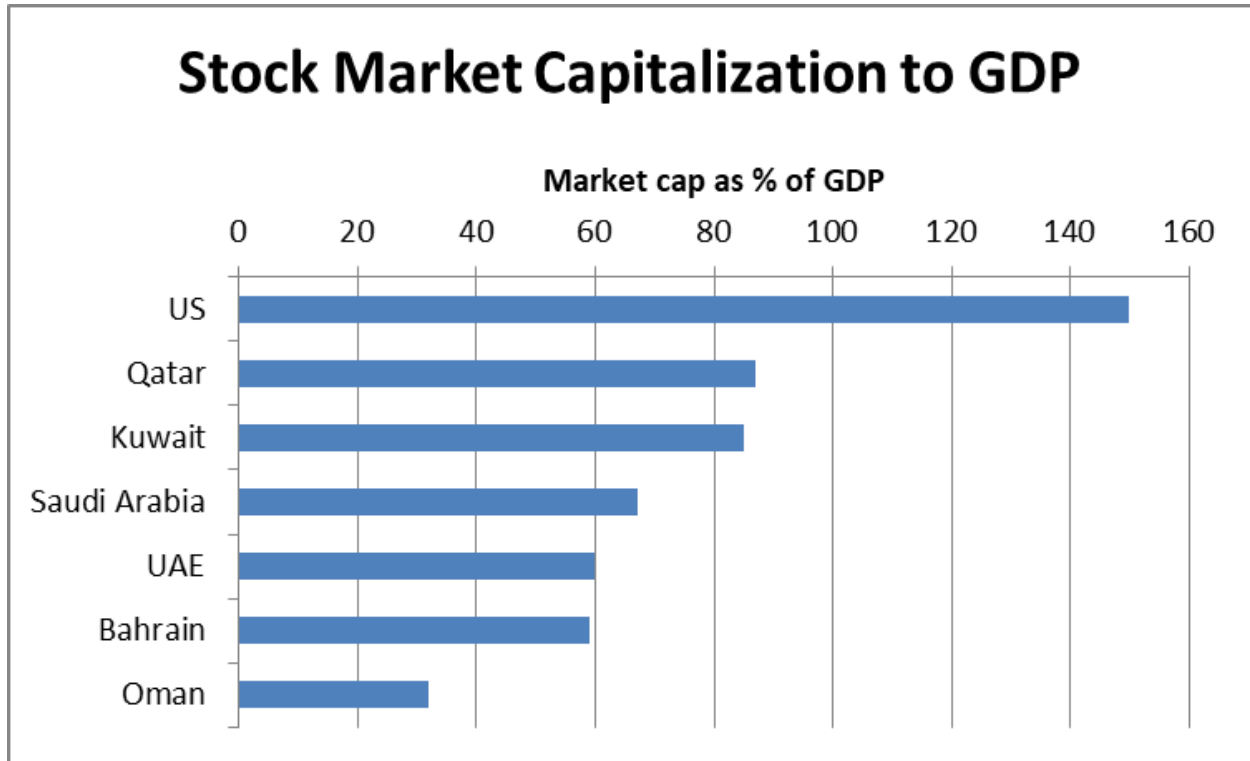
* Source: Author calculations.

Figure-6



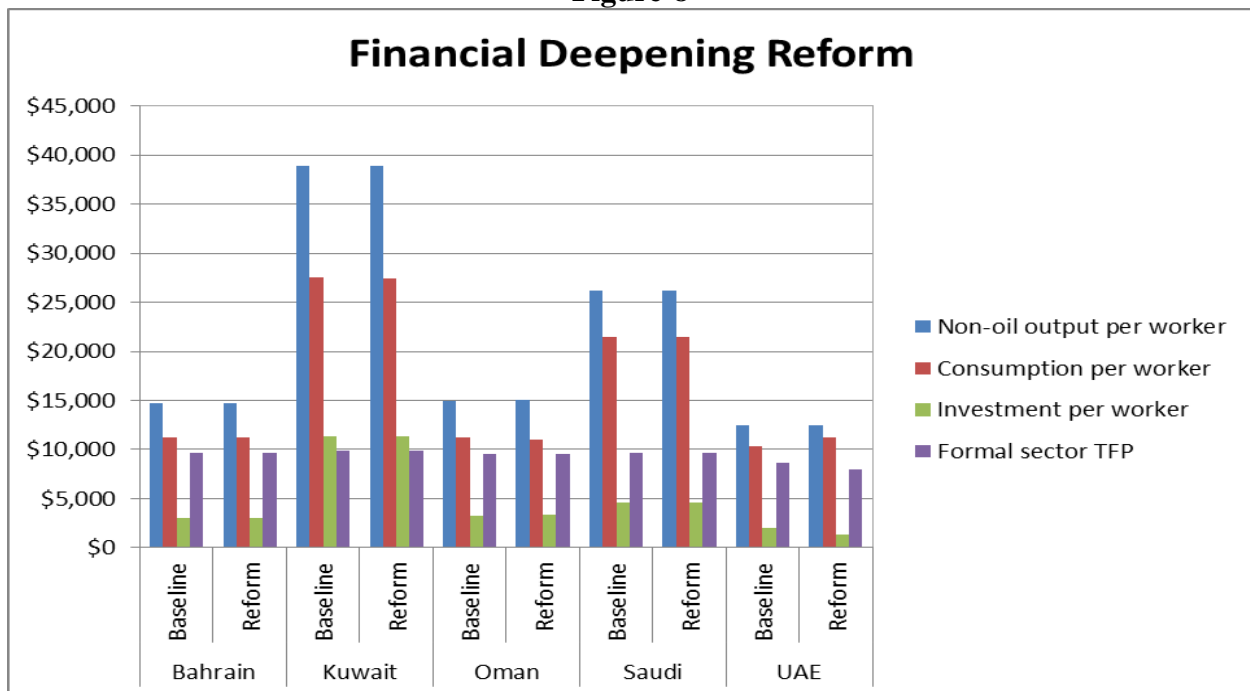
* Source: Author calculations.

Figure-7



* Source: Author calculations.

Figure-8



* Source: Author calculations.

Figure-9

Turning to the second part of this paper, the wage premium analysis in GCC countries. Are wage levels in the GCC aligned with macroeconomic fundamentals? Regression analysis is the methodology used here. I use Al-Waqfi and Alfaki's econometric model in their paper "Gender-Based Differences in Employment Conditions of Local and Expatriate Workers in the GCC Context" by plugging the data I gathered in their regressors to obtain the predicted

wage. The rationale here was that since these papers were written on GCC, it would be reasonable for me to use their coefficients and get reasonable results. After doing this, I compare this predicted wage with the actual wage data and see whether the wage gap exists.

The dependent variable in Al-Waqfi and Alfaki's paper is log of monthly wage, while independent variables include hours of work per week, dummy variable for citizenship of employees, experience, experience squared, dummy variable for college university degree, dummy variable for graduate (i.e., master or above) degree, dummy variable for manager job category, and dummy variable for professional or technician job category.

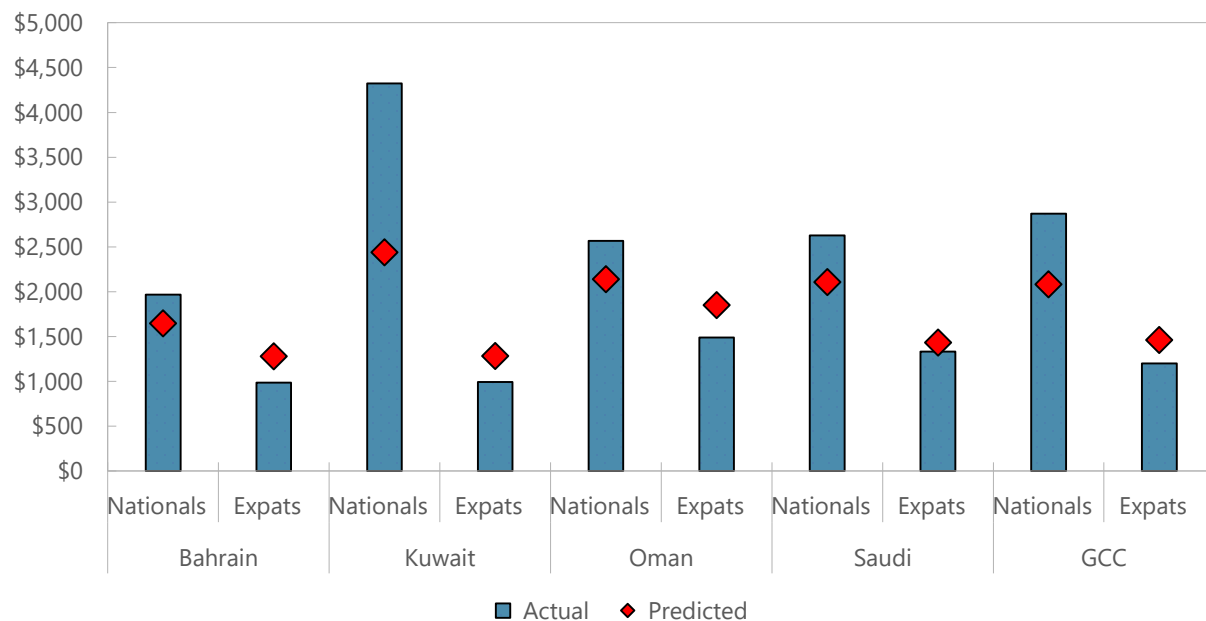
Table-1 shows the actual average monthly wages in 2019 for GCC countries. For all countries, there is a wage gap between nationals and expatriates; nationals earn more than expatriates.

Country	Average Actual Monthly Wage	
	Nationals	Expatriates
Bahrain	\$1,969	\$986
Kuwait	\$4,322	\$992
Oman	\$2,567	\$1,488
Saudi	\$2,627	\$1,333
GCC	\$2,871	\$1,200

*Source: Author calculations.

Table-1

Figure-10 presents the results. On the X-axis we have four GCC economies (no UAE and Qatar due to data limitations). We also have the average of GCC in the far-right side. On the Y-axis, we have the values in USD. Actual wage is in blue and predicted wage is in red. Each country has nationals and expats breakdown. As the figure shows, for nationals, Kuwait has the largest wage gap, and Bahrain has the smallest. Oman and Saudi Arabia are somewhere in between. Also, across the board, nationals' actual wage is always higher than the predicted wage whereas it is the opposite for expats—expats' actual wage is always lower than the predicted.



* Source: Author calculations.

Figure-10

Conclusion

The Macrostructural Toolkit calibrated for the GCC shows there may be important gains for non-oil growth from structural reforms. Relative to other reforms, reducing informality and improving access to finance yield the largest gains. Reducing both the cost of doing business and informality always lead improvements. Whereas financial reforms are not always beneficial in the model as it was the case for UAE. There are some limitations with both the toolkit and doing business indicator as the paper discussed earlier.

Wage gap exists in GCC countries when compared to wages implied by fundamentals. The gap varies across GCC countries: Kuwait has the largest gap, Bahrain has the smallest, Oman and Saudi Arabia are somewhere in between (no wage data for Qatar and UAE). At the current wage levels, expats are more attractive to private sector employers. This creates a barrier for GCC objective to hire nationals. Closing the wage gap would improve competitiveness and encourage FDI. A future extension to this paper could be to compare GCC results with a more advanced economy (e.g., US) as a benchmark.

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