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# Fiscal Policy considerations for post war reconstruction in Iraq, Syria, Yemen and Libya.

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#### Abstract:

The recent violence in Libya, Iraq, Syria and Yemen constrained economic activities and crippled all forms of government revenues. In countries such as Syria and Yemen, civil conflict reduced natural resource revenues and limited tax efficiency and collection. Violence also erupted production of natural resources driving down government income in Iraq and Libya. The war in all four states altered expenditures priorities and channelled spending toward militarized activities at the cost of productive investment spending. Relating to SDGs 1, 8, 16, and 17, we propose in this paper robust fiscal spending options that could promote sustainable and inclusive economic growth while taking into consideration urgent humanitarian needs.

### 1- Introduction

Since 2010, economic conditions in Iraq, Yemen, Syria and Libya deteriorated significantly leaving millions of people behind with severe health conditions (especially in Yemen and Syria), low educational attainment and significantly poor living standards. The conflict in Syria resulted in around \$168 billion loss in income, more than \$100 billion worth of physical capital destructions and millions of internally and externally displaced civilians between 2010 and 2015. Similarly, the civil war in Libya killed thousands of innocent civilians and many civilians have been forced to flee their territories. The economic loss in Libya was exceptionally high due to the drop in natural resource production and revenues that are considered the main source of income. Based on ESCWA's estimates, the income loss between 2010 and 2015 was estimated at almost \$226 billion. Irag on the other hand, experienced both an intra and interstate wars in less than a decade. The conflict has created major socio-economic and humanitarian crisis with almost 10 million people require humanitarian assistance and over 3 million IDPs. The war impacted the living standards in Iraq and a large share of the population has fallen into monetary poverty reaching 22.5 percent nationwide and 41.2 percent in ISIS affected regions (in 2014). The conflict in Yemen resulted into a man-made famine, as bureaucratic impediments and the ongoing conflict hindered access to two-thirds of the population (18.8 million) in need of humanitarian assistance<sup>1</sup>. Between 2010 and 2015, the expected foregone income in Yemen was estimated at almost \$33 billion.

The critical question to be answered in this paper is, how conflict affected countries would sustainably cope with the post conflict reconstruction process in the presence of the abovementioned humanitarian and economic issues given the overarching structural and institutional challenges in all four states? This paper presents forward looking reconstruction opportunities while considering pressing challenges that might hinder the reconstruction process. We propose that such countries should set an objective reconstruction plan that highlights all humanitarian challenges, identify sources of financing (whether coming from international donors or domestic borrowers) and identify how fiscal policy could play a significant and decisive role in maintaining a stable reconstruction process while considering the absorptive capacity constraints, the nature of each country's economy and the governance status prior and during the war.

The remainder of the paper is organized as follows: Section 2 provides a theoretical overview of the negative impact of capital loss on growth and an estimate of the foregone GDP and government revenues for all four states between 2010 and 2015. Section 3 highlights the macroeconomic and governance challenges as well as issues related to reconstruction priorities that such countries might face during reconstruction. Section 4 suggests different potential sources of funding to accompany the reconstruction period, possible challenges associated with each presented source and lessons learned from countries that had been through a civil war in the past four decades. Section 5 presents different routes of

<sup>&</sup>lt;sup>1</sup> In Spring of 2017, deteriorating humanitarian conditions in Yemen led to an outbreak of cholera (65,300 suspected cases as of June 2017, according to the WHO) with the number of infected cases are expected to rise to reach 130,000 within weeks.

sustainable fiscal spending based on the economics structure of each country. Section 6 covers some concluding remarks.

# 2- Socio-Economic and Fiscal Damage

The conflict in Syria, Yemen, Libya and Iraq geared in the same devastating direction affecting the economic, demographic and the social apparatus of their societies and jeopardizing the political and economic conditions for neighbouring countries. In this paper, we focus only on the economic losses incurred by all four countries. First, we theoretically interpret the impact of capital loss on economic growth. We then predict the forgone income in conflict-affected countries without examining the regional costs of such wars. Usually, it is hard and very costly to identify accurate measures of the cost of conflict. To this end, we utilize previous predictions to estimate the losses in income by utilizing the 2010-2015 IMF income forecasts and the realized income for the same period for all four countries. We use the same technique to estimate losses in government revenues in the following section.

#### 2.1- A theoretical interpretation of capital loss

Based on the Neo-classical theory, accumulation of physical and human capital is considered as the main source of economic growth (Mankiw et al. 1992). Bridging economic theory to growth dynamics experienced in conflict affected countries, all states have experienced major destructions in their drivers of growth, mainly in their physical and human capital. To this end, this section underlines the impact of capital on economic growth through analysing theoretically how physical and human capital destruction impact economic growth. We define physical capital as any building or machinery used as inputs for production every time period "t". We also define human capital as the stock of education each unit of labour has accumulated overtime. Similar to physical capital accumulation, a portion of GDP is used for investment in human capital in every period. Both types of capital accumulation occur through successive investments overtime to add on the existing stock of capital and compensating for capital depreciation.

Previous economic models (such as Basic Solow or Ramsey Cass Koopmans Model) assessing income losses mainly included only the role of physical capital. However, the impact of human capital on growth is paramount and should not be underestimated. In our analysis, we model human capital because in conflict-affected countries physical capital is partially or completely destructed and skilled labour is either displaced, has joined the military forces or has migrated to contribute to other state's income impacting the hosting country's production process. Subsequently, we theoretically show that the negative impact of human capital reduction on growth is direct through incorporating human capital in the production function. To support our theoretical justification with empirical evidence on the importance of human capital, we rely on Annan and Blattman et al (2007). The authors argued in an empirical exercise that conflict in Northern Uganda reduced educational attainment and long-term productivity. Further, Shemyakina (2006) in a panel data analysis examined the effect of conflict on schooling and how civil wars could reduce the probability of school completion depending on conflict duration and intensity. We

assume that physical capital increases at an exogenous rate  $s_k$  and depreciates at a rate  $\gamma$ . Just as in physical capital, human capital accumulation occurs through investing income at an exogenous rate  $s_H$  less the depreciation in human capital  $\lambda$ .

This relation can be summarized by the following equations:

$$\dot{K}_t = s_k Y_t - \gamma K_t$$

$$\dot{H}_t = s_H Y_t - \lambda H_t$$

Where  $\dot{K}_t$  is considered as the change in capital over time.  $s_k Y_t$  illustrates the investments in physical capital.  $\dot{H}$  is the change in human capital overtime, while  $s_H Y_t$  depicts investments in human capital. During a civil war, affected economies encounter major losses and migration of different types of capital stock (Weinstein and Imai, 2000). First, as part of the opportunity cost of conflict, the economy could experience major physical capital flight compared to relatively stable countries. Usually, civil war elevates political and economic uncertainty, putting domestic investments at a higher risk and pushing investors to shift resources toward safer international markets. This was evident in Turkey which was hosting many Syrian investors since the outbreak of the Syrian war. Second, during conflict capital drops at a higher rate, mainly due to the absence of additional investments and the destructive forces of violence. Usually, in conflict-affected countries, capital decreases at a higher rate relative to savings reducing the accumulated capital stock overtime and the degree of capital loss is dependent on the war intensity.

In the case of human capital, countries in conflict usually face an escalating rate of human capital migration depending on the nature of the war (Bang and Mitra, 2013). Further, labour might lose productive skills due to the crippling impact of the fray on educational institutions and the involvement of labour force participants (population between the age of 15 and 35) in militarized activities. Consequently, human capital could decrease at a higher rate and additional investment in skills would be halted.<sup>2</sup> In a simplified Cobb-Douglas production function and using the above equations that determines human and physical capital dynamics, one can show theoretically how physical and human capital could affect the overall income growth by differentiating the per-capita production function with respect to time:

$$g_{y} = \alpha g_{k} + \phi g_{h} + (1 - \alpha - \phi)g_{A}$$

Where  $g_y, g_k, g_A$  and  $g_h$  represents output growth, capital growth, technology growth and growth in human capital respectively. Comparative statics shows that income growth changes in the same direction of technology, human capital and physical capital. Further, the magnitude of this change is determined by the values of  $\alpha$  and  $\phi$ , the share of physical capital and human capital in income. The above equation dictates that any decrease in human and physical capital resulting from conflicts will result in a decrease in income growth. Our theoretical analysis indicates that the loss of any type of capital in Iraq, Yemen,

<sup>&</sup>lt;sup>2</sup> Based on ESCWA estimates of school enrolment in Syria, primary enrolment dropped from 97 percent in 2010 to 61.5 percent in 2015. Physical capital loss was also estimated at USD 89.9 billion in 2015 and expected to add up to USD 100 billion in 2016.

Libya and Syria is affecting economic growth and the impact is dependent on the share of each type of capital in income.

#### 2.2- Economic Loss Estimation

A precise assessment of the physical and human capital loss is impossible now due to the war intensity in all four states. Most estimates of capital damage were done through satellite images or through Geographic Information System (GIS) assessments, which might provide a partial snapshot of the damage, especially in Libya, Yemen and Syria. <sup>3</sup> To have an estimate on the overall loss of economic activity, we rely on the IMF's previous income estimates. We present the predicted versus realised GDP levels for Iraq, Yemen, Syria and Libya between 2010 and 2015. It is also worth noting that aside from war accumulated losses, Libya and Syria are still suffering from economic sanctions in multiple sectors, which further worsen the socioeconomic conditions. Predicted values were estimated by the IMF in 2010, before the outbreak of the civil war in Libya, Syria and Yemen, and the uprising of the so-called Islamic State in Iraq and Syria (ISIS). While the realized GDP is calculated based on estimates by UN-ESCWA), we calculated the total gap between the predicted and the realised GDP at \$ 428.14 billion between 2010 and 2015.



#### Figure 1: Predicted versus realised GDP.

<sup>&</sup>lt;sup>3</sup> Provided Satellite images for conflict affected countries show mainly property destruction, without providing more information if the demolished property is a residential, commercial or an industrial property where the cost of destruction would be different depending on the nature of the property.



Source: ESCWA analysis based on IMF and national sources data.

While the difference between predicted and realised GDP was minimal for Iraq (likely because the impact of war, which had been ongoing in the country since the US invasion in 2003, was already taken into account into the predictions), the difference is large for Libya and Syria. Yemen, on the other hand, experienced only one year of severe conflict in 2015, and therefore its GDP loss is relatively small based on our estimations that include data up to 2015.

Many estimates of GDP losses have been published for Syria, ranging from -30 percent to -57 percent over 2010-2015. Our estimate of US\$ 168.65 billion GDP losses for Syria is roughly in line with that of Frontier Economics (2016), which found GDP in Syria to be 45 percent lower than it would have been in the absence of war (we found it to be 41% lower).4 Studying the Yemen's economy, the Economist Intelligence Unit (EIU) found that Yemeni economy contracted in real terms by an estimated 38 percent in 2015. On May 6 2016, a joint report by the World Bank, the United Nations, the Islamic Development Bank and the European Union<sup>5</sup> estimated that the conflict in Yemen has so far resulted (still partial and incomplete) almost \$7 billion worth of damage and economic losses (in nominal terms) of over \$7.3 billion measured in loss of production and service delivery. According to the World Bank, Libya's economy shrunk on average by around 14 percent per year between 2013 and 2015, which is roughly in line with our estimates. In Iraq, real GDP growth has declined by about 3 percentage points since 2013 (Lanchovichina & Ivanic, 2016). This is also roughly in line with our estimate of a small impact of recent conflict on Iraq's GDP.

In 2016, ESCWA produced a report (ESCWA, 2016) estimating that conflicts in the Arab region between 2011 and 2015 led to a net loss of \$613.8 billion in economic, equivalent to 6 percent of the region's GDP. The calculation includes direct and indirect effects of the conflicts, including refugee arrivals and falls in tourism. However, the number does not include several aspects of the cost of war, such as capital flight, foregone investments, loss of remittances, loss of earnings by workers and reduced trade volumes. The

<sup>&</sup>lt;sup>4</sup> A 2015 SCPR report estimated Syria's total economic loss since the start of the conflict at US\$ 202 billion by the end of 2014, equivalent to 383 percent of the 2010 GDP in constant prices. Lanchovichina and Ivanic (2016) find Syria's GDP to have declined by 30 percent due to the war. Gobat and Kostial (2016) find that Syria's GDP has contracted in real terms by 57 percent between 2010 and 2015.

<sup>&</sup>lt;sup>5</sup> <u>http://www.reuters.com/article/us-yemen-security-damages-idUSKCN10R2B7</u>

ESCWA estimate covers the war in Syria, its impact in neighbouring Lebanon, the impact of transition and war in Tunisia and Libya, and the adverse socioeconomic impact of the occupation of Palestine. As the Yemeni conflict started in 2015, the results of the ESCWA research are likely to capture the impact of this conflict rather marginally (we try if possible to fill this gap with this paper). In addition to GDP, the four wars significantly affected trade patterns and reduced trade integration in the region. For example, before the conflict, trade between Syria, Lebanon, Turkey, Jordan, Egypt and Iraq was steadily rising and trade integration processes were ongoing following the signing of the "Levant Quartet" agreement in 2010. The benefits of deep trade integration reforms were expected to be sizable, however, the war wiped out all such prospects.

#### 2.3- Estimated loss in Government Revenues

The structure of government revenues varies between Iraq and Libya compared to Syria and Yemen. For example, Libya and Iraq's government revenues are mostly generated from hydrocarbon receipts (natural resource revenues is above 90 percent of total government revenues). However, in Syria and Yemen government revenues are partially generated through taxation and the rest through hydrocarbon revenues. In the graphs below, we estimated the total loss in government revenues resulting from the decrease in tax revenues and hydrocarbon income. Firstly, we predict the average level of taxes and hydrocarbon revenues using a counterfactual scenario. Using the IMF 2010-2015 projections of tax revenues as a percentage of GDP and natural resource rents as a percentage of GDP, we predict the level of government revenues that could have been generated if these countries did not experience a war post 2010. Secondly, similar to our gdp loss analysis, we use the realized GDP between 2010 and 2015 to calculate tax revenues as a percentage of GDP and natural resource rents as a percentage of GDP. Then we estimate the loss in government revenues resulting from losses in tax revenues and natural resource rents. We estimate the total losses in government revenues to add up to \$209 billion.

Our estimates reveal that Iraq and Libya incurred the largest losses between 2010 and 2015 estimated at \$47 billion and \$83.5 billion, respectively. As shown in figure 5, that the loss in government revenues in Libya is increasing overtime, especially after 2013 due to the outbreak of the civil war and the existence of two opposing governmental bodies trying to rule the country. This effected was compounded by the drastic decrease in international oil prices starting in 2014. A similar trend was observed in Iraq. In 2014, violence intensified after ISIS gained control over major cities in Iraq such as Mousel Ramadi and Fallujah. The drop in government revenues was also blamed on the drastic drop in oil prices by the end of 2014. Losses in tax and natural resource revenues for Yemen and Syria (realized losses in government revenues were estimated by the National Agenda of the Future of Syria) were estimated at \$27.5 billion and \$51.6 billion respectively. Syria's government revenues tumbled starting in 2011 due to the drop in economic activity and the dominance of ISIS of oil production in Dair el Zor<sup>6</sup>. In Yemen, government revenue

<sup>&</sup>lt;sup>6</sup> Oil and Gas represents one four of government revenues in Syria

deterioration was blamed on the maturing oil fields and the sabotage of new oil explorations due to the war.









Source: ESCWA Estimation

# Figure 4: Estimated loss of government revenues due to losses in tax and natural resource revenues

# Figure 5: Estimated loss of government revenues due to losses in natural resource revenues



Source: ESCWA Estimation Based on World Banks Government Revenue: estimations

## 3- Policy Challenges

From a macroeconomic perspective, economic policies regulating the exchange rate, real output, external accounts and fiscal spending are considered weak and sometimes absent during civil conflict. Usually,

during any war overall macroeconomic stability decreases due to higher inflationary pressures and the drastic increase in public debt. Higher levels of instability increases the risk of a free fall of the exchange rate and widen the gap in the balance of payment. The challenge facing post conflict governments is to be able to synchronize a sound fiscal and monetary policy that restore inflationary pressures(to boost investment and consumption confidence) along with sectoral policies that are capable of restoring forgone physical and human capital while paying a due attention to urgent humanitarian needs. Successive governments could consider multidimensional policies and not focus solely on economic growth at the cost of other activities.

Financing scenarios are also crucial for long term post war development. Financing shortages during any designed reconstruction process might delay targeted social and economic outcomes. Bulir and Hamann (2007) argued that in aid dependent economies, it is hard to implement macroeconomic stability when the sources of financing fiscal activities are volatile. This might be a relevant challenge in the upcoming 3 years due to subdued growth prospects of the world's economy and low commodity prices that are considered the key driver of the Arab region's growth (International Monetary Fund, 2016a).

Additional challenges may arise from large aid influx, especially in the way it is spent and absorbed by different economic sectors (Aiyar and Berg et al., 2005). When not invested efficiently, aid can cause a drastic change in the economic structure of the recipient country. One of the major issues that could tailgate aid influx is the Dutch disease. The term originally describes the impact of natural resource revenues on the Dutch manufacturing sector but has come to be used as a general term to describe the situation of most natural resource-rich countries. However, in the presence of foreign aid, the diagnoses are valid with or without the presence of hydrocarbon income, especially in aid dependent states.<sup>7</sup> The Dutch disease is economically explained as the appreciation of real exchange rate (RER) resulting from the increase in relative prices of non-tradable goods to tradable goods. Unless there is an unlimited supply of non-tradable domestic goods, prices of such goods will appreciate to equate the supply and demand. On the other hand, in a small open economy, prices of tradable goods do not change since they are determined by international markets and do not adjust to domestic market prices fluctuation. This results in higher price for non-traded goods, where prices of non-oil traded goods get cheaper in terms of non-traded good.

#### 3.1- The issue of prioritization

Even in stable eras, it is always hard to prioritise in allocating public expenditures. Lack of strategic guidance and failing to identify short term and long term bottlenecks<sup>8</sup> will alleviate the reconstruction process. If one factors out the financing issue, the issue of government resources allocation will surface

<sup>&</sup>lt;sup>7</sup> This is relevant in a Palestine, Liberia, Afghanistan, Malawi and Burundi.

<sup>&</sup>lt;sup>8</sup>associated with inter sectoral policy priorities

to the top. *The question of interest for all governments in conflict affected countries is where to optimally spend right after the civil war?* To show conceptually how government resource allocation affects the society, we assume a utilitarian government taking control of public spending during the post-war period. We assume that after a war crisis, society's short term and medium term welfare could be improved through government spending on two major goods, consumption goods and investment goods. Consumption goods are considered as spending on humanitarian aid, emergency needs, wages and other utilities having a short term economic impact. While investment goods have a long term economic impact. Investments could be considered as spending on infrastructure, health and education and sectoral spending in productive sectors to facilitate the expansion of value added economic activities. To visualize the welfare gained by the society through different spending choices, graph (a) below examines the indifference curve of both consumption goods and investment goods. The tangency point between the indifference curve and the budget line represents theoretically the optimal benefit received by the society from government spending on investments goods and consumption goods.



After a crisis, spending exactly at the budget line is considered as a utility maximizing condition to the society. According to economic literature, positive returns on infrastructure and other forms of capital are of a long-term nature. On the other hand, consumption spending has a direct positive short-term impact and a long-term negative return especially if spending on productive activities is always negated—eventually, government consumption would reduce economic growth especially when governments run prolonged primary budget deficits to finance recurrent activities at the cost of productive activities. Time inconsistences justified by preference changes between the long and the short run would impact the outcome of the distributions significantly.

To link our analysis with previous literature, Addison (1998) argues that in conflict-affected countries, governments have to deal with short-term humanitarian spending, security issues and long-term development programs as well. He also added that the reconstruction process and economic reforms cross roads, where well-implemented reforms will lead to better reconstruction. In his paper, Addison presented a new economic reforming agenda for a set of African countries (such as Somalia, Angola, Mozambique and Guinea-Bissau) as a road map for better post-war development. The agenda focused primarily on privatization (especially in a the presence of poor governance and poor human resources),

incentivization of small and medium enterprises, and inclusion of poverty reduction in the overall macroeconomic framework. Addison's focus was both on short-term and long term activities which mimics our theoretical interpretation in figure (a).

From figure (b) any corner solution might be an optimum spending decision, however, with different short term and long-term implications. Intertemporal spending solely on humanitarian and recurrent spending (U<sub>1</sub>) might frontload consumption at the cost of income generating investment activities. At the same time, absorptive capacity bottlenecks will sustain if unbalanced spending represented by figure (b) persisted in future periods. On the other hand, spending solely on investments to reconstruct the destructed capital (U<sub>2</sub>) might expand the production possibilities frontier and at the same time backload urgent consumption needs which might exacerbate deprivation and poverty, mainly in the short and the medium term, leading to a higher probability of war relapsing. It is also worth noting that in the presence of corner solutions, a shift in government budget due to additional foreign aid (from model (c)) will be welfare improving, however, spending in the same fashion overtime might not be at optimum in the long run due to the same concerns we raised earlier. This raises the following question: Given the initial condition of each country, what is the optimal spending scheme that fulfils urgent consumption needs without compromising long-term sustainable development?

#### 3.2- Governance Challenges

If we compare the governance quality of the conflict affected countries in the Arab region with African countries such as Chad and Angola (who experienced a civil war because of a regime liberalization process), we can see that such countries are experiencing about the same governance quality including similar governance challenges. For example, after the Chadian war in 2010, the country experienced limited upswings in governance quality, however maintained a low quality since then. Based on ESCWA's vision 2030 analysis, conflict-affected countries in the Arab world might end up with the same devastating consequences if no efforts are initiated to change the status quo. Governance performance of all four countries prior to the conflict and during the war could signal that the reconstruction process might face serious efficiency constraints. This is evident in Figure 6. It shows that between 2010 and 2015, average performance in governance quality was on the negative side with political instability steadily increasing to reach the lowest level of instability in 2015 for the four countries.

**Figure 6: Governance Quality** 



Source: The World Governance Indicators(WGIs), World Bank. The above point estimates represent the averages of Iraq, Yemen, Libya and Syria's score in each governance quality index.

Since it is statistically proven that the above governance quality indices(WGI's) are positively and significantly correlated<sup>9</sup>, it could be possible that armed conflict and higher political instability are the major factors preventing any possible signs of progress. To have a closer look at the performance of government cabinets over the years for all four countries, we examine the government effectiveness index specifically—it measures the quality of bureaucracy, quality of infrastructure and quality of public administration. We explicitly selected government effectiveness, because it gauges mainly government public administration performance that is connected to the fiscal practice. From figure 6 one can conclude that on average countries experienced a low performance in government effectiveness with obvious deterioration overtime. According to the dimensions determining the government effectiveness index, a low score such as the one presented in figure 6, could hint to inefficient spending on health, education and infrastructure along with government failure in handling public services, low quality of budgetary and financial management and an overall low quality of public administration. To have a rather closer look at fiscal policy governance, we present in figure 7 below the macroeconomic stability scoring from the Bertelsmann Transformation Index (BTI). The index measures the capability of a government to have a consistent fiscal policy that includes medium-term goals for debt reduction and fiscal consolidation, and potentially the creation of a stabilization reserve to reduce external vulnerability.

<sup>&</sup>lt;sup>9</sup> Pairwise correlation between political stability and other governance indicator (except voice and accountability) is above 0.7 for Arab states.

Figure 7: Macro-stability Index



Source: Transformation Index, BTI: The government has not devised or implemented any fiscal or debt policies to promote macroeconomic stability. 10= the government's fiscal and debt policies promote macro -economic stability, supported in part by institutional (self-) Constraints. The questions of indicator are as follows: The government's fiscal and debt policies promote macroeconomic stability, supported in part by institutional (self-) constraints. The government's fiscal and debt policies generally promote macroeconomic stability, but lack institutional safeguards and are prone to populist policy changes. The government's fiscal and debt policies are inconsistent and insufficient to promote macroeconomic stability. The government has not devised or implemented any fiscal or debt policies to promote macroeconomic stability.

The graph above assesses how consistent the government follows a strict policy of fiscal discipline and the central bank's ability to maintain prudent monetary policies aiming at insuring macroeconomic stability. According to the BTI macro-stability index, macro-stability decreased significantly in Syria and Yemen after 2012. This can be linked to the civil unrest that started in 2010 in Syria and intensified after 2012. The government's failure to maintain economic stability in Syria manifested when the central bank couldn't stop the escalation of exchange rates( currency depreciation) in early 2012. Further, since the outbreak of the war, the reduced economic activities and low tax collection pushed the government of Syria to run a non-sustainable budget deficit (more than 30 percent of gdp in 2013) where most resources were inched toward military spending. According to the Syrian Center for Policy Research (SCPR) Public debt climbed to 126 percent of GDP in 2013, with a significant increase of foreign debt.

The Yemeni fiscal performance is equally devastating due to the aftermath of the protracted civil war that started in 2015. Gross government debt in Yemen is 67.34 percent of GDP. This is considered low, yet non-sustainable due to the low annual economic growth compared to the interest on debt, which is expected to deteriorate even further in coming years. The dim overall macroeconomic prospects is reflected in the macro-stability index which dropped in 2014 and 2016 due to the vulnerable state of the country's fiscal position influenced by the collapse of real economic activity. Further, the International Monetary Fund (2016b), claimed that public finance in Yemen came under pressure and fiscal deficit surged significantly due to the drop in hydrocarbon receipts resulting from drop in oil prices.

Since the outbreak of the civil war in 2014, Libya's macroeconomic stability eroded. The presence of two governments put pressure on the overall macroeconomic conditions reducing the chances of having an integrated fiscal policy to promote economic development. Iraq's macroeconomic stability was also reduced recently due to the exacerbated government spending on security and other recurrent activities requiring the government to run a consecutive budget deficit since 2014. Additional spending was justified with the hike in military expenses to fight ISIS. For countries such as Iraq and Libya oil revenues

add up to more than 90 percent of total government revenues. It is worth noting that, low economic growth and low oil prices would put macroeconomic stability at risk, even if one factors out the war effect on both nations.

# 4- Resource mobilization

The lengthy episodes of civil conflicts based on religion and ethnic issues in Iraq, Iran, Syria, and Yemen requires these countries to re-define their social contract to asserts clearly the state's function legitimacy in generating revenues within a clear constitutional framework. Before any reconstruction efforts, conflict affected states should pledge to a new social contact that secure equal political and economic opportunities and resource distribution irrespective of tribe, religion, gender and political views. By definition, a civil war is nothing but the consequence of institutional failure. Therefore, states that emerged from a conflict should redefine their institutional framework to transform the state into a viable one (Panic, 2009).

From previous war experiences in African and Asian countries, one can underline different scenarios on financing urgent needs in the post conflict era. For example, after the war ended in Congo, tax authorities generated royalties from oil companies based on the pre-war arrangements while gradually strengthened their taxes and customs administration. The government also received almost \$6 billion of ODA between 2001 and 2003. After its devastating war with Eritrea, Ethiopia financed urgent spending through imposing 10 percent taxes on imports. Using the tax rate that existed during wartime in 1995 as a base, Guatemala proposed an increase in its tax rate by 50 percent between 1995 and 2000. The coming section will propose similar financing scenarios.

### 4.1- Mobilizing resources nationally

In the aftermath of the crisis, mobilizing resources nationally can be challenging, especially if internal sources of financing such as taxation is restricted. As mentioned earlier in our analysis, the negative impact of conflict on government revenues is substantial and the severity intensifies if the war is prolonged for multiple years making it more challenging to reactivate the fiscal institutions back to its pre-war capacity. This was shown empirically in many studies that looked at effect of civil war on government revenues. For example, Addison et al. (2002) claimed that fiscal revenues are negatively correlated with the intensity of civil wars. They argued that fighting a militia in small areas of the country is different from fighting a civil war across the nation. Using the Department of Peace and Conflict data from the Uppsala University, they found that reducing the intensity of civil war could help to mobilize additional revenues. In their empirical analysis, they found that tax revenues increased by 20 percent if the intensity of civil war was reduced from high to medium intensity<sup>10</sup>. Further, an additional 15 percent increase in tax revenues as a percentage of GDP could be collected if the intensity is reduced from medium to low intensity conflict.

<sup>&</sup>lt;sup>10</sup> The data set used in their analysis included all violent incidents in oil rich and oil poor countries at different development stages around the world, categorised by the type of incident, the year of activity, involved states, government involvement in case of civil conflict etc.

We recast the above analysis, using Polity IV and the WDI data on tax revenues for 11 countries who had episodes of civil conflict in the past 20 years. Our analysis revealed that the relation between tax revenues and civil war episodes is negative and significant. The graph below depicts that there is a negative impact of an additional episode of civil conflict on government revenues. <sup>11</sup> This asserts that revenue generation requires peace and stability to start initiating tax collection.





At early stages of post conflict, it is difficult to mobilize large tax revenues to cope with the reconstruction plan if the tax base is impaired and compliance due to institutional failure. This was evident in the case of the Bosnia and Herzegovina's war, where tax capacity was destroyed almost completely and the only source of tax revenues was border taxation. According to Gupta et al. (2004), to reactivate the fiscal authority in post conflict eras, the state should re-impose all required legislative laws and reinforcing regulations to make the tax policy legally enforceable in areas of conflict. This depends on the state's ability to restore order after the civil war. Along with the required reforms, a fast gradual generation of tax revenues from economic activities could further entrench stability and support urgent national needs (including merging all armed personnel to the national army with a legitimate monopoly of power to the state).

The speed of tax revenues restoration depends on the existing taxing system. For example, it could be challenging for a country such as Syria and Yemen to swiftly collect taxes, since most of their tax revenues are generated from corporate taxes and personal income taxes. A tax regime of this kind requires major restoration of physical and human capital to generate additional revenues and usually to incentivise

<sup>&</sup>lt;sup>11</sup> In our analysis, we used countries such as Afghanistan, Albania Congo, Guatemala, Liberia, Sierra Leone and Zimbabwe.

investments in the post conflict era, tax cuts are required. Arguably, in countries such as Syria and Yemen, in the short run, indirect taxation and taxes on selected goods and services might quickly help to mobilize revenues because unlike other types of taxes, indirect taxation could be easily monitored and collected. We stress on the role of selective tax criteria to negate the impact of indirect taxation on the vulnerable and poor classes. In the medium run, governments should reconsider adjusting and reforming the tax regime, enhance public-private partnership to increase tax collection and reduce tax evasion. This will be rather challenging where incentive mechanisms are required to increase collection efforts and accountability in tax monitoring.

One additional source of government taxation is oil and gas. However, this source of government income is not sustainable, and might counter the process of development due to revenues volatility. In 2014, the share of oil revenue in total revenue was around 94 percent in Iraq and 93 percent in Libya. In such countries, a restoration of oil production at early stages of post conflict is essential. This could be done through government's control of oil production and maintaining a certain level of security. Since natural resource revenues is not sustainable in the long run, diversifying government revenues sources through proposing a new tax regime is essential. As mentioned earlier, taxes can add a more sustainable source of government revenues, especially when the non-resource sector as a percentage of GDP increases.

The common denominator for all revenue generating activities is improvement in governance quality. If public financial management quality continues the business as usual scenario, tax collection from economic agents and oil revenues generated would be subject to embezzlements and tax favouritism, which deter the reconstruction plan and compromise security and stability. This was evident in Iraq, when high corruption and embezzlements almost jeopardized the state's legitimacy. The Iraqi government military spending amounting \$58 billion (between 2004 and 2014) were not sufficient to prepare the Iraqi military to fight small terrorist groups using traditional weapons.

#### 4.1.1- Government Borrowing

To finance reconstruction, governments could also borrow domestically from the private sector either by issuing debt securities or through short term and long term loans. International borrowing from sources such as the world bank, the IMF and other international development banks is also a possible option. However, these types of borrowings are subject to multiple risks. First, due to inflationary pressures debt securities might not be attractive to investors especially at early stages of reconstruction. This pushes governments to increase bonds interest rates to significantly higher level. This was evident in Lebanon in 1997-1998 when interest rates reached almost 40 % on government bonds. Third, borrowing in foreign currencies from international organizations might put additional exchange rate risks on borrowers. Consequently, government borrowing will determine the public debt dynamics and could witness positive or negative development depending on how efficiently resources are spent in the economy.

Usually, government borrowing should promise higher future economic growth and higher future government revenues. However, altering effective and efficient spending with recurrent expenditures will

significantly increase debt and reduce economic growth through crowding out investments<sup>12</sup>. Previous experience in terms of post-war spending patterns can be drawn from cases such as Rwanda, Angola, Lebanon and Cambodia, who experienced similar violent conflicts during the last century. In figure 7 below we plotted the debt and fiscal performance for ten years following the end of civil conflicts in such countries. These countries experienced a different route in their post-war spending. There are extreme cases such as Lebanon and Angola who progressed in opposite directions. When looking at the dynamics of budget deficit of Angola, it becomes obvious that Angola started with a high level of debt and then reduced its debt significantly after the war. The country managed to close its spending gap over the years and ran a budget surplus 2 years after the end of the war. What is surprising is that the country's military expenditures increased right after the civil war by 160 percent (between 2003 and 2013). This could be blamed on the government's monopoly of power after the final episode of civil conflict and to the doubledigit annual growth in income between 2004 and 2007 due to high oil prices. <sup>13</sup> Angola is a natural resource rich country and considered the second largest oil producer in sub-Saharan Africa. This implies that the fiscal surplus is a result of higher hydrocarbon production after the civil war and might not be sustainable.<sup>14</sup> However, even though the country is well endowed with natural resources, income inequality and poverty remained high even a decade after the civil war.<sup>15</sup> Over the years, the country failed to improve its business climate, enhance economic development and increase economic diversification.

In contrast, debt dynamics in Lebanon were not very favourable. Lebanon started with a low level of government debt and kept running successive deficits for the following 10 years of the war, pushing debt to 146 percent of GDP. Although total revenues have been improving and were relying on a healthy tax base, government expenditures were also increasing at a higher rate. Government spending grew at a rate of nearly 1.5 times higher than revenues, causing the government to run successive deficits since the end of the civil war. As a result, the Lebanese debt position is exceptionally high, with total public debt amounting to 134 percent of GDP in 2014, and constitutes one of the highest debt ratios in the world. The Lebanese government exerted various efforts to reduce its deficit and debt in general, but emergencies including instability and crisis management activities led to additional unplanned spending that kept national debt rising steadily over the years. If we investigate the change in debt for post conflict years, one can see that the Lebanese debt increased by 350 percent between 1992 and 2000 (from \$6.2 billion to \$27 billion). On the other hand, GDP per capita in Lebanon increased from \$1,965 in 1992 to \$5,334 in 2000 (growing by 170 percent). According to economic intuition, countries usually borrow domestically

<sup>&</sup>lt;sup>12</sup> This was evident in a country such as Lebanon

<sup>&</sup>lt;sup>13</sup> Between 2003 and 2005, fiscal decomposition for Angola was missing. However, from 2006 onward, the composition of expenditures in Angola did not fluctuate significantly. Capital expenditures fluctuated within a band between 25 and 33 percent of total government spending.

<sup>&</sup>lt;sup>14</sup> Natural resource revenues in Angola accumulated up to 60 percent of GDP in 2005.

<sup>&</sup>lt;sup>15</sup> According to the Article IV by the International Monetary Fund (2014), Angola is one the most unequal nations in Africa, where the top 10 percent of income earners control almost one third of the national income, with a poverty headcount ratio above 37 percent. The poverty headcount increases significantly in rural areas. One would assume that the post –conflict era witnesses a drastic change in HDI. However, the change in HDI in Angola was slightly marginal; it started at 0.415 in 2003 and increased by only 27 percent in 10 years to reach 0.52 in 2013.

or internationally to manipulate their business cycle during hardship through targeted spending in productive sectors. However, in the case of Lebanon, debt accumulations were used to finance recurrent spending and other non-income generating activities. For instance, capital investments reached a peak of 24 percent of total government spending in 1994 as part of the reconstruction plan. However, they dropped significantly to settle at less than 5 percent after 2001. This drop in capital spending was accompanied with higher current fiscal spending to accumulate an average of 48 percent between 1992 and 2000 (excluding Electricité du Liban and other unclassified expenditures). Military expenditures as a percentage of GDP decreased from 7.5 percent of GDP in 1990 to reach 5.3 percent in 2000. However, military spending could not be gauged accurately due to major in kind military donations from European countries and the United States.

If we look at Cambodia and Rwanda, one can see that both governments had a deficit increase. However, they maintained an almost horizontal trend of debt to GDP due to their growth in income that moved in tandem with their debt accumulation and their additional generation of tax revenues. For instance, Cambodia increased its tax base significantly, where their tax revenues as a percentage of GDP climbed from 8 percent in 2002 up to 14.5 percent in 2014.

Figure 7: Post war fiscal revenues, spending in billion USD, deficit in billion USD and debt accumulation as a percentage of GDP.







It is worth noting that due to low oil prices, the regional economic conditions and international unfavourable economic growth (especially in emerging markets and Europe), domestic financial institutions as well as financial institutions in neighbouring countries could play a key role in post war reconstruction in all four states. However, the question would be whether the financial markets in conflict affected countries and neighbouring countries have the financial capacity to fund reconstruction projects given the size of destruction especially in Libya and Syria.

#### 4.2- Mobilizing resources internationally

As mentioned earlier, the ability of national authorities to provide the required humanitarian and development aid right after the war is limited and sometimes not present. After implementing peace, conflict affected states require additional resources to stabilize the state's political and socio-economic environment and most importantly to set the required institutional framework to be the milestone of long-term development. This requires the intervention of the international community to fully or partially facilitate the required resources. The United Nations usually support conflict-affected states to entrench stability and enrich synergy between different conflicting parties. This usually reduce political tension and promote peace and incentivise state building. Within the SDG's context, the UN's effective intervention can be through providing recommendations and technical assistance on how countries can maintain a peaceful and just state, reduce the impact of the humanitarian crisis, enjoy higher economic growth, create productive jobs, reduce gender gaps in economic and political opportunity, reduce poverty and inequality and enhance health and quality education. The attainment of such goals requires commitment at the national, regional and international levels and funding is usually discussed at a UN high level meeting where donors commit to provide the required funding based on political consensus.

#### 4.2.1 International Aid

Post conflict international aid is different from foreign development aid (FDA) issued in normal circumstances in purpose and distribution. Usually post-conflict foreign aid provides the necessary resources for urgent humanitarian needs and in reconstructing public infrastructure, hospitals and schools in a designed plan with clear objectives that insure a stable growing economy based on inclusiveness and sustainability. <sup>16</sup>

However, aid inflow fluctuation have a detrimental impact on the economy where volatile aid inflows could have the same impact on the economy as natural resource revenue volatility. To have a closer look on aid volatility, we plot trends of development aid, for the first ten years of post-conflict for four countries that experienced a civil war in the past century. The graphs below highlight the pattern of FDA to GDP. Usually foreign aid increases significantly right after the end of the war, reaching up to 100 percent of GDP and then subsides in the same fashion. For example, in a country such as Rwanda, Official Development Aid (ODA) was almost 100 percent of GDP right after the end of the civil war in 1993/4, and then decreased to less than 10 percent in 5 years. The same pattern - however at a lower extent - was experienced in Cambodia, Angola and Lebanon. Three major lessons could be learned from these countries. First, the shock of development aid in post conflict is paramount and capable to retard economic activities creating Dutch disease symptoms, especially if aid as a percentage of GDP is significantly high, supply side bottlenecks are present and aid is prolonged for more than two years in the absence of strategic fiscal planning. Second, aid volatility could be detrimental to economic growth.<sup>17</sup> Third, in the presence of relatively low institutional quality, developmental aid could end up wasted in "white elephant" projects and clientelism (similar to the case of Lebanon). In this case, aid would be viewed by policy maker as a substitute of tax revenues.

<sup>&</sup>lt;sup>16</sup>Post-war international aid is also used to build the post war institutional framework. According to Gupta et al. (2004), governments could use aid to rebuild the damaged institutions that can help the resumption of economic activities and the effective absorption of additional aid inflows.

<sup>&</sup>lt;sup>17</sup> One could measure the relation between volatility of economic growth and Aid by looking at correlation between standard deviations of GDP growth and the change of FDA.



Overall, foreign aid along with national savings should play a key role in increasing future investments and eventually economic growth. However, according to economic literature aid-economic growth and the aid-investment nexus is not clear. Hansen and Tarp (2000) in their cross-country regression analysis argued that aid is positively related to growth via investment and this relation is not dependent on good policies. This is the case when aid is directed toward capital accumulation. In contrast, other studies such as Boone (1994, 1996) and Burnside and Dollar (2000) argued that aid effectiveness is conditional on the presence of good policies. Burnside and Dollar (2000) show that aid has little effect in the presence of poor policies. It will only induce positive growth effects only when good fiscal, monetary, and trade policies are in place. Boone (1994, 1996) claims that aid does not promote economic development when distortionary policies undermine the efficient allocation of aid flows. Collier and Hoeffler (2002) argued that economic growth is augmented by foreign aid and policy. They argued that to study the impact of aid

on growth, aid has to be interacted with policy variables. From all presented previous analysis, one can deduce that aid with bad institutions and low governance quality will be ineffective and could hinder long term development. Good practice institutions could lead to sound structured policies that are easier to implement and more fruitful which could attract external donors (Staines, 2004).

# 5- Fiscal Spending

In normal circumstances, a fiscal regime is supposed to compliment the monetary policy (if the exchange rate is flexible) and the external accounts. It usually adds to the overall macroeconomic framework the dimension of using resource revenues, tax receipts and public spending to target key challenges and attain major macroeconomic objectives while paying due attention to public sector deficit and overall national debt in the medium and the long term. Assigned objectives of fiscal policy could include setting the optimum fiscal stance, economic sustainability, real productivity, inclusive growth and decent employment, growth friendly public and private investments (through targeting investments in specific sectors) and poverty and inequality (including gender inequality) reduction. A fiscal stance is situation dependent and could be amended based on the socioeconomic and political condition of a given country. In the case of all four countries of our study, a fiscal policy that is too restrictive can hinder investment and growth, and might even sparkle additional episodes of conflict. On the other hand, an over accommodative policy may result in inflationary pressure that crowds out investment in tradable sectors. Overall, fiscal spending should be consistent with the initial conditions of the country, where fiscal weakness might result in additional war episodes if expenditures are not distributed equally (among ethnic or religious groups in the case of conflict affected Arab states). Fiscal policy should consider laying down a solid plan of action with the right sequence of priorities which would increase investors and donors confidence at the same time.

## 5.1- Fiscal Policy regime in Iraq and Libya

In countries that are rich in natural resources such as Libya and Iraq, natural resource revenues make up more than 90 percent of government revenues. Given this fact, any fiscal regime for the post-conflict era should include a list of objectives, such as macro-fiscal stability, fiscal sustainability (given the sustainability of reserves, permanent versus temporary), and pro-economic diversification expenditures together with reconstruction. To attain these objectives, a fiscal rule should be implemented to avoid policy discretion when it comes to the type of spending. Usually a fiscal rule includes an expenditure rule and a resource prices rule (such as the long term moving average criteria) to fully cope with the reconstruction and development plan from one side and the fluctuation of oil prices from the other side. The expenditure rule should clearly state the limit and the nature of government spending, where any adjustments to the limit should be evaluated based on the absorptive capacity of the economy — usually higher limits of spending are set for human and physical capital accumulation rather than current spending only if the capacity allows additional spending. An example of an expenditure rules could be similar to

what the government of Batswana initiated in the last decade. The government sets a clear rule called the Sustainable Budget Index:

# $Sustainable \ Budget \ Index = \frac{Reccurrent \ Expenditures}{Reccurrent \ Revenues}$

Recurrent expenditure does not include any spending on infrastructure, education and health. Recurrent revenues are tax receipts from non-resource activities. It is mainly the ratio of non-investment government spending to non-hydrocarbon revenues. Government officials in Botswana aim at a ratio lower than one to guarantee that only a smaller portion of non-resource revenues are consumed rather than invested on health, education and infrastructure. This rule could be also applicable for financial development aid, where FDA should be pooled with natural resources revenues to be invested in growth promoting activities.

However, as mentioned earlier, following a strict fiscal rule or excessive spending in conflict affected countries with hydrocarbon income could be challenging. Such countries need immediate humanitarian and consumption spending, where excessive spending might have inflationary pressures. To avoid the repercussions on economic activity, urgent humanitarian and consumption needs could be balanced between kind and cash. Further, post war excessive investments could have macroeconomic implications especially if the capacity of the economy is restricted. According to Araji (2017), one of the main constraints in resource rich countries hindering domestic investments is absorptive capacity. Depending on the war intensity, it is hard to expand absorptive capacity promptly especially when it comes to improving education quality, investing in human capital, infrastructure, manufacturing, technology, and improving the size, efficiency, and perfection of the financial markets to absorb investments and enhance diversification. Absorptive capacity constrains in the medium and the long term should be taken seriously such that the economy would be able to absorb invested funds in a sustainable manner.

Sovereign Wealth Funds (SWF) is an optimal choice besides the above-mentioned policies if natural resource revenue shocks are high, the economy is resource dependent and absorptive capacity is low. Allocating resource revenues in a SWF is considered as a prudent behaviour to mitigate natural resources volatility and avoid excessive spending in countries with bad public financial management and no economic diversification, which could be a valid case in conflicted countries. Resource rents could be placed in funds, usually in more efficient financial markets, and only the interest income incurred could be consumed. After relaxing capacity constraints, a gradual march of internationally invested funds towards domestic markets will have a positive impact on the economy and mainly on domestic investments (Araji, 2017). SWF should clearly state the capital inflow–outflow of resource revenues, and the level of public borrowing against the fund. An additional role of the SWF is to enhance transparency and accountability of depleted resources, enhance fiscal performance during the boom/bust cycle, and behave as an optimum investment/saving tool for future generations.

To have a progressive fiscal regime in natural resource rich and conflict-affected countries, many major steps are needed to be put in place. First, post-conflict fiscal planning requires the reactivation and reforming the institutional and legal setting of the fiscal authority. This requires clarity in revenue collection and spending, access to fiscal policy information, a detailed public sector checks and balances,

and most importantly, the fiscal rule should be defined and protected by law. According to the Natural Resources Governance Index, both Libya and Iraq have some of the mentioned governance quality in place, however, it requires additional commitments to internationally accepted natural resources governance guidelines. Second, it should prioritise expenditures that promote diversification to avoid the absorption capacity and capital scarcity constraint in the long-run. Third, new rounds of conflict needs to be avoided through reduction in military spending and responding to humanitarian and urgent consumption needs in an inclusive plan without leaving any group of people behind.

Historical fiscal performance for both Iraq and Libya dictates an urgent reform to reach a more resilient and economically sustainable growth in the long-run. For example, the fiscal cost of fuel and electricity subsidies accounted to twice as much as spending on health and education combined in Libya for 2012 (IMF 2013). Looking at the fiscal composition of the Libyan budget (issued by the Libyan Central Bank), one can see that if we combine administrative expenses to subsidies, they account for almost 80 percent of total government spending while spending on capital investments is minimal. This could hint to two things: First, government resources are mainly spent on recurrent expenditures that are non-productive by nature. Second, excessive spending on salaries and wages is a known stance in non-diversified economies to compensate for low private sector employment. This is used to tame the possibility of any social unrest. The same issue can be underlined in Iraq. Fuel and electricity subsidies accounted for 8 percent of total GDP in 2013. Historical evidence revealed that these types of subsidies showed inefficiency especially due to the overconsumption of fuel and electricity and the regressive benefit to different income brackets.

#### 5.2- Fiscal policy regimes in Syria and Yemen.

As mentioned earlier, besides the humanitarian aspect and away from military spending, the key role of a realistically designed fiscal policy in Syria and Yemen is reconstructing infrastructure, the reactivation of the pre-war productive sectors and regenerating trade. Spending on such activities could reduce the social and humanitarian consequences of the war, enhance production, boost employment, attract investors and eventually boost economic growth. Governmental focus on reactivating the growth engines of the economy could help generate additional government revenues especially in countries with a tax regime that is dependent on corporate and income taxation such as the one implemented in Syria and Yemen. Conventional fiscal policy schemes for the post conflict era might not be effective. After any war, the fiscal policy mandate requires the use of public resources in socially productive investments (Addison and Ndikumana, 2000). For example, governments should prioritize among sectors based on productivity, employment, poverty reduction and gender equality among others. Prioritisation should consider the short-run environment through urgent consumption and humanitarian needs and the long-run through investments in infrastructure health and education. Further, given that almost one third of the fiscal revenues are generated from hydrocarbon income, options presented in earlier sections are also applicable to facilitate additional government spending on non-resource investments and eventually

reduce significantly the dependence of government revenues on resources revenues. This should be coupled with fiscal policies that promote structural transformation to add to the economy addition high value adding activities that could generate additional tax revenues in the long-run.

# 6- Conclusion

It is known that armed conflict and political turbulences in conflict affected countries resulted in a devastating destruction of physical and human capital infrastructure wiping out hundreds of years of development. This brings us to a conclusion that post conflict reconstruction requires planners to focus on both short term and long term aspects to have a successful post war renaissance. Short-term aspects include resettling the displaced and refugeed population, disarm military groups and work on their reintegration, reduce overall violence and increase food security across the country. Also, short term economic policies should focus on insuring a stable business cycle, a stable exchange rate and lower levels of inflation to generate a steady flow of government revenues (through taxing business activities), raise government credibility and reduce uncertainty facing donors and investors. For natural resource rich countries, gaining control of oil production, reducing growth volatility, manage inflation and exchange rate pressures would be an optimal goal in the short run. The long-term focus should be toward the rebuilding and distribution of physical and human capital and the accessibility of private societies to natural capital and physical infrastructure. This will eventually lead to a positive social return where government return on investments complements the private return on capital.

Overall, short term and the long-term goals if implemented would eventually secure a flow of domestic revenues either through taxation, natural resources and/or domestic borrowing to finance reconstruction. Short term and long-term plans should also be accompanied with the required policy reforms to enhance government effectiveness and private sector performance. For example, in Syria and Yemen, fiscal policy reforms should be accompanied with the right legislative and institutional reforms to widen the existing tax base, reshuffle the tax structure and increase transparency in tax collection and government spending. This will minimize resource leaks, embezzlements and tax evasions. As seen in our governance analysis, such reforms are required in both countries but yet more pertinent in Yemen due to the fast depletion of natural resources and lower diversity in economic activities which reduces the possibility to generate revenues in the short and long term. In natural resource rich countries, reforms should be directed toward more transparency and accountability and less dependence on resource windfalls. While putting exceptional efforts on expanding their non-oil sector, Iraq and Libya should start thinking about implementing efficient tax systems as an additional source of government financing. Based on institutional rankings, Iraq has more institutional capacity than Libya to transform to a more diversifies economy overtime due to their existing institutions and human capital stock.

Finally, it is worth noting that post-war reconstruction is not just a mechanical decision that solely consider solutions similar to what was presented in this paper. Financing reconstruction, resource distributions and overall economic outcomes in conflict affected countries are dependent on the nature of post conflict settlements that are set to terminate the war and the institutions governing the political and the economic

apparatus. Owing to this, the involvement of the international community or private sector in financing reconstruction depends on the final settlement that shall illustrate the nature of fiscal spending and the progress of the reconstruction process. In addition, relying heavily on international and regional aid is at all times not optimum, because such aid is volatile and highly contingent on the world's economic fluctuation and commodities prices which does not guarantee a sustainable source of financing for the entire reconstruction period.

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