



Natural Resources: What Strategy for Afghanistan?

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Abstract: The paper reviews the economic literature on natural resources, and explains that natural resource abundance can be an advantage for growth and development if it is coupled with effective economic policies, structural development and efficient institutional arrangements. It also discusses various recommendations by economists on how to overcome the “resource curse” phenomenon. Finally, the paper makes policy recommendations for Afghanistan, which range from economic policies to political economy discussions. The paper suggests that resource rents should be used as a source of political stability and support the diversification process of the economy through a resource-based industrialization strategy. Acquiring high-quality institutions should remain a high priority for Afghanistan to limit corruption and constrain political elites from capturing the resources rents. Moreover, the paper discusses specific issues on mining policies and regulations in Afghanistan.

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The analyses, interpretations and conclusions expressed in this paper are those of the author and do not necessarily reflect the views of Samuel Hall.

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Omar JOYA for *Samuel Hall Consulting*

1. Introduction

Conventional thought in economics until 1980s postulated that natural resource abundance was a major advantage for countries to enjoy rapid growth and successful development. Walter Rostow (1961), for instance, considered natural resource abundance as an element of preconditions for the “take-off” from a state of underdevelopment to that of an industrial development, just as it was in the cases of Britain, Australia, Canada, United States, and Sweden. Béla Balassa (1980), a neoliberal economist, emphasized that “a country’s endowment of natural resources will benefit its industrial development” by providing funds for investment and generating demand through market linkages.

However, since the 1980s most economists have been sceptical about the idea that natural resource abundance always induces good economic performance. The literature that has emerged since then has argued that natural resource endowment can have negative impact on growth and development, and thus become a “curse”. Empirical studies in the last three decades have investigated this fact and have found negative correlation between resource endowment and economic growth (Gelb, 1988; Sachs and Warner, 1995, 2001; Gylfason et al., 1999; Auty, 2001; Sala-i-Martin and Subramanian, 2003). Economists have also explained that natural resource abundance encourages rent-seeking behaviour in the economy, weakens the institutions, encourages corruption, damages democracy and increases the probability of civil war in the country (Collier and Hoeffler, 1998, 2005; Leite and Weidmann, 1999; Ross, 2001a,b; Sala-i-Martin and Subramanian, 2003; Isham et al., 2003; Robinson et al., 2006).

Nevertheless, economists do recognize the fact that if efficient institutional arrangements are put in place and if the right structural policies are adopted, resource abundance can become a “blessing” for the country. Countries such as Norway, Canada, Australia, Botswana, Indonesia, Malaysia, and Chile were able to successfully exploit their natural resources and achieved strong growth and development. High-quality institutions, improved human capital, optimal diversification strategy, efficient fiscal rules, increased transparency, and effective stabilization arrangements – among other factors – may enable the country to reap the benefits of resource abundance. Lederman and Malloney (2007a) wrote that “natural resources are assets for development that require intelligent public policies that complement natural riches with human ingenuity” (page 10). Frankel (2010) stated that “the Natural Resource Curse should not be interpreted as a rule that resource-rich countries are doomed to failure. The question is what policies to adopt to increase the chances of prospering.”

For Afghanistan, too, natural resources can favour its development if they are combined with efficient institutional arrangements and structural policies. Given the current macroeconomic and structural challenges in the economy, the mining sector can be key to some of these problems. First of all, fiscal deficit in Afghanistan – if foreign grants are ignored – amounts to nearly 10 percent of GDP. Domestic revenues cover slightly more than 60 percent of *operating* expenditures only. The International Monetary Fund (IMF) has forecast that fiscal deficit will reach 12 percent of GDP in 2020. Such a huge fiscal deficit will clearly not be sustainable for the country and it can seriously destabilize the economy in the future. Furthermore, the trade deficit amounts to more than 40 percent of GDP. Growth in exports has been declining in the last few years, whilst imports are projected to grow much faster in the medium-term – indicating a widening trade deficit. For the

moment, the large trade deficit is being offset by huge current transfers (mainly foreign aid inflows) and the current account is almost in balance. However, a decline in foreign aid in the next 5 years especially after foreign troops' withdrawal in 2014 – that has also been forecast by the World Bank (2012) – will put pressure on the exchange rate and may generate a balance-of-payments crisis in the country. On the other hand, 36% of the Afghan population in 2008 was estimated to be living under the national poverty line, and unemployment is expected to be significant. Poverty, inequality, and unemployment – if they continue over time – will create serious social unrest and induce political instability in Afghanistan.

Therefore, the mining sector can play an important role in the Afghan economy through various channels, especially in post-2014 period what the World Bank (2012) has called as the “transition era”. First, it can be the best source of revenue for the government and can help Afghanistan achieve its fiscal sustainability. Natural resource rents can be best substitutes for aid and will lower Afghanistan's dependence on foreign aid. Shocks to foreign aid will less likely to leave severe impact on the economy in the post-2014 period. Secondly, it can significantly improve the balance-of-payments position of the country through boosting exports – exports of both commodities and processed goods – and attracting foreign direct investments (FDI) in the mining sector. Thirdly, rents from natural resources can be distributed through various social transfer programmes or invested in specific activities that generate income to poor households and thus alleviate them from poverty. Furthermore, the mining sector may provide a large number of employment opportunities for both skilled and non-skilled workers in the country. Finally, natural resources may facilitate the process of industrialization in the country as it may encourage downstream industries and boost support activities by local SMEs (small & medium enterprises). A successful implementation of such a policy will remain conditioned on how the government invests and allocates the resource rents, how it chooses the system of incentives to encourage investment, productivity enhancement and technological upgrading in other industries, and how the government identifies the right instruments to eliminate the sector-specific constraints and to induce the industrial take-off. Given these four important channels through which natural resources can impact the economy, the World Bank (2012) simulations show that under optimistic mining circumstances, the mining sector will increase the average growth rate over the period 2010/11 – 2018/19 from a baseline scenario of 5.9 percent to 7 percent.

Natural resources in Afghanistan are not negligible.¹ The country is rich in fuel and non-fuel minerals. The estimated total value of mineral deposits in Afghanistan ranges between US\$1 and \$3 trillion. Geological surveys by the US and the UK have shown that Afghanistan holds huge deposits of iron ore, copper, cobalt, gold, lithium, niobium, uranium, chromite, granite, marble and other metallic and non-metallic minerals. The deposits of copper and iron ore are some of the largest in the world, consisting of 60 and 2,200 million tonnes, respectively. The amount of lithium in Afghanistan is also significant, as official US sources have stated that Afghanistan could become the “Saudi Arabia of lithium.” Surveys have also shown that there are huge blocks of oil and natural gas in northern Afghanistan. It is estimated that there are 3.4 billion barrels of crude oil, 444 billion cubic meters of natural gas, and 562 million barrels of natural gas liquids in the country. Moreover, precious and semi-precious stones such as high-quality emerald, lapis lazuli – of which Afghanistan holds the largest and the unique-quality reserves in the world – and ruby are found in huge volumes in Afghanistan.

Almost all these minerals and fuel resources are untapped. So far, only three large deposits have been granted to private firms for extraction. In 2007, the Aynak copper deposit was awarded to a Chinese firm under a \$4.4 billion deal; commercial operation is scheduled to start in 2014. In 2011, the Amu Darya oil basin was awarded to a Chinese firm and its local partner; the production started

¹ This paper only concentrates on fuel and non-fuel minerals, and ignores other types of natural resources such as forests, plantation crops, and opium.

in June 2012. In 2012, the Afghan government signed the final awarding contract for the Hajigak Iron ore deposit with a consortium of 7 Indian firms and a Canadian firm for a total investment worth nearly \$15 billion.

The usual perception among the government officials and general public is that the mining sector ‘can solve all existing problems’ in the country by its own. This paper, however, argues that the mining sector can only be a source of growth and development if efficient institutional arrangements are put in place to constrain corruption and rent-seeking behaviour in the economy, limit expropriation of resources, build political consensus for seeking a long-term sustainable growth strategy, and strengthen government capacity to effectively implement economic and structural policies and to regulate the economy. Furthermore, optimal structural policies on human capital and economic diversification and sound macroeconomic management must be taken on hand in order to achieve good economic performance and development. If these prerequisites are not met, natural resource endowment will not only fail to generate growth and induce development but will also impede these. Hence, this paper will explain the possible ways to overcome the “resource curse” and will discuss an optimal strategy for Afghanistan to make its abundance in natural resources a success story.

The structure of the paper is as following. Section 2 briefly explains the “resource curse” theory in its multi-dimensional definition. Section 3 discusses various suggestions and propositions made by economists on how to overcome the resource curse phenomenon. Finally, section 4 presents an optimal strategy for Afghanistan in exploiting its natural resources before section 5 concludes the paper.

2. The resource curse theory

2.1. The resource curse theory in theory

Scepticism about natural resources is not a recent thinking in the history of economic theory. Early in 1950s, Hans Singer (1950) and Raul Prebisch (1950) – economists from the so called “structuralist school” – noted that natural resources lead to a decline in the terms of trade of commodity exporting countries over time and this does not favour their economic development. They argued that the prices of commodities decrease in the long-term relative to the prices of manufactured goods because the demand for primary goods is inelastic with respect to world income. Therefore, countries that specialize in primary goods and import manufactured goods will experience a declining terms of trade and will miss the industrialization opportunity.

Almost three decades later, Corden and Neary (1982) and Bruno and Sachs (1982) put forward the “Dutch Disease” theory that attracted most attention, and subsequent studies in 1980s focused on this phenomenon. The theory came up when the Netherlands’s manufacturing output declined after that they started extracting natural gas in early 1970s. The theory explains that natural resource exploitation leads to an appreciation of the real exchange rate, which in turn negatively affects the manufacturing and other tradable sectors. As a result, economic growth may decline due to a decrease in non-commodity exports and manufacturing output.

The Dutch Disease model developed by the aforementioned economists explains that a boom in the extractive sector (an increase in the world prices of commodities) draws labour out of the manufacturing sector due to more attractive returns to labour supply. In return, the manufacturing sector will experience shortage of labour and higher input costs. On the other hand, a rise in extractive revenues will lead the government to raise its spending, which will be partly spent on non-traded goods such as construction and services. As a result, the prices of non-traded goods and services increase in the economy, which will appreciate the real exchange rate. Finally, manufacturing output and non-commodity exports will decline due to both higher labour costs and more appreciated real exchange rate (because the latter raises the prices of exported goods at international markets). To satisfy domestic demand, imports will increase and will thus enlarge the trade deficit.

The Dutch Disease effect of natural resources has extensively been studied in the last three decades. Many countries that extracted their resources saw their manufacturing sector contracted and experienced slower growth. Gelb (1988), for instance, studied the economic performance of oil-exporting developing countries and found that these countries exhibited poor economic performance during the boom periods of 1970s and 1980s. Sachs and Warner (1995, 2001) were the first to initiate the econometric literature on the impact of resource abundance on economic growth. The authors used a data-set of 71 resource intensive countries for the period 1970-1990 and found that “economies with abundant natural resources have tended to grow less rapidly than natural-resource-scarce economies.” Other studies such as Leite and Weidmann (1999), Gylfason et al. (1999), Auty (2001) and Sala-i-Martin and Subramanian (2003) also found similar results.

Macroeconomic volatility is another symptom of natural resource abundance. Countries dependent on natural resources experience strong macroeconomic volatility (van der Ploeg and Poelhekke, 2009a, 2009b; Malik and Temple, 2009; Frankel, 2010), which exhibits in their growth rate, price level, exchange rate and public expenditures. Empirical studies have found that macroeconomic volatility has *significant* costs in terms of decline in economic growth, loss in welfare, and increase in inequality and poverty (Aizenman and Pinto, 2005). Another explanation for

the adverse effect of natural resources on long-term growth is that resource-rich countries tend to have lower saving rates (Atkinson and Hamilton, 2003) because governments are unable to manage large resource revenues sustainably. In fact, economic growth theory suggests that the saving rate is a determinant of growth; the higher the saving rate, the higher the economic growth. Therefore, the low saving rate in resource-rich countries can explain why many of these countries are not able to fully transform their natural resource wealth into productive and reproducible assets such as physical and human capital (van der Ploeg, 2010).

However, the “resource curse” theory goes beyond the Dutch Disease effect and poor economic performance of resource-rich economies. The resource curse has become a multidimensional phenomenon that not only involves slow economic growth but also poor development outcomes, weak institutions, malfunctioning democracy and civil war (Rosser, 2006). For instance, Bulte et al. (2005) found that resource-intensive countries suffer lower levels of human development. Gylfason (2001) found that natural resources leave negative impact on the level of education and human capital. Ross (2003a) confirmed that oil and non-fuel mineral economies exhibit worsened conditions for the poor.

Recent literature on natural resources has suggested that resource endowment affects economic growth and development through the institutions (Easterly and Levine, 2002; Sala-i-Martin and Subramanian, 2003; Isham et al., 2003; Bulte et al., 2005; Mehlum et al., 2006a). Institutions may refer to governance, laws and regulations, enforcement mechanisms, property rights, judiciary system, social norms, etc. In fact, a consensus has recently emerged in development economics that the quality of institutions has *significant* impact on economic growth and development (Acemoglu et al., 2001, 2003; Rodrik, 1999, 2007). Sala-i-Martin and Subramanian (2003) found that natural resources, in particular oil and minerals, have a strong and negative impact on growth by weakening the institutional quality. Isham et al. (2003) noted that countries abundant in “point-source” natural resources (such as oil, minerals and plantation crops) have weaker institutional capacities and these are significant determinants of economic growth.

Another consequence of the resource curse is that agents engage in rent-seeking behaviour. In high-rent economies, non-cooperative powerful groups engage in a “redistributive struggle” and this will result in a greater share of resources being invested in non-taxable inefficient activities (Tornell and Lane, 1999). Ross (2001a) argues that resource windfalls encourage politicians to engage in “rent-seizing” activities; meaning state actors seek the rents that are held by state institutions. Robinson et al. (2006) explain that temporary resource booms lead to negative economic outcomes because political elites will intend to maximise the rents that they can extract in the short-term, and thus they deviate from the socially efficient extraction path. On the other hand, permanent resource booms also lead to an increased misallocation of resources in the economy, because politicians will have an incentive to engage in inefficient redistribution of rents to influence elections. Auty (2001, 2006) argued that resource rents incite governments to capture and distribute the rents and thereby divert efforts away from promoting wealth creation in the economy through efficient activities. Leite and Weidmann (1999) empirically investigated the impact of natural resource abundance on corruption and found that natural resources are an important determinant of a country’s level of corruption. Busse and Gröning (2011) also found similar results for the impact of resource abundance on corruption.

Other studies have focused on the link between natural resource abundance and political stability, regime type, democracy, and civil war. Wantchekon (1999) found that natural resources increase socio-political instability and have significant impact on the probability of authoritarian governments. Ross (2001b) found that oil and non-fuel mineral wealth impedes democracy; resource-rich countries tend to be less democratic than resource-poor countries. Collier and Hoeffler (1998, 2005) found that natural resource dependence increases both the probability and the duration of civil wars. Several explanations have, so far, been discussed in the literature on the link between natural resources and civil war. First, resources rents constitute an attraction for rebels

wishing to capture the state and can thus motivate conflict in the country. Secondly, natural resources induce patronage politics. States with natural resources often have weak institutions and do not develop a democratic system based on electoral competition and civil rights. Third, resource rents are often used as a source of financing for civil wars, and therefore natural resource lengthens the periods of civil war in these conflict-prone countries. Collier and Hoeffler (1998, 2005) found, however, that the relation between natural resources and civil war was non-linear; natural resource wealth initially increased the risk of civil war but after a certain level of exports, it reduced the risk due to an increase in per capita income and an enhanced financial capacity of the government that enables it to defend itself against rebellion groups through military expenditure.

2.2. Are the arguments for the resource curse theory conclusive?

Despite the fact that there is considerable evidence on the notion of a resource curse, the arguments are by no means conclusive (Rosser, 2006). The econometric literature on the resource curse theory has still not reached to a consensus; conceptual disagreements over the correct measure of resource abundance, as well as appropriate econometric technique to measure its impact are the ongoing sources of debate. Stijns (2000), Herb (2005) and Fearon (2005) emphasized that if natural resource abundance is measured alternately, the negative impact of natural resource abundance on growth, democracy and civil war disappears. Usually the resource curse literature has measured natural resource abundance in terms of the ratio of natural resource exports to GDP or to total exports. If resource abundance is measured in terms of levels of production, or percentage of rents in government revenues, the evidence for the resource curse theory disappears. On the other hand, some economists argue that not all types of natural resources are harmful for growth and development, but only abundance of particular types of resources (Rosser, 2006). Many researchers have found that only “point source” natural resources (oil and non-fuel minerals), and particularly “lootable” resources such as diamond and drugs, are problematic (Isham et al., 2002; Sala-i-Martin and Subramanian, 2003; Ross, 2003b).

Davis (1995) studied data on 22 mineral economies over the period 1970-1991 and found no evidence of the resource curse. Instead, he found that mineral economies outperformed non-mineral economies in certain development indicators. The author acknowledged that “the resource curse is, if anything, the exception rather than the rule.” On the other hand, Alexeev and Conrad (2009) showed that the effect of an abundance in oil and other minerals on long-term growth is positive. The authors argued that the claims of the natural resource curse literature are due mostly to misinterpretation of the available data. Lederman and Maloney (2007b) adopted a panel data analysis to allow better control for unobserved fixed effects and endogeneity, and found that “several possible indicators of the incidence of natural resource exports seem to have a *positive* rather than a negative effect on subsequent economic growth.” Manzano and Rigibón (2001) noted that natural resources per se are not responsible for the fact that resource-rich developing countries experienced slow growth since the 1970s. The authors explained that resource-rich economies accumulated large stocks of foreign debt in the 1970s when the prices of commodities were very high. When commodity prices declined in the 1980s, these countries experienced “debt overhang effects” that translated into an economic slowdown.

Therefore, despite the considerable literature on the resource curse theory, the idea of natural resources being an advantage for growth and development has still not been abandoned. Traditional literature on the resource curse theory did not account for the dynamic patterns of trade specialization and for the role of human capital and technological progress in their analysis. Recent studies, however, have treated resource endowment in a dynamic context alongside other structural elements of the economy. These analyses are discussed in the next section.

3. Overcoming the resource curse

Frankel (2010) wrote that “the Natural Resource Curse should not be interpreted as a rule that resource-rich countries are doomed to failure. The question is what policies to adopt to increase the chances of prospering.” Economists have proposed a wide range of policies that enable a country to successfully exploit its natural resources and to make its resource endowment an advantage for its growth and development. These policies can be of different nature – ranging from macroeconomic policies to politico-institutional arrangements. This paper, however, discusses the most deliberated suggestions made by economists.

3.1. Structural Policies

i. Education and Technological Progress

Growth theory and empirical studies document a significant role for human capital in the long-run growth. Human capital increases economic growth through enhancing labour productivity and encouraging technological progress and innovation. Focusing on resource-rich countries, economists have found a significant role for human capital in these economies. Studies have found that resource endowment may lead to a decline in economic growth only in countries with *low levels of human capital*, whereas in countries with human capital *above a low threshold*, resource abundance propels economic growth (Gylfason, 2001; Bravo-Ortega and de Gregorio, 2007). In fact, a high level of human capital may more than offset any negative effects of natural resources on growth. Bravo-Ortega and de Gregorio (2007) argue that “it is difficult to explain the faster growth of Scandinavia compared with Latin America without highlighting the *educational gap that emerged between the two groups of countries over the period 1870-1910, and which remained large throughout the 20th century*” (emphasis by authors). The authors emphasize that if natural resources are coupled with the accumulation of human capital, they could be transformed into an engine of economic growth.

Therefore, a national effort in education is necessary in resource-rich countries so that they reap the benefits of natural resources. National policies to improve the level of education in a resource-rich country should not only focus on standard education, but also on vocational & technical trainings that respond to the needs of the mining industry. In Sweden, for example, technical colleges were established in almost all cities of the country since the 19th century. This was one of the main factors for the successful resource-based development of Sweden. Additional examples include those of Australia, Chile, Mexico and the United States where mining institutes were established.

Furthermore, national “learning” capacity for technological adoption and tinkering is an important factor for a successful exploitation of natural resources. Technological progress increases productivity growth and creates dynamic industries in the country. Maloney (2007) explained that one of the reasons that Latin America missed the opportunities for resource-based growth, while other countries and regions such as Australia, Canada and Scandinavia enjoyed it, was their deficient national “learning” or “innovative” capacity, arising from low investment in human capital and scientific infrastructure. Therefore, it is not the inherent character of natural resources that matters for resource-based development, but “the nature of the learning process through which their economic potential is achieved” (Wright and Czelusta, 2007). In reality, natural resources require extensive investments before they become productive assets, and the required investments not only include physical capital and infrastructure, but also the acquisition of knowledge and adoption of technologies that make natural resources valuable.

ii. Diversification / Resource-based industrialization

Empirical studies have found that export concentration is negatively correlated with economic growth (Lederman and Maloney, 2007b; Murshed and Serino, 2011). The argument is that export concentration exposes the country to terms-of-trade shocks (Koren and Tenreyro, 2007; Malik and Temple, 2009) which, in their turn, negatively affect the growth rate. Resource-abundant countries are usually commodity exporters with a concentrated basket of exported goods. Murshed and Serino (2011) argue that “it is only specialization in unprocessed natural resource products that slows down economic growth, as it impedes the emergence of more dynamic patterns of trade specialization.”

Economists have therefore suggested that diversification into natural resource processing (resource-based industrialization) can be seen as a way out of the resource curse (Hesse, 2008; Gelb and Grasmann, 2010; Murshed and Serino, 2011; Massol and Banal-Estañol, 2012). Diversification is found to have a positive impact on economic growth in developing countries. It minimizes the risks that countries are faced with, lowers the negative impact of external shocks on the economy, prevents the Dutch Disease (i.e. appreciation of the real exchange rate) from affecting the manufacturing or other traded sectors, and – above all – allows for a gradual allocation of resources to their most productive uses in the economy. Chile, Indonesia, Malaysia, Mexico and Sweden represent best examples of resource-rich countries that were able to diversify their economies.

Gelb and Grasmann (2010) explain that diversification requires a combination of three policies: (i) a reasonable level of macroeconomic stability; (ii) a reasonably open trade policy; and (iii) the active use of resource rents to increase the productivity of other traded sectors, whether by increased spending on infrastructure, offering temporary subsidies or other methods.

3.2. Citizen dividends or social transfers

An interesting proposition that has been made by some economists is to distribute the resource revenues to the citizens. The objective is to transform a resource-abundant country into “non-resource abundant” in which there will be no windfall revenue that would encourage rent-seeking behaviour and corruption. However, economists have different opinions on how the transfer of rents should take place. Below various methods of rent transfers are discussed.

i. Lump-sum distribution

A first type of rent transfer is the direct distribution of resource revenues to the citizens. The theory is that individuals at micro-levels know better how to make optimal choices for consumption, saving and investment. This also gives them a good reason to feel that they are the real stakeholders in the ownership of natural resources in their country (Frankel, 2010), which may contribute to achieving social cohesion for resource exploitation and increase political stability in the country. One good example of such a policy is the Alaska Permanent Fund that redistributes part of the state’s oil revenue to the citizens. Iran and Mongolia, too, use across-the-board transfer system to households to distribute their oil and mineral revenues (Gelb and Grasmann, 2010). Sala-i-Martin and Subramanian (2003) suggested that Nigeria should distribute its oil revenues to the population on an equal per capita basis, and Birdsall and Subramanian (2004) made similar suggestion for Iraq. In fact, even if all revenue is distributed, the government can still receive a significant share of it through its effect on tax revenues.

However, some economists are sceptical about the practicality of this proposition. Collier et al. (2009) highlighted that “this argument, though correct, is of doubtful relevance, since the countries with the worst governance are unlikely to implement such a scheme, and those most likely to implement have least need of it.”

ii. Social protection schemes/ Conditional transfers

This is a variant model of direct transfer programmes. Conditional cash transfer schemes are based on household’s performance on specific indicators, such as children attending school or receiving essential health services, including vaccinations. Such model has been implemented in at least 14 developing countries, including Mexico, Brazil, and South Africa (Gelb and Grasmann, 2010) and has been proved quite effective. A more comprehensive model is social protection schemes that not only depend on the accumulation of human capital by households (education or health) but also on that of physical capital, for example if farmers maintain their assets during drought or economic downturn.

iii. Loan to private sector

Another option is that the government uses the resource revenue to lend to private firms on concessional terms. In developing countries, financial sector is usually underdeveloped and credit constraints impede private investment. Concessional lending to private sector thus removes credit constraints and may boost investment in the country. Such a lending could be done through public credit schemes or a development bank. Though the historical record of development banks has been extremely poor, on a modest scale “it may be worthwhile for resource rich countries to revisit and rethink this option” (Collier et al., 2009).

iv. Subsidies

Rent distribution can also be done through the channel of subsidies. The government can subsidize prices of fuel or agricultural crops, private investment, or even employment. Price subsidies consist of setting the domestic prices of certain products well below the world prices for specific welfare objectives, while investment subsidies include a wide-range of policies such as subsidizing factors of production (e.g. land and other inputs), extension of credit, financing R&D activities, and provision of public goods. Investment subsidies are believed to be much effective, while fuel subsidies may be distortionary and fiscally and environmentally unsustainable (Collier et al., 2009; Gelb and Grasmann, 2010). Employment subsidy – also called an “income subsidy” – consists of setting/increasing the national minimum wage (Collier et al., 2009) whilst the government pays for the wage deficit of private sector employees. Another model is that payments from the government increases with the income of workers to encourage skills upgrading in the country (Gelb and Grasmann, 2010).

Examples of public subsidies in developed resource-rich countries include the Common Agricultural Policy in Europe, coal mining in Germany, and cheap leases of federal lands to oil companies in the United States (Frankel, 2010). Moreover, Chile, Indonesia and Australia also allocated extensive investment subsidies to the agriculture sector throughout the second half of the 20th century. Chile actively used its resource rents to create new export industries for fruit and vegetables, and was able to diversify away from the mining sector.

v. Tax reduction

Reducing non-oil taxes can also be a good option for the government. A lower tax burden may reduce the deadweight costs of taxation and could be a useful strategy for enhancing business environment and attracting investments to diversify the non-oil economy (Gelb and Grasmann, 2010).

3.3. Fiscal rules & policy

i. Increased public spending

One of the channels through which resource rents can be allocated in the economy is by increased public spending on infrastructure, education and health (Collier et al., 2009; Gelb and Grasmann, 2010). Increasing public expenditures can have both short- and long-term effects on the economy. The short-term impact of an expansionary fiscal policy is an increase in demand in the economy and thus higher economic growth. However, it may also have some unfavourable consequences; such as an inflationary impact, crowding out of private investment, and a widening trade deficit (if public spending uses imported goods). Nonetheless, with sound macroeconomic management, these unfavourable short-term consequences can well be managed and an expansionary fiscal policy may lead to higher economic growth. The long-term effect of such a policy comes through decreased transaction and transportation costs due to improved infrastructure, and enhanced productivity outcomes of education and health, which significantly impacts the long-term growth in the economy.

The argument in favour of increased public spending to offset the adverse growth effects of the resource curse is, thus, based on the long-term effects of improved physical and human capital. A prerequisite for a successful fiscal policy is the presence of strong fiscal institutions and higher administrative capacity because the government will control both the macro-level policy design and the micro-level project implementation. Nonetheless, economists strongly emphasize that public spending in resource-rich countries must be confined to fiscal rules to avoid pro-cyclical policies and enlarging fiscal deficit – a lack of which may create serious macroeconomic instability as boom-bust cycles happen repetitively in commodity markets.

ii. Rules on public spending: Countercyclical fiscal policy

Boom-bust cycles in world commodity prices pose great challenges to commodity exporting countries. In the absence of fiscal disciplines, governments in developing countries have the tendency to run procyclical fiscal policy. During commodity price hikes, governments cannot resist the temptation or political pressure to increase spending proportionately – in fact, some of the increased spending is financing by borrowing from abroad (Frankel, 2010). However, in downturns when prices crash, governments are inclined to both decrease public spending – which is often difficult to do due to social and political constraints and due to micro-constraints at project implementation – and to pay off some of the excessive debt that they accumulated during the upturn. Therefore, such instances create serious macroeconomic instability and significantly affect fiscal sustainability in the country.

One suggestion that is usually made to resource-dependent countries is to run *countercyclical fiscal policy*. In fact, such policy will be hard to implement in the absence of (legally-binding) “fiscal rules”. Hence, governments in resource-rich countries are asked to impose targets on specific fiscal indicators, such as on fiscal deficit, expenditures, or structural surplus. The objective of fiscal rules in resource-rich countries should include: i) achieving macroeconomic stability; ii) moving towards

fiscal sustainability; ii) scaling up growth-enhancing expenditures; and iv) adequate accumulation of precautionary savings (Baunsgaard et al., 2012).

Among the resource-rich developing countries, Chile has been applauded for its successful countercyclical fiscal policy (Rodríguez et al., 2007; Frankel, 2010). Chile, under its fiscal rules, has fixed a target for *structural surplus* – originally set at 1% of GDP, then lowered to 0.5% of GDP, and subsequently to 0 in 2009. Structural balance nets out cyclical components from the actual budget balance, and thus reflects the balance that is independent of cyclical resource revenues. Since Chile largely depends on its copper revenues, its structural balance isolates the prices of copper and estimates the fiscal performance as if copper prices had been running at their long-term level. Rodríguez et al. (2007) explain that the structural balance policy makes national saving procyclical in that it permits fiscal surpluses when the economy is booming and deficits when the economy is performing significantly below potential.

Frankel (2010) emphasized that “any country, but especially commodity-producers, could usefully apply variants of the Chilean fiscal device.” Under the Chilean rules, the government can run a deficit larger than the target to the extent that: i) output falls short of potential, in a recession, or; ii) the price of copper is below its 10-year average level; “with the key institutional innovation that there are two panels of experts whose job it is each mid-year to make the judgements, respectively, what is the output gap and what is the medium term equilibrium price of copper... The principle of separation of decision-making powers should be retained: the rules as interpreted by the panels determine the total amount of spending or budget deficits, while the elected political leaders determine how that total is allocated” (Frankel, 2010). The Chilean model worked very well; as during the years of high copper prices, Chile was able to save \$20 billion, equal to 12% of GDP, in a stabilization fund by the end of 2008. During the 2008 global recession, it was able to pay for a large fiscal stimulus of about 3% of GDP which helped the economy to maintain its growth (The Economist, 2010b).

iii. Transparency and accountability

An important arrangement that must be put in place in resource-rich countries is a transparent system of revenue and fiscal transfers. In addition to introducing explicit fiscal rules, disclosure of the terms of contract and of payments & revenues helps increase transparency in natural resource management. The Extractive Industries Transparency Initiative (EITI), launched in 2002, includes the criteria of full publication and verification of company payments and government revenues from oil, gas and mining projects. Resource-rich developing countries adhering to the principles of transparency and checks & balances can join this global initiative and become an EITI Compliant country.

Further suggestions for a transparent financial regime in resource-rich countries include depositing resource revenues in a special foreign bank account (Iimi, 2007) and giving extra powers to the foreign bank or a global clearing house such as freezing the account in the event of a coup (Humphreys and Sandhu, 2007; Frankel, 2010). An example of such a system is the Kuwait's Natural Resource Fund; during Iraq's invasion of Kuwait, access to Kuwait's bank accounts in London remained to the Kuwaitis.

Such type of arrangements promoting transparency in resource-rich countries can well avoid the expropriation of funds by political elites, and reduce the incentives for corruption and civil war.

3.4. Sovereign Wealth Funds

It is often discussed that it may be desirable for resource-rich countries to have Natural Resource Funds (NRF). These funds can be in two forms: i) Stabilization Fund or Sovereign Liquidity Fund (SLF); or ii) Sovereign Wealth Fund (SWF). The primary distinction between the two types is their temporal function; SLF aims at smoothing the short-run volatility effects of commodity boom-bust cycles on government revenues/spending (explained in the next section), whilst SWF aims at saving resource rents for future generations over the long-run. The strategy of building an SWF requires that the government saves part of the resource rents during commodity booms and uses it to invest in a fund that is composed of financial assets (such as bonds, stocks and other financial instruments), precious metals such as gold, and other nonfinancial assets. The oldest and biggest SWFs belong to oil-rich countries in the Persian Gulf such as Kuwait, Saudi Arabia and the United Arab Emirates.

Economists have argued that in the absence of rules on spending out of the fund, an SWF – in itself – does not constrain politicians from misappropriating the money. However, if funds are transparently and professionally run, and if they are given clear instructions that politics should not interfere with their objective of maximizing the financial wellbeing of the country, SWF can be well effective (Frankel, 2010). The Norwegian State Petroleum Fund (now called Norwegian Pension Fund) is cited as a good example. Humphreys and Sandhu (2007) recommend that spending out of the fund should go through the regular budget, so that politicians will not be able to spend the money through out-of-budget methods. It has also been suggested that spending out of SWFs should be directed to education, health or retirement support for future generations, and this should be imposed by rules so that funds are not used for military or other corroding purposes.

3.5. Institutions for macroeconomic stability

i. Stabilization funds

Stabilization funds, also called Sovereign Liquidity Funds (SLFs), provide a good strategy to smooth out the volatility effects of natural resources and reduce their adverse effects on the economy. As explained in the earlier section, SLFs differ from Sovereign Wealth Funds (explained in earlier section) in that they have short-term objectives and are composed of easily liquidable assets.

Stabilization funds enable governments to make saving during commodity booms, and use it for the periods of downturn. In fact, savings in SLFs will be invested in international capital markets and then the fund will be run down when commodity prices fall. The size of the SLF depends on the degree of prudence of policy makers, the level of volatility of resource revenues, and the difference between marginal cost of borrowing and marginal return to lending (Collier et al., 2009). Since volatility in commodity prices is highly uncertain and unpredictable, determining the size of an SLF is not a clear task. The main problem with building an SLF is that if it is too large enough to offer a reasonable chance of successfully smoothing, it implies that domestic investment of revenue is extremely low (Collier et al., 2009). Thus, there is high opportunity cost associated with an SLF and if it becomes too large it runs into the same problem of an offshore SWF; funds are not made available for domestic investment, and benefits are pushed too far into the future (Collier et al., 2009).

ii. Price setting in contracts

Price setting in oil and mining contracts is often subjected to a problem known as “dynamic inconsistency”: the price in the contract is set *ex ante*, but later when the world prices go up the

government intervenes *ex post* and sets a new price. Such uncertain behaviour makes foreign companies extremely reluctant to invest in the country and the process of negotiation can have large transactions costs, to an extent which may involve interruptions in the export flow (Frankel, 2010).

Humphreys, Sachs and Stiglitz (2007) and Frankel (2010) have recommended that the terms of contract should be explicitly made dependent on future market. The best option would be *indexed contracts*, in which the share of gains & losses between the government and the company is indexed on market prices. For example, if the world price goes up 10 percent, then the gains are split between the company and the government in some particular proportion. "Indexation shares the risks of gains and losses, without the costs of renegotiation or the damage to a country's reputation from reneging on a contract (Frankel, 2010).

iii. Hedging in futures markets

Commodity producers are usually exposed to the volatility in commodity prices and thus experience volatile export revenues. One way to insure against the risk of price fluctuations is to hedge the revenues through futures contracts, forward markets, commodity swaps and other financial instruments (Collier et al., 2009; Frankel, 2010). However, these are only short- to medium-term instruments and are less useful when prices remain at low levels for longer periods. Up to now, only few resource-rich countries (including Mexico) have hedged commodity-price risks through these financial instruments (Collier et al., 2009). Nonetheless, this option remains a possible short-term strategy for resource-rich countries.

iv. Denomination of debt in terms of commodity prices

The Latin American debt crisis in 1982 proved the fact that while borrowing may be easy for commodity exporters during boom periods, they may face serious repayment problems during downturns when the cost of servicing their debt soars. One way to avoid such an undesirable phenomenon is to index the debt to the price of the commodity (Frankel, 2010). This way, debt service obligations automatically rise and fall with the commodity prices. Frankel (2010) emphasizes that the reluctance of commodity producers to index their debt to the price of their export commodity is primarily due to the fact that foreign banks may not be lending in the currencies of emerging markets. Yet in recent years, more and more developing countries are able to borrow in local currency.

v. Maintaining high levels of investment

Theoretical and empirical studies have found that the cost of volatility in macroeconomic aggregates such as consumption, government expenditure or trade – in terms of economic welfare – may be larger than the cost of volatility in investment. Investment is the most volatile component of national accounts, even in best functioning economies. Collier et al. (2009) argue that the volatility of investment is likely to be less problematic than might initially appear, and thus coping with this volatility may not be a fundamental problem. The authors present structural and cyclical analyses and suggest that it should be primarily domestic investment to adjust to fluctuations, "so that during boom periods resource revenues are translated into domestic capital."

The main question that arises is that how the domestic investment process should be managed. Collier et al. (2009) explain that the policy implication is that the government should focus on running a high long-term rate of investment. High rates of investment (as percentage of GDP) will exhibit proportionately smaller degrees of volatility, and thus they are easier to manage. The authors highlight that the typical investment rate for low-income Africa is currently 19 percent of

GDP. However, an efficient use of resource revenues on the above principles might roughly double this level.

3.6. Privatization

Economists have argued that countries that have privatized their energy and mining sectors will most likely to avoid the resource curse, because privatization may prevent the problem of rent-seizing (Weinthal and Luong, 2001; Ross, 2001a; Moreen, 2007). Weinthal and Luong (2001) argue that privatization offers a potential path out of the resource curse “when it involves a transfer of ownership to domestic actors.” The authors explain that foreign companies have a bargaining advantage vis-à-vis the state only in the short-run because the government needs capital to develop its resources. But once foreign investors had their capital sunk in the country, the bargaining power shifts to the government. However, domestic investors are present in the country over a long-term, and thus they help develop a viable tax system in the country because both the government and the domestic companies need one another to survive. Therefore, although privatisation may offer a way out of the resource curse, it has a “more positive impact on the development of tax regimes when the transfer of ownership is to domestic investors” (Weinthal and Luong, 2001).

3.7. Monetary Policy

i. Exchange rate and monetary policy regimes

The choice of an exchange rate regime may have important implications for a resource-rich country, given the fact that the country is an exporter of commodities whose prices experience strong fluctuations in the world market. The advantages/disadvantages of fixed and floating exchange rates are mixed. On the one hand, a *fixed exchange rate* (conventional peg arrangements) provides a “nominal anchor” to prices, has often been instrumental in reducing inflation, and may help promote fiscal discipline (Agénor, 2004). However, a pegged exchange rate increases the vulnerability of the economy to adverse external shocks in such that, by eliminating foreign currency risk, it encourages overborrowing by domestic firms at lower interest rates in world capital markets. Increased exposure to external shocks will induce monetary aggregates to fluctuate. As a result, changes in liquidity may translate into sharp movements in interest rates (Agénor, 2004). On the other hand, a *flexible exchange rate* gives the central bank greater independence in choosing its inflation objective and it allows the balance of payments to automatically adjust to the terms-of-trade shocks. However, arguments against choosing a flexible exchange rate are that it may not prevent a real exchange rate appreciation (hence a loss of export competitiveness) and may be characterized by excessive volatility (Agénor, 2004).

Some have suggested that an appropriate exchange rate regime for middle-size developing economies is probably an intermediate exchange rate regime, called a *managed floating exchange rate*, in which monetary authorities control the movements of the exchange rate through active intervention in the foreign exchange market without specifying or committing to a preannounced path or margin for the exchange rate. Many resource-rich countries have also adopted the intermediate regime since the early decade of 2000, in between a few commodity exporters with a flexible regime (such as Chile and Mexico) and a few with a fixed exchange rate (such Gulf oil producers, and Ecuador) (Frankel, 2010).

In countries with flexible or managed floating regimes, the exchange rate is not usually a nominal target. Therefore, alternative “nominal anchors” such as Consumer Prices Index (for Inflation Targeting) or monetary aggregates (e.g. money supply or monetary base) have been chosen. Though inflation targeting is practiced in Sweden, Canada, Australia, Chile, Brazil and

Norway, Frankel (2005, 2010) argues that it has a particular disadvantage for commodity producing countries: it is not robust with respect to changes in the terms of trade. He explains:

“Consider a fall in world market conditions for the export commodity, a decrease in the dollar price. It has a negative impact on both the balance of payments and the level of economic activity. It would be desirable for monetary policy to loosen and the currency to depreciate, to boost net foreign demand and thereby restore external balance and internal balance. But CPI targeting tells the central bank to keep monetary policy sufficiently tight that the currency does not depreciate, because otherwise import prices will rise and push the CPI above its target. Conversely if the world price for the export commodity goes up, a CPI target prevents a needed appreciation of the currency because it would lower import prices and push the CPI below its target.” (Frankel, 2010, page 28)

Frankel (2005, 2010) proposes an alternative monetary policy regime for resource-rich and commodity exporting countries: Peg the Export Price Index (PEPI). In a PEPI, the central bank targets a price index of a basket of export commodities. The argument in favour of the export targeting proposal is that it combines the advantage of both pegged and floating exchange rate regimes: it automatically accommodates terms of trade changes, as floating is supposed to do, while simultaneously abiding by a pre-announced nominal anchor, as an exchange rate peg promises. Under PEPI, when the dollar price of exports rises, the currency per force appreciates in terms of dollars. On the contrary, when the dollar price of exports falls, the currency depreciates in terms of dollars.

A more moderate version of export targeting proposal is to target an even more comprehensive index of domestic production prices, including nontraded goods, such as the Producer Price Index or GDP deflator (Frankel, 2005, 2010). In practice, it is often difficult to separate production into nontraded goods and exportables. The key point is to include export commodities in the index and to exclude import prices, whereas the Inflation/CPI Targeting does it the other way around.

ii. Foreign exchange accumulation by central banks

In countries where Natural Resource Funds are politically influenced while the Central Bank preserves its independence, it is desirable to accumulate foreign exchange reserves for the objectives of stabilizing the exchange rate during external imbalances and/or smoothing spending over time. However, economists consider accumulating international reserves for the objective of smoothing government expenditures (through lending to the fiscal authorities during commodity downturns) as a sub-optimal mechanism (Frankel, 2010).

3.8. Acquiring high-quality institutions

Last but not least, strengthening the institutions is a vital step in order to overcome the resource curse. The role of institutions in determining the impact of resource-abundance on economic growth and development was discussed in pages 5 and 6. Resource-rich countries with strong institutions have experienced rapid growth and development, while those that had weak institutions were trapped in the resource curse. Acemoglu et al. (2002) give the example of Botswana as a successful case story. The authors explain that “good policies were chosen in Botswana because good institutions... were put in place.” The existence of inclusive pre-colonial institutions which put constraint on political elites, and maintaining and strengthening of institutions of private property in post-independence were keys to Botswana’s success.

Institutions such as good governance, rule of law, effective judiciary system, increased transparency and accountability, appropriate property rights, contract enforcement, increased government efficiency, existence of egalitarian and democratic rights, free elections, presence of social safety nets, and institutionalised representation of minority groups are necessary for not only resource-rich countries, but also for developing countries as a whole, to achieve strong economic growth and development. These institutional reinforcements, however, need to be supported by measures to build “social capacity and political consensus” in resource abundant countries (Woolcock et al., 2001).

New Institutional Economics maintain that markets need to be supported by non-market institutions because markets are not self-creating, self-regulating, self-stabilizing, or self-legitimizing. Dani Rodrik (2007) explains that, in order for markets to function well, there need to be five types of market institutions alongside the market: property rights, regulatory institutions, institutions for macroeconomic stabilisation, institutions for social insurance, and institutions of conflict management. In fact, property rights are necessary to guarantee an adequate control over the return to the assets (e.g. an innovation) that are produced by entrepreneurs; regulatory institutions curb fraud, anticompetitive behaviour, and moral hazard; institutions for macroeconomic stabilisation – that were discussed partly in page 14 – help smooth out the real, financial, monetary and external shocks in the economy; institutions for social insurance help achieve social cohesion in the country; and institutions of conflict management prevent detrimental struggles between social factions by reducing the payoff to socially uncooperative strategies.

Rodrik (2007) explains that there is no unique type of institutions for all countries. There is a large variety of regulatory, stabilizing, and legitimizing institutions that can support a well-functioning market economy. The acquisition of institutions depends on local knowledge, experiences and capabilities. Institutions need to be developed locally; they cannot be independent of a country’s history, culture and social norms. Nonetheless, a country can always learn from the institutional arrangements prevailing in other countries – best practices, and international codes and standards can always help.

4. What strategy for Afghanistan?

“Imagine that a valuable natural resource is suddenly discovered both in Afghanistan and Switzerland. What would the economic consequences in each of the two countries be? Would the new wealth turn out to be a curse or a blessing?” These were the words of Mehlum, Moene and Torvik (2006b) that they hypothetically posed in an article published in *The World Economy* journal. After discussing the implications of the institutional quality for growth and development, the authors conclude that “the economic consequences of discovering a new valuable resource are therefore likely to be quite different in warlord-dominated Afghanistan and law-obedient Switzerland.”

The hypothetical argument of the authors is precisely true. Hence, the objective of this policy paper is to discuss such policies, arrangements and measures that Afghanistan may adopt along with its natural resource exploitation in order not to be left deprived of the same gains that Switzerland would have enjoyed from the discovery of a new natural resource. Policy recommendations in this paper range from political economy discussions to economic policies, which are discussed below.

4.1. Resource rents as a source of political stability

Numerous works have discussed that natural resource abundance negatively impacts political stability. As explained in section 2, natural resources encourage rent-seeking behaviour in the economy and may create rapacious redistributive struggle between political and social factions in the country. They also have an impact on the type of political regime and on the quality of democratic institutions. Above all, natural resources tend to increase the probability of civil war, especially in ethnically fractionalized countries.

On the other hand, political instability itself affects the exploitation of natural resources in the country. Political instability not only discourages private companies to engage in the extraction and exploration of natural resources, but also pushes the governments into “rapacious resource depletion” (van der Ploeg and Rohner, 2012). Private investment in mining projects usually span over 25 to 30 years, and such long-term investments depend, above all, on political certainty and stability. Increased uncertainty about future political environment will fail the country to attract noteworthy investments by international companies. Furthermore, uncertainty about the future encourages the governments to engage in over-extraction of natural resources in order to reduce future rents and the incentives for rebel groups (van der Ploeg and Rohner, 2012).

Conventional policies prescribed to resource-rich, conflict-prone countries are:

- (i) to increase political stability through strengthening the *institutions of conflict management* (i.e. democratic institutions, participatory political regimes, free elections, egalitarian rights to minority groups, civil liberties, and social insurance mechanisms)² and supporting these with “social consensus” to minimize the risk of coups and authoritarian regimes in the future;
- (ii) to restrict rent-seeking behaviour in the economy through acquiring high-quality institutions (e.g. effective judiciary system, rule of law, property rights, contract enforcement, etc.) that constrain political elites from expropriating resource rents and limit corruption in the country; and
- (iii) to develop *meta-institutions that reduce the political feasibility of capturing the rents* and thus to reduce the incentives for rebellion groups. Such meta-institutions

² For a discussion on “conflict-management institutions”, see Rodrik (1999).

include both political and social measures. Political arrangements may consist of building strong national military forces, enacting agreements for the military presence of foreign countries or international military organizations (such as NATO, UN security missions, etc.), and strengthening the constitutional bodies (such as parliament). Social measures, on the other hand, include strengthening the civil society and promoting social awareness for political rights and freedom.

Contrary to conventional policies, other thinking is based on the “rentier state thesis”. The rentier state theory explains that governments in resources-rich countries receive large amounts of “unearned” income and thus they tend to develop greater redistributive capacity of rents through various social transfer mechanisms. The problem with the rentier states is that they tend to be autocratic and authoritarian regimes, and use the resource rents for patronage politics (i.e. to reward individuals for their electoral support).

Policy recommendations based on the rentier state thesis suggest that resource rents can be used to buy off anti-government groups and to bring about political stability in the country (Smith, 2004; Bjorvatn and Naghavi, 2011; Connelly, 2011; van der Ploeg and Rohner, 2012). To put simply, social transfer policies bribe the rebel groups to work rather than to fight. The proponents of the rentier state thesis argue that in politically unstable environments the democratization process does not work very well. Priorities for such countries are to create incentives for rebel groups to engage in cooperative action, and to increase the cost of conflict so that the transfer program serves as a disciplining force.

With reference to Afghanistan, this paper argues that typical rentier state suggestions may not be appropriate for Afghanistan because capturing the resource rents do not constitute the fundamental objective of the insurgents (i.e. the Taliban). When resource rents enter as an element in the objective function of the insurgent groups, then transferring part of the rents to insurgents may reduce their incentive to engage in secessionist conflicts³. However, the Taliban in Afghanistan allegedly hold a non-pecuniary and ideological objective for their struggle in centrist conflict (i.e. conflict with the aim of conquering the whole state). Nevertheless, natural resource exploitation in Afghanistan has not yet generated large amounts of revenue for the government, and the Taliban know well that there are no *lootable* natural resources in Afghanistan that they could automatically exploit. Hence, it is much unlikely that *direct* transfer of rents would discourage the Taliban from pursuing the conflict.

However, *alternative* versions of a rentier state policy may well be effective in Afghanistan. Cash payments or social transfers should not be made directly to the Taliban leaders and members, but should be directed at communities and local population. I propose the following models of a rentier state policy for Afghanistan:

- (i) Resource rents should be used to generate employment opportunities and to provide public goods for the population living in areas that are prone to Taliban influence. The objective is to buy off local communities to cooperate with the central government and to discourage them from joining the Taliban insurgency groups. This can be done through launching large infrastructure projects, establishing hospitals and health care centres, extending access to electricity, and providing other public goods and services in those areas.
- (ii) Conditional social transfers may also be a good approach. Specific forms of “social protection schemes” such as conditional cash transfers and agricultural subsidies to *communities* that exhibit stability and peace and that do not provide help or show favour to Taliban groups can be an effective policy. This will provide incentives at

³ Secessionist conflict refers to which a political entity secedes from the state to form an independent state of its own.

- community levels to cooperate with the government and to exclude those individuals, from within, that join the insurgency.
- (iii) Provision of rewards, cash payments, and financial benefits to anti-Taliban political elites at community, district, provincial, regional and national levels who cooperate with the government. These political figures can be effective means of gaining the public support through their influence on people of related ethnic, political and religious groups.
 - (iv) The “reconciliation process” put forward by the Afghan government to encourage Taliban members to withdraw from insurgency and join the government in exchange for cash and non-cash (e.g. providing job) benefits is a good idea. Future resource rents can be used to further maximize these incentives. However, the shortcoming of the government is that it has focused more on the “carrot” while has ignored the “stick” mechanism. If there are incentives for groups to join the central government, then there should a mechanism that would penalise those who rejoin the insurgency. Many incidences have been reported in the media where reconciled groups have committed violence and have not been cooperative with the government. A comprehensive carrot-and-stick mechanism will be necessary for the reconciliation process to succeed.

The above propositions can transform the “conflict-triggering effects” of natural resources into “regime stabilizing effects.” However, these policies should not impede and harm the democratic institutions developed in the country during the last decade. An effective mechanism for implementing the social transfer programmes may well be aligned with democratic norms and not necessarily induce excessive patronage practices.

Nevertheless, the conflict-triggering effects of natural resources in Afghanistan may be minimized (Ross, 2010). Ethnic divisions may not have a conflict-triggering impact in a country when natural resources and political power are evenly dispersed throughout the country. On the contrary, costly conflict is harder to avoid when the geographical distribution of natural resources is concentrated in a region that coincides with the presence of a minority group (Morelli and Rohner, 2010). In Afghanistan, natural resources are spread around the country and are not concentrated into a single region where a single ethnic group would claim the rights for mineral resources.

To conclude, natural resource abundance can become a source of political stability in Afghanistan, instead of being a destabilizing and conflict-triggering factor. Policies based on traditional rentier state thesis that involve direct rent transfer to rebellion groups may not be stabilizing for Afghanistan because the Taliban do not look for a secessionist conflict to capture the resources rents. However, alternative versions of a rentier state theory can be effective – and politically and socially feasible – if the social transfers are not directed at Taliban leaders but instead at communities and local population living in areas that are prone to Taliban influence.

4.2. Diversification and resource-based industrialisation

Diversifying the economy should be a necessary policy of the Afghan government so that the country does not fall dependent on commodity exports for the years to come. As explained in section 2, resource-dependent and commodity exporting countries experience strong macroeconomic volatility subsequent to boom-bust cycles in global commodity markets. Macroeconomic volatility, in its turn, engenders significant costs in terms of decline in economic growth, welfare loss and increase in inequality and poverty.

In fact, diversification lowers the exposure of the economy to exogenous shocks (both internal and external shocks) and smooths out the aggregate impact of idiosyncratic shocks⁴ (such as sectoral shocks) in the economy. Empirical studies have found that “countries diversify over most of their development path” (Imbs and Wacziarg, 2003) and that diversification leads to higher economic growth (Agosin, 2007; Lederman and Maloney, 2007; Hesse, 2008, Murshed and Serino, 2011). Furthermore, as explained in section 2, only a resource-based industrialization strategy offers a path out of the “resource curse”. Therefore, Afghanistan should not envisage specializing in unprocessed commodities because such a strategy may end up to the detriment of growth. Afghanistan should consider diversifying away from the mining sector towards sectors based on natural resources. The latter include downstream processing of natural resources including agro-processing activities, and upstream support activities to the mining sector.

The role of the government is to encourage private investment in aforementioned sectors. In fact, many of these sectors require simultaneous, large-scale investments to be made in order to become profitable and to attract private investors. “Profitable new industries can fail to develop unless upstream and downstream investments are coaxed simultaneously” (Rodrik, 2007). Such a problem is known as “coordination failure”. In the presence of coordination externalities, the government will be required to coordinate the investment and production decisions of entrepreneurs.

Meanwhile, diversification into new sectors and activities is faced with another problem: information externality. In fact, investment in new activities and sectors has a large social value, but their private return is too low because the first entrepreneur who invests in a new activity will have to share the value of his discovery with other entrepreneurs who will quickly emulate. Conversely, if his investment in the new activity fails to be profitable, he will bear the full cost of his failure. Thus, returns to investments in new activities are not fully appropriated. Free entry by competitors (i.e. imitators or copycats) makes the nonappropriability problem worse and undercuts the incentive to invest in new activities (Hasumann and Rodrik, 2003). On the other hand, new investments by local entrepreneurs require them to experiment with new product lines and to do “technological tinkering” to adapt established technologies of foreign producers to local conditions. Transferring a certain technology to a new economic and institutional environment has always an uncertain probability of success (Rodrik, 2007).

Information externalities and coordination failures both are reasons to believe that diversification is unlikely to be successful without direct intervention of the government or other public action. Investment in underdeveloped countries may have been constrained by inadequate incentives to bear the possible costs of investments in new activities and thus “laissez-faire cannot be the optimal solution under these circumstances” (Hasumann and Rodrik, 2003). The first-best policy response in the presence of information externalities is to subsidise investments in new activities. This can be done through providing public credit or guarantees, public R&D, temporary monopolies, tax incentives, import tariff exemptions of input materials, or even trade protection of key sectors (Rodrik, 2007).

The aforementioned policy instruments constitute basically an “industrial policy” – which is an interventionist and sectoral policy, as opposed to “laissez-faire” approach. Though industrial policy has often been blamed for ‘picking winners’ in the market which may be subjected to misjudgement by the government and to political influence, some mainstream economists have emphasized on the importance of “rethinking industrial policy” in today’s era of post-crisis realism and on a more active role of the government in coordinating investments and facilitating industrial upgrading (Rodrik, 2007; Aghion et al., 2011; Lin, 2011; Stiglitz, 2011). Countries such as Japan, China, Malaysia, Indonesia, South Korea, Thailand, and Chile used growth-enhancing sectoral policies throughout the 20th century which favoured their development. The question is not whether industrial policy is

⁴ Risks that affect only particular groups of individuals or specific economic sectors.

justified at all, which is being implemented in one form or another by many countries in the world today⁵, but how industrial policy should be designed as part of a growth strategy to favour economic development in a country (Spence, 2008; Aghion et al., 2011). Export promotion policies, development of export processing zones (EPZ) and incentives for foreign direct investment (FDI), which are being extensively practiced today around the world, all qualify as industrial policies (Rodrik, 2007; Spence, 2008).

Therefore, Afghanistan should use the resource rents as a source of financing for its diversification strategy. Following are some specific suggestions for the Afghan government on how to pursue such a policy:

- (i) Resource rents should be used to finance both “hard” and “soft” infrastructure projects in order to minimize transaction costs for investment and to increase returns to capital. Hard infrastructure refers to roads, highways, railway, port facilities, telecommunication systems, electricity grids and other public utilities. Soft infrastructure includes institutions, regulations, social capital⁶, and other economic arrangements (Lin, 2011). Increased access to public goods and services, decreased transaction costs, and higher marginal return to investment are some of the most important incentives for local and foreign entrepreneurs to invest in a country.
- (ii) Resource rents should be allocated for “horizontal” and “vertical” policies of the government to support private investment. Horizontal measures refer to financing R&D activities across industries and economy-wide skills/technological upgrading measures. Meanwhile, vertical policies consist of promoting specific sectors and supporting specific businesses by provision of subsidies, public credit, tax holidays, or temporary tariff protections. However, these vertical interventions must be carefully designed and well calculated because any system of incentives is subject to moral hazard and political capture. Therefore, the policy should be embedded in an appropriate institutional context so that corruption and rent-seeking are fully prevented.
- (iii) Resource rents should be used for providing “investment guarantees” to foreign investors. In fact, Afghanistan exhibits high political uncertainty which makes foreign investors reluctant to invest in the country. Investment guarantees and incentives for FDI are some of the best instruments to attract noteworthy investments in various resource-based industries and to offer an insurance mechanism of political uncertainty to foreign and local entrepreneurs. Several resource-rich countries relied on foreign investment and technology to develop their industries and to diversify away from natural resources. One good example is Mexico whose industrialization was almost entirely undertaken by foreign entrepreneurs and immigrants (Maloney, 2007). Hence, due to limited technical know-how and lack of access to technology by local entrepreneurs in Afghanistan, encouraging foreign investments in resource-based industries should be an important strategy of the government.

Nevertheless, Afghanistan should not abandon agriculture production in favour of specializing in manufacturing and resource processing industries. Plantation crops do constitute the resource base of a country. Some of these crops such as coffee/cocoa in African countries generate high rents just like other point-source natural resources. In fact, resource-rich countries such as Chile, Brazil, Indonesia and Australia have actively used resource rents to develop their comparative advantage in

⁵ See *The Economist* (2010a) on recent examples of industrial policy practices by countries such as Japan, France, China, United States and Britain.

⁶ Social capital refers to social interactions, relations and norms between individuals in the society that have economic value and benefits. Economic theory has recently suggested that social capital contributes to economic growth.

agriculture-related industries and have diversified their production structure. For Afghanistan, agriculture sector not only offers a path for diversification but also plays a crucial role in macroeconomic stability (Joya, 2011). Since agriculture sector in Afghanistan is highly vulnerable to weather conditions – due to large share of rainfed crop production – climatic shocks (such drought, flood, etc.) leave significant adverse effect on economic growth in the country. Over the last decade, major growth falls and price hikes in Afghanistan were associated with drops in agriculture output and thus climatic shocks (Persaud, 2010; Joya, 2011). Meanwhile, around 80 percent of Afghan households depend somehow on income received from agriculture-related activities. Therefore, public support to agriculture production may constitute an effective way to reduce poverty – which comprised 36 percent of Afghan population in 2008 – and to decrease macroeconomic instability in the country. A stable macroeconomic environment is a necessary condition for a successful diversification process (Gelb and Grasmann, 2010), and the agriculture sector is key to achieving macroeconomic stability in Afghanistan. Hence, the government can use the resource rents to subsidize seeds and fertilizers, provide concessional credit to farmers, rehabilitate and expand irrigation infrastructure, and, last but not least, pursue an agriculture intensification policy through introduction of modern machinery and more drought-tolerant and flood-resistant seeds.

On the other hand, opium production generates huge rents to farmers, which is a strong incentive to cultivate opium poppy instead of other cereals. The problem with opium rents is that they escape from the government revenues, finance terrorism and insurgency, and makes macroeconomic management very difficult for Afghan policy makers. Unfortunately, previous efforts by the Afghan government and international community to eradicate opium production in the country have not been much effective. One good strategy is to provide farmers with economic incentives to switch from poppy cultivation to other cereals and crops. The best incentive would be to subsidize the prices of other crops, for example wheat. Though agriculture price subsidies are criticized for distorting the market prices, they are actively used in countries around the world, including the European Union, for the reason that they may be welfare-enhancing. For Afghanistan, agriculture subsidies would be even more applauded due to its poverty-alleviation momentum and its capacity to reduce opium production. Wheat can qualify as the best crop to be subsidized because it constitutes the primary nutritional item of Afghan households, especially the poor. Hence, resource rents can be used to subsidize the price of wheat: the government can buy the wheat at a very high price from the farmers and sell them at lower price in the market. This, itself, can be an industrial policy instrument to encourage diversification in the economy.

4.3. Notes on mining policy and regulations in Afghanistan

The purpose of this section is not to make a detailed assessment of the current mining policy in Afghanistan, but rather to highlight and discuss specific points on mining policy and regulations to the policymakers.

Exploration and exploitation activities:

The mining legislations in Afghanistan are being drafted and enacted for the third time since 2005. A new Minerals Law was passed in 2005, followed by Hydrocarbons Law in 2006. Shortly after, the two laws were replaced by new legislations in 2009 that were written with the World Bank assistance. However, the new legislations (Law on Minerals and Law on Hydrocarbons) were not well received by mining companies because the laws did not provide enough incentives for private investments. For instance, the 2009 Law on Minerals considers separate contracts for exploration and exploitation activities, and there is no guarantee that prospecting companies would automatically get the right for extraction of their discoveries. In 2011, the Ministry of Mines intended to update the two laws to provide more incentives for private investment and to ensure that companies that engage in exploration activities get the right to extract what they discover. The

draft minerals law is yet to be approved by the Council of Ministers in order for it to be, later on, passed by the Parliament.

The issue whether exploration and extraction activities be separated or not is an important policy decision. Both cases have their own problems. On the one hand, if exploration and extraction are totally separated, then the prospector has no incentive to engage in exploring. On the other hand, if the prospecting company is automatically given the right to extract what it discovers, the incentive is to underestimate the true value of the discovery so that it is not charged by the government for large royalties. A possible solution to this problem is to have a *partial* separation between the exploration and exploitation activities; the prospecting company can be given a total or partial exemption on royalty on subsequent extraction contract (Collier and Venables, 2008). This way, the prospector has an incentive to discover, because it will be given a tax-exemption, and the government will control the principal-agent problem that arises from such a situation.

National interests:

In July 2012, the Council of Ministers blocked the draft minerals law saying that it gave too much of importance to foreign mining interests while ignoring Afghanistan's national interests.⁷ The concerns of the Afghan Cabinet are – to some extent – worth taking, especially when the contract on Aynak copper mine (signed with China Metallurgical Group) has not been publicly released and has been kept confidential. As explained in section 2, privatization offers a path out of the natural resource curse, and the positive outcome of it is enhanced when domestic interests are taken into consideration. Afghanistan has also opted for the privatization of the mining sector, and thus domestic interests ought to be given importance in order to achieve social consensus for the privatization policy of natural resources.

However, a nationalization strategy for the mining industry does not seem an optimal option for Afghanistan at current circumstances, because it may lead to further accrual of corruption in the government and to encouragement of rent-seeking or rent-seizing behaviour in the country. Though nationalization solves some of the principal-agent problems that arise from mining contracts, it leads to sub-optimal results given the current technical, financial and institutional limitations of public institutions in Afghanistan. Keeping the current track of the privatization process in the mining industry (except for forests, water resources, etc.) and supplementing it with checks & balances and further regulations on social and environmental measures would be an optimal policy for Afghanistan.

Improve extraction techniques and equipment:

Small-scale mining, so far, makes a significant proportion of mining activities in Afghanistan. Most small-scale mining activities employ traditional extraction techniques, which significantly affects the quality of the extractive minerals. For instance, gemstones in north-eastern regions and marble throughout the country are quarried using traditional techniques including the usage of explosive materials. Even medium-size local companies engaged in marble quarrying do not use modern machinery and equipment (Rassin, 2012). Many of these companies that operate in medium-scale level employ blasting techniques, which not only result in 50% to 80% of material being wasted, but also causes micro-fractures throughout the entire marble deposit (Rassin, 2012). As a result, the quality of processed marble slabs remains very poor and thus the Afghan marble industry operate in suboptimal market circumstance, despite the fact that the Afghan marble is considered to be one of the most high-quality marbles in the world.

Therefore, it is imperative that the government encourages the usage of modern machineries and equipment by local firms operating in mineral extraction. At micro level, such a policy will

⁷ "Afghan Cabinet Raises Concern About Mining Legislation, to West's Unease" by Mathew Rosenberg. July 23, 2012. The New York Times. <http://www.nytimes.com/2012/07/24/world/asia/afghan-cabinet-blocks-new-mining-laws.html> (accessed 16/10/2012)

enhance market conditions (local and foreign demand) for Afghan mineral products, and at macro level, it will boost the mining sector through increased efficiency and productivity. As a result, mineral depletion will be minimized and natural resource exploitation will have higher impact on economic growth. The implementation of such a policy may involve public incentives such as reduced royalty fees for those local companies that employ modern equipment and efficient extraction techniques or favourable treatment of companies with such profile in the bidding processes, and vertical policies such as provision of public credit for the purchase of machinery & equipment.

Social policies for mining:

The “Social Policy Guidelines” of the Ministry of Mines that have been developed as a support document to the *National Mining Policy* outlines comprehensive measures and arrangements for the social development of local communities. The document discusses engagement, consultation, benefit-sharing, involvement in the resettlement decision-making, and overall welfare enhancement measures for local communities. However, the concern remains on how effectively the government implements the policy and regulates the social outcomes of mining projects. An important point that must be considered by the policymakers is an equal distribution of benefits to the surrounding communities regardless of the provincial boundaries and dominant ethnicities. For example, the Hajigak iron ore deposit is situated in Bamyan along with the boundary with Wardak province. The government should make sure that social benefits of the project will be equally distributed to the communities on both sides of the provincial boundary.⁸ Failing to do so, unequal distribution of benefits to communities in the two provinces may lead to social discontentment and unrest.

4.4. Security and political tensions

Security is the most important condition for Afghanistan to be able to attract foreign investments in the mining sector, and to successfully exploit its natural resources. However, security is worsening in key mining sites since the last one year, such as at Aynak copper mine in Logar province and at Hajigak iron ore deposit in Bamyan and Wardak provinces. Bamyan which was one of the most stable and secure provinces in Afghanistan has recently experienced insurgency activities. Minister Shahrani recently accused “regional intelligence units” for strategically destabilizing the mining sites in Afghanistan.⁹ For instance, recently the Chinese consortium of MCC and Jiangxi Copper companies which work at Aynak mine partially halted their operations and sent some of their employees back home due to security threats they received from the insurgency groups.¹⁰

The Afghan government needs to restore security in areas where mining sites have been awarded for extraction or have been put for tender. Though a special police force have been created to provide protection for mining activities, it seems that more effort needs to be done. The government needs to find proper solutions to the security challenges through political and institutional channels. One possible way would be to make local communities feel responsible for the security of mining sites whose operations directly impact their lives. Local communities must be given the awareness that insecurity may result in halting the mining operations and, as a result, they may lose the benefits that they would have received from mining operations. Local communities must be made involved in the process of security enhancement in exchange for financial benefits,

⁸ This has also been emphasized by Sexton (2012) and a similar reference has been made in Noorani (2011).

⁹ Minister Shahrani’s exclusive interview at ToloNews, with Mujahed Kakar. September xx, 2012

¹⁰ “China halt at flagship mine imperils Afghan future” by Jessica Donati and Mirwais Harooni. September 27, 2012. Reuters. <http://af.reuters.com/article/worldNews/idAFBRE88Q0XL20120927> (accessed 16/10/2012)

because the economic incentives offered by mining projects increase the cost of engaging in non-cooperative behaviour or supporting the insurgents.

Recent incidences have proven that Afghan communities have the potential to fight the insurgents and prohibit them from infiltrating their regions. More than 50 villages have risen against Taliban forces during the last six months in south-eastern Afghanistan, which involved armed uprisings.¹¹ Thus, a solution to the security threats posed to mining activities is that involved mining companies enter into formal or informal agreements with local communities in which the main conditionality to offer further economic benefits to communities would be better security around the area. In some African countries, mining companies regularly bribe local rebel groups *not to jeopardize their operations*. As argued in section 4.1, an optimal approach in Afghanistan would be to transfer the financial benefits to local communities. Such social transfers can well be conditional on specific performances of local communities.

A concern may rise that empowering local communities to get involved in security enhancement of the areas may result in an arming process of communities. However, the Afghan government has already previous experience in creating local armed groups through the Afghanistan National Auxiliary Police (ANAP) and the Local Defence Initiative (LDI) programmes. Though the programmes were not very effective (Lefèvre, 2010), they invalidated the initial concerns of *formalizing local militias*. Hence, the Afghan government can well have the ability to control, manage and discipline the process of community involvement in the security process of mining sites.

4.5. Overall remarks on policy, regulations and institutions

In addition to the above specific recommendations, further points that were discussed in section 3 are relevant for Afghanistan. Below are some suggestions that the Afghan government should take into consideration.

- Afghanistan lacks skilled workers for the mining industry. It is imperative that the government establishes vocational schools and technical mining institutes to training workers for future employment in the mining sector. The two large mining projects of Aynak and Hajigak will require thousands of skilled workers in the next 5 to 10 years. Local recruitment can only take place if the required skilled workers are available locally. The failure of such a process will incite social discontentment for the fact that the aforementioned companies will be bringing foreign workers. Furthermore, establishment of technical training centres will enhance human capital in the long run and will increase the impact of the mining sector on growth and development in Afghanistan.
- The government should work on a medium-term fiscal sustainability approach, and lay the foundations for an effective fiscal discipline in the future. In fact, a successful system of fiscal rules cannot be created spontaneously. It requires years of institutional practice, amendments and revisions until a newly-created system is adopted into the contextual needs. Therefore, the work needs to start now so that the government could establish effective fiscal rules in the future. This needs planning on a medium-term fiscal sustainability programme, and avoiding pro-cyclical fiscal policies at present and until mining operations effectively generate huge income to the government.

¹¹ “Armed uprising against Taliban forces insurgents from 50 Afghan villages” by Ben Farmer. August 14, 2012. The Telegraph. <http://www.telegraph.co.uk/news/worldnews/asia/afghanistan/9475141/Armed-uprising-against-Taliban-forces-insurgents-from-50-Afghan-villages.html> (accessed 16/10/2012)

- Once mining revenues become the principal source of revenue for the government and the fiscal budget turns out in surplus, the creation of a stabilization fund in the medium-term is an imperative strategy. This will greatly help the Afghan government to minimize macroeconomic volatility in the economy.
- The current nominal anchor for the managed floating exchange rate in Afghanistan is the *monetary base*, also called “reserve money targeting”. Monetary policy authorities should envisage moving towards targeting a *price index* that would include commodity prices. This should be planned for the medium-run, when the share of mining sector in GDP becomes significant – around 20% of GDP – and commodity exports represent more than half of total exports. In such circumstances, a price index targeting regime for monetary policy may effectively maintain price stability in the country.
- Acquiring high-quality institutions is the most imperative strategy for the Afghan government. Minimizing corruption and limiting political elites from capturing resource rents can only be feasible if strong and efficient institutions are developed. The government should work on strengthening the rule of law, improving the judiciary system, maintaining transparency and accountability in mining contracts, enforcing checks & balances, establishing contract enforcement mechanisms, introducing property rights system, increasing government effectiveness, strengthening the regulatory capacity of the government, and promoting good governance as a whole.

5. Conclusion

Natural resource abundance can be an advantage for economic growth and development, but it does not *per se* make a country prosperous unless it is coupled with effective economic policies, structural transformation of underdeveloped economies, efficient institutional arrangements, and well-calculated political decisions. Afghanistan is rich in natural resources and departs on a long and complex journey to explore its natural assets. Policies, regulations, and arrangements must be well designed so that it reaps the benefits of its resource endowment.

The paper first reviewed the economic literature on natural resources, by discussing various explanations on the “resource curse theory” and concluded that the existing literature on the resource curse is not conclusive. Natural resources can well be a source of development if appropriate policies are implemented. Subsequently, the paper discussed various recommendations by economists on how to escape the resource curse, and highlighted specific policy practices by successful resource-rich countries throughout their development history.

Finally, the paper proposed specific policies to the Afghan government considering the local context and institutional, social and political characteristics of the country. It explained that resource rents should be used to strengthen political stability and achieve social consensus, through various social transfer programmes and rentier state approaches. It also proposed that the Afghan government should diversify the economy and pursue a resource-based industrialization strategy in order to decrease macroeconomic volatility and to render natural resources a supporting factor for its development. The government can play an important role in this process by actively coordinating the investment decisions, providing incentives for investment in new activities and sectors, and allocating the resource rents to develop and improve both “hard” and “soft” infrastructures. Rents from fuel and non-fuel minerals can also be used as an instrument to fight opium cultivation by providing incentives for farmers to switch to the cultivation of alternative agricultural crops; for example by subsidizing wheat prices.

Remarks on specific issues in mining policy were also discussed, including partial separation between exploration and exploitation activities, consideration of domestic interests in mining contracts, encouraging the usage of modern technology in extraction of mines, and equitable distribution of the social benefits of mining projects. Meanwhile, technical and vocational institutes must be established in the country to train skilled workers for the mining industry, and this does not only have short-run employment benefits but also leads to long-run human capital enhancements. Furthermore, the government should work on a medium-term fiscal sustainability approach, and lay the foundations for an effective system of fiscal rules in the future. Finally, the paper recommended that Afghanistan should acquire high-quality institutions in order to minimize corruption and limit political elites from capturing the resources rents. This includes strengthening the rule of law, improving the judiciary system, maintaining transparency and accountability in mining contracts, enforcing checks & balances, establishing contract enforcement mechanisms, introducing property rights system, increasing government effectiveness, strengthening the regulatory capacity of the government, and promoting good governance as a whole.

The final message of the paper is that natural resources in Afghanistan have the potential to transform the country into a prosperous and successful economy, but this does not come without any conditions. Appropriate policies, institutional arrangements and political decisions all play a role in determining the impact of natural resources on the economy.

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Contacts

Samuel Hall Consulting

Qala-e-Fatullah, Street 5, #2

Kabul, AFGHANISTAN

14, rue Duvivier, 75007

Paris, FRANCE

Kabul: +93 796 60 60 28

Paris: +33 6 66 48 88 32

development@samuelhall.org

Visit our website at www.samuelhall.org