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The Macro Setting Afghanistan's economic growth averaged 9.4 percent per year between 2003 and 2012. Part of this exceptional growth performance can be explained by the high level of aid Afghanistan received in the past decade, which raised aggregate demand for goods, services, and construction. Official development aid and military assistance grew steadily from US\$404 million in 2002 to more than US\$15.7 billion in 2010—equivalent to 98 percent of GDP. About a third of these aid flows went into the development of civilian infrastructure and services, such as education, health, electricity, and roads.

The resulting development outcomes are impressive: between 2002/03 and 2011/12, GDP per capita increased from US\$186 to US\$688; the gross primary school enrolment rate rose from 19 percent to 72.4 percent; the percentage of Afghans with access to improved water sources grew from 22 percent to 45.5 percent; maternal mortality nearly halved; and life expectancy improved from 45 years to 48.7 years. The challenge will be to sustain these gains during the coming decade. Afghanistan's growth and development progress remain fragile. While progress in producing development outcomes was very encouraging in the immediate post-Taliban era, recent trends point to a stagnant poverty rate and mounting challenges to employment.

Poverty levels are stubbornly high, with 36 percent of the population living below the national poverty line in 2007/08, and more than 50 percent vulnerable to becoming poor. Recent data suggest that overall poverty levels did not decline between 2007/08 and 2011/12, despite the rapid growth in this period. Income inequality as measured by the Gini coefficient appears to have widened significantly. Underemployment is a serious issue. While unemployment is relatively low, at 8.2 percent in 2011/12, more than 16.8 percent of the employed population is working less than 40 hours per week. At the same time, the labor participation rate is low, at 60 percent, mainly because very few women participate in the labor market.

The transition (withdrawal of the International Security Assistance Forces) raises the question of how the projected decline in aid will affect the country's economy. Simulations with an economy-wide model show that the decline in aid that is currently implied by donor commitments is likely to halve Afghanistan's growth prospects. Even with favorable assumptions, which include gradual improvements in security and good progress in developing extractive industries, Afghanistan is unlikely to achieve growth rates averaging higher than 4.8 percent annually through 2025. At this rate of economic growth and with a projected population growth rate of 2.8 percent per year, it would take Afghanistan more than 20 years to raise its real GDP per capita to the level currently enjoyed by the rest of the South Asia region.

Little progress would be made in reducing current high levels of poverty and un- and underemployment. The employment challenge would be greater because of a projected addition to the workforce of 400,000 – 500,000 young people each year, and because cutbacks in foreign aid are likely to have knock-on effects on employment in the services sector. The transition also poses significant financial risks to the country. Foreign aid accounts for large shares of both Government spending and foreign exchange receipts and both will be at risk during the transition years. While domestic revenues reached an impressive 11.4 percent of GDP in 2011, these revenues financed only some 40 percent of Government expenditures. Moreover, expenditures are expected to increase as the Government assumes more financial responsibilities for domestic security and the expansion, operation, and

maintenance of public assets, many of which until now have been funded off budget through donor-funded development projects. The Government's funding gap is projected to reach 20 percent of GDP by 2025. Reductions in foreign aid will also put Afghanistan's balance of payments at risk. Continued strong donor engagement in Afghanistan will be critical to the country's development, but there is a clear need to pursue economic policies and investments that can expand export earnings, generate Government revenue, and encourage foreign direct investment to help offset the decline in aid flows. All this will need to be achieved at a time when Government funding will be tight.

Role of Agriculture in the Economy Afghanistan's economy is still largely agrarian and the agriculture sector makes important contributions to economic growth, employment creation, poverty reduction, food security, and the fiscal health of the nation. Agriculture (excluding the opium poppy economy) accounts for about a quarter of national GDP (table 1).

More than 80 percent of the country's population, and nearly 90 percent of the poor, live in rural areas, and agriculture plays an important role in their livelihoods. In 2011/12, for example, agriculture provided income for 49 percent of all households and was the main source of income for 30 percent. Agriculture also employs about 40 percent of the total workforce, though not all these workers are fully employed.

The number of full-time equivalent (FTE) jobs in agriculture is estimated at 2.5 – 2.7 million, or 3.2 – 3.4 million when the jobs created through linkages from agriculture to the rest of the economy (e.g. to wheat milling, baking, and other agro-processing) are included.¹⁰ Agriculture and agriculture-related activities will remain the biggest employer of rural people in Afghanistan for the foreseeable future and the best hope for creating additional jobs.

However, by 2012/13 the needs of post-conflict reconstruction had swelled the share of the services sector to 53.5 percent of GDP (Table 1), services remain largely unsophisticated, dominated by wholesale and retail services, transport, and government services. The current level of employment in services is at risk, because the sector could see a decline in demand for its output associated with the cutbacks in foreign aid spending during the transition period. Manufacturing is not a vibrant sector; it has a relatively small share of GDP (12.8 percent), and has hardly contributed to real growth over the past decade (Figure 1). The development of mineral resources is unlikely to create many jobs for unskilled or semi-skilled workers.

Table 1: Sector shares of total value added

	2002- 2003	2006- 2007	2012- 2013
<i>Agriculture</i>	38.5	29.2	24.6
<i>Industry</i>	23.7	28.8	21.8

<i>Manufacturing</i>	18.7	16.7	12.8
<i>Mining</i>	0.1	0.4	1.0
<i>Construction</i>	4.8	11.6	8.0
<i>Industry-Other</i>	0.1	0.2	0.1
<i>Services</i>	37.8	41.9	53.5

Source: Central Statistics Office.

Despite the structural shifts in the economy, agriculture remains one of the largest contributors to economic growth. It contributed more than half of the 8.3 percent growth in GDP in 2012, a year when favorable weather conditions resulted in an exceptionally good harvest.

Most (roughly 90 percent) of Afghanistan's manufacturing industry and most of its exports depend on agricultural production. Official statistics show that exports—mostly of dried nuts and fruits, other derivatives of agricultural production, and carpets—amounted to 5.5 percent of GDP in 2012/13. Large but unrecorded exports of opium provide an estimated 7-8 percent of GDP if valued at farm-gate prices. But even factoring in illicit exports, Afghanistan's export performance is below the norm for countries at its income level, whose export-to-GDP ratios are closer to 30 percent.

Prior to the conflict period, Afghanistan was largely self-sufficient in food. Today the country imports significant and growing shares of its food staples (especially wheat), and meat and other livestock products. The growing dependence on imported foods not only drains foreign exchange but also exposes the country to a growing food security risk in an era of high and volatile world food prices. During the food price crisis of 2008, for example, the country needed to import 2.33 million metric tons (mt) of wheat and the domestic price reached US\$609/mo.

Agriculture as a Key Source of Future Growth

Agriculture has good potential for growth and is highly relevant to poverty reduction and job creation both on-farm and off-farm. Afghanistan has a long tradition in horticulture and livestock production, including for export.

However, the last three decades of conflict have brought massive destruction in production infrastructure and the country's agricultural productivity is now only half its pre-war level. Household-level data show that a significant portion of arable land remains underutilized, mainly for lack of irrigation water. Only about 63 percent of farmers use fertilizer, a much smaller fraction use pesticides or herbicides, and only a few obtain information or advice on improved crops or livestock production methods.

From a positive point of view, the challenges offer ample catch-up opportunities for productivity enhancement. Maximizing growth in agriculture will require investing more in the expansion of irrigated land; improving the conveyance of irrigation water and the on-farm management of this water; and developing services for generating knowledge and disseminating technology.

Simulations with an economy-wide model show that by raising productivity in agriculture, Afghanistan could raise its GDP growth rate to 5.8 percent annually, on average, over the next ten years (compared to the 4.8 percent baseline). An improved investment climate, predicated on improvements in security that would boost the potential for both mining and agriculture, could raise average GDP growth in this period to 6.7 percent.

Agriculture's Prospects for Job Creation

Future growth dynamics will favor investments in mining and agriculture. However, mining is a capital-intensive activity that produces relatively few jobs: perhaps 10,000 – 30,000 by the 2020s. Even in the best-case scenario, mining in Afghanistan could directly generate about 100,000 – 125,000 jobs over the next ten years. This is a rather small number compared to the 400,000- 500,000 young people who will enter the national workforce annually, not to mention the extra jobs that may be needed to compensate for losses in employment in the services sector as spending on donor-funded projects declines. In addition, with most of the jobs in mining being for skilled and semi-skilled workers, their direct benefits for the rural poor, landless, nomads, and women are likely to be limited. The job impact from agricultural growth would be much more substantial. As noted above, agriculture generates 3.2 – 3.4 million FTE jobs (including backward and forward linkage effects). Analysis using farm budgets or a crop/livestock production labor requirement approach suggests that the number of jobs could significantly increase if the irrigated area can be expanded and productivity raised. For example:

Expanding the irrigated area for cereal production by 100,000 ha could produce an additional 80,000 – 90,000 FTE jobs;

Irrigating arable land for crop production could create 33 – 60 percent more jobs per hectare than relying on rain-fed farming; and

Shifting from wheat to production of some horticultural crops could triple, or even quadruple, the labor input (employment) per hectare.

Job creation can further be fostered by supporting access to credit, land, and markets; promoting high-value horticulture and intensive livestock production; and creating opportunities for female participation through targeted interventions in value chains.

The Agriculture Sector

Agricultural Production Of Afghanistan's land area of 65 million hectares, only about 8 million (or about 12 percent) is arable; major parts of the country comprise mountains and deserts. Afghanistan has a mainly dry continental climate and most of the cultivable land receives less than 400 mm of rain per year. Irrigation is therefore the lifeblood of agriculture, and it is sourced from snowmelt in the high mountains in the spring and summer months. Given the highly seasonal nature of the water supply and its origin in the high mountain areas,

water storage and conveyance infrastructure is critical for irrigation and urban water use. Although the country has the potential to irrigate some 4.4 million ha—and before the conflicts it had the infrastructure in place to irrigate nearly 3 million ha—today only about 2 million ha of arable area is irrigated regularly each year, while the remaining 6 million ha of arable land is either under rain-fed crops or left fallow.

Food crops account for more than two-thirds of the cultivated area; they are typically grown for subsistence and mixed with a variety of other crops, such as perennial horticultural crops and vegetables.

The vast majority of the country's farms are small (60 percent are smaller than 1 ha and about 90 percent are smaller than 5 ha), so most farm households can grow only part of their own cereal needs. Nationally, annual cereal production ranged between 3.7 and 5.6 million metric tons (mt) during 2005 and 2011.

Wheat is the dominant cereal as measured by planted area, production, and consumption. Afghans consume wheat with every meal, resulting in the world's highest annual per capita wheat consumption (160 kg). Wheat flour supplies 57 percent of the total caloric content of the average bundle of food items of the poor in Afghanistan. Before the conflicts, Afghanistan was self-sufficient in cereals and in some years was even a small exporter.

Today, however, largely as a result of population growth, lagging yields, and shrinkage of the irrigated area, the country imports an average of 1.2 million mt/year (imports fluctuate widely with domestic production). A key policy issue is to find the right balance between economic efficiency and the risk of a national food crisis. Given its arid climate, Afghanistan most probably lacks a comparative advantage in wheat, and would find it more economically efficient to focus on high-value agricultural products for export while importing wheat.

However, the Government is concerned about the country's growing dependence on the regional wheat market at a time of high and volatile world prices. High year-to-year fluctuations in domestic cereal production add to the problem: a worst-case scenario would be a large import need at a time when wheat imports are not available or are very expensive. Apart from wheat, other major cereal crops in Afghanistan are rice, maize, and barley, which together account for about 15 percent of the cereal area.

Total production of these three cereals is about 1 million mt/year (about 300,000 – 450,000 mt/year for each crop) and is much more stable than that of wheat. With regard to export crops, Afghanistan has a long tradition in horticultural production, particularly of fresh and dried fruits, nuts, and vegetables. In the 1970s, it was a world-class producer and exporter of almonds, pomegranates, pistachios, grapes, and apricots, and supplied about 20 percent of the raisins in the world market. But it is no longer so, and its loss of export market shares can be attributed to the declining productivity of aging orchards and vineyards; lack of new planting; and the capture of these shares by new market entrants that are more competitive on cost and quality.

Afghanistan is traditionally known as a livestock country, with an estimated 45 percent of its land area classified as rangelands. In the 1970s, it was self-sufficient in meat and milk, and exported significant amounts of animal fiber (wool) and high-value processed products (carpets and skin garments). Today the country depends on (rapidly growing) imports of frozen chicken, eggs, and dairy products, but it continues to export significant numbers of carpets, which constitute one of its main licit exports. Three decades of war have allowed neighboring

countries to capture a large part of the value added in processing many of Afghanistan's traditional animal products. Current average per capita meat consumption in Afghanistan is only ten kilograms per year. Many Afghans raise livestock while also growing crops. Overall, livestock herds significantly decreased between 1977 and 2004. This was partly because many pastoral nomads took refuge in Pakistan during the conflicts.

Other reasons included lack of access to summer grazing areas in Central Afghanistan, years of severe drought, poor animal husbandry, and poor disease control. Livestock numbers have rebounded since 2004, with the return of some owners and their animals to the country. Current livestock numbers are very uncertain, partly because there has never been a livestock census or survey in Afghanistan, but the best estimates suggest that today the country has around 21 million animals: perhaps 3.5 – 4.0 million head of cattle; 13 – 15 million goats and sheep; and about 2 million donkeys.

Opium poppy production is an illicit, but important part of Afghan agriculture, and for many poor and landless households it is the main source of livelihood and income. The area planted fluctuates widely from year to year, but has generally risen since the mid-1990s, and in 2013, it reached an estimated high of 209,000 ha producing 5,500 mt of opium. Opium poppy can be grown almost anywhere in Afghanistan with irrigation (more than half the country's provinces cultivate at least some), but its production is currently concentrated in the less secure south and the inaccessible northeast of the country (Helmand, Kandahar, Farah, Nangarhar, and Badakhshan provinces). Poppy is very profitable compared to wheat and many traditional land uses when grown by small and marginal farms under sharecropping or leasing arrangements.

Poppy growing creates significant employment for farmers and itinerant workers. An overriding challenge in trying to displace this crop is to create sufficient alternative employment and income-generating opportunities.

Major National Agricultural Policies and Strategies

The key strategic document for the Ministry of Agriculture, Irrigation, and Livestock (MAIL) is the National Agriculture Development Framework (NADF) of 2009. As outlined by NADF, the Government's strategic framework in agriculture has four programmatic pillars:

Production and productivity: increasing production and productivity of crops and livestock, through provision of better research and extension services and enhanced use of inputs. The goals are to move Afghanistan closer to self-sufficiency in field crops, expand production of cash crops to meet domestic and export demands, and improve the supply of animal products for food and handicrafts. The Government's framework therefore focuses on cereals and industrial crops, horticulture, livestock, irrigation, and support for nomadic livestock production. It seeks to get more farmers out of subsistence farming into semi-specialized and/or semi-intensive market-based production systems, while maintaining diversification for risk reduction and food security.

Economic regeneration: through development of value chains: (a) support to producer, retailer, and trader organizations; (b) financial services for agricultural development; (c) value addition; (d) quality control and safety of agricultural inputs and products; (e) marketing and market linkages; and (f) agricultural land leasing. Each of these subcomponents includes actions that should be taken solely by MAIL, and others that should be taken by MAIL in coordination with external support.

Natural resource management: expected to be achieved through: (a) natural resource surveillance, planning, and regulation; (b) protection and conservation; and (c) community management of natural resources.

Change management: intending “to create a dynamic, well-functioning, competent, and effective institution through a process of reform and structural adjustment, prepared to meet the challenges of the 21st century and responding to the needs and demands of the agriculture sector.” Potential targets for change may include leadership practices, communication practices, organization design, lines of business and activities performed performance management, incentive and compensation strategies, culture change, policies and procedures, and process re-engineering and outsourcing.

Based on the above pillars of NADF, a number of sector-specific policies, strategies, and laws have been developed, and more recently two national priority programs (NPPs).

Implementing the NADF and the NPPs poses challenges, as noted in section 1 above, and thus it may be wise to focus efforts on a few “first movers”—that is, on priority commodities that are imported and on traditional export crops, pushing hard to strengthen the value chains of these products to achieve growth and create jobs, with the expectation that the rest of the agricultural sector will follow. Such a strategy is very similar to that underlying the Asian Green Revolution (GR), where an initial thrust on import substitution for wheat and rice in high-potential irrigated areas led to significant growth in agricultural employment and thence to rural transformation.

As governments did in the Green Revolution model, the Afghan state would need to play a lead role in driving and coordinating the strategy within each of the selected value chains to encourage growth and to overcome cross-cutting constraints like irrigation water and finance. Compared with the GR model, however, there are greater opportunities today for the state to partner with the private sector and NGOs in market-led solutions for input and output marketing and for credit—while globalization has broadened the opportunities for benefiting from international trade in agriculture. On the negative side, Afghanistan must contend with opium poppy production, which draws resources away from licit agricultural and allied activities, and whose curtailment poses some additional constraints on a first-mover strategy.

Sources: <https://www.worldbank.org>