MALI

SELECTED ISSUES

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INTERNATIONAL MONETARY FUND

MALI

SELECTED ISSUES

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BOXES

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GROWTH, STRUCTURAL TRANSFORMATION, AND DIVERSIFICATION IN MALI[1]

Growth in Mali in the past has been disappointing and highly volatile compared to growth in a group of benchmark countries. This note examines slow structural transformation and diversification as candidate explanations for this relative underperformance. At present, the majority of Mali's population is employed in low-productivity agriculture and the secondary sector is underdeveloped. Further structural transformation and diversification of output and exports could thus yield significant growth dividends, but will be challenging in the context of a rapid projected increase in the workforce over coming decades, much of which would need to be absorbed by the agricultural sector. Policies could focus on easing the constraints to structural transformation in key areas such as education and the business climate, as well as devising a clear strategy for tackling the challenges posed by rapid population growth.

A. Growth, Volatility, and Productivity

1. **Growth in Mali in the past has been comparatively weak and highly volatile (Figure 1).** Despite a lower starting level of income per capita, Mali has grown more slowly on average over the past two decades relative to the rest of Sub-Saharan Africa. With real per capita growth averaging only 1.4 percent over the past 25 years, Mali's growth performance has been weak relative to a set of peer countries in both SSA and Asia who had a similar level of per capita income to Mali in 1990, but who are now over two times richer in PPP terms.[2] This underperformance in growth relative to other countries has been most pronounced since the turn of the century, when growth took off in many low income economies, but saw only a slight acceleration in Mali. The security crisis in 2011–13 also exacted a heavy toll on living standards, with per capital income at the end of 2014 around 10 percent lower than is pre-crisis trend. Growth also remains relatively more volatile than in peer countries, despite having declined in recent years, since Mali's economy remains highly exposed to exogenous shocks, such as droughts.

2. **Comparatively low human capital accumulation and total factor productivity appear to have driven slow growth (Figure 2).** A growth decomposition exercise suggests that half of Mali's growth over the past two decades can be attributed to labor accumulation, while capital accumulation accounts for around a third. In contrast, human capital and productivity appear to have been the main drivers of the low growth performance, and are the factors in which Mali lags most relative to other countries, together with labor force participation. Rates of both basic

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[1] Prepared by John Hooley.

[2] Mali had a per capita income in PPP terms of US$502 in 1990 and US$829 in 2013. An SSA peer group consisting of Ethiopia, Rwanda, and Uganda had an average per capita income of US$551 in 1990 and US$1759 in 2013. And an Asian peer group of Nepal, Bangladesh, and Cambodia had an average per capita income of US$649 in 1990 and US$2055 in 2013.

education and female labor force participation in Mali are significantly lower compared to SSA and Asian benchmark countries, and more unequally distributed across the population, while a challenging business environment impedes productive private sector activity (see also the External Stability Assessment, annexed to the Staff Report). These factor 'gaps' suggest that policies should target access and quality of education, public financial management (PFM) reforms to improve the efficiency of public investment, and key areas of the business environment, such as removing barriers to starting a business and external trade while ensuring efficient electricity provision.

Figure 1. Growth and Volatility

Output growth per capita in Mali has been relatively weak over the past two decades.

GDP per capita
(Current USD, PPP)

Sources: IMF, WB
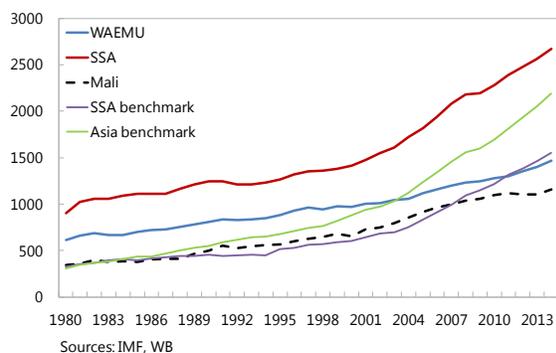
Per capita growth was particularly weak in the 2000s relative to peers—a 'lost decade' perhaps? The security crisis of 2011–12 also took a heavy toll on living standards.

Real GDP per capita growth 1990-2013
(In Percent)

Sources: IMF WEO
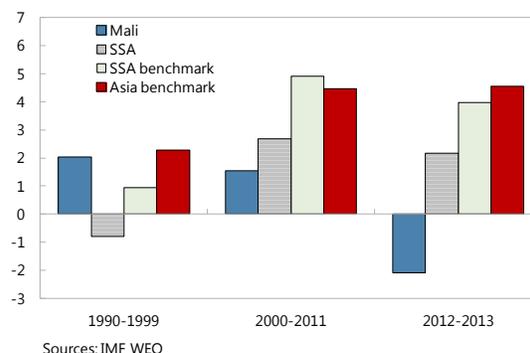
Growth has also been volatile...

Real GDP Growth, 2000-2013
(Annual Change, in Percent)

Sources: Malian authorities and IMF staff estimates.
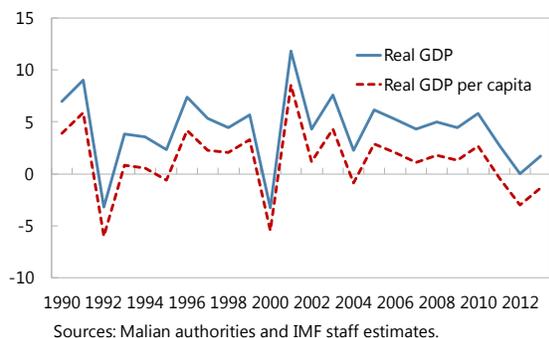
.... and more so than in other benchmark countries.

Relative Volatility, 1994-2013
(Ratio of Standard Deviation to Average Growth Rate per Period)

Sources: WEO, country authorities, and staff estimates. For the Africa Benchmark, 1994-5 are excluded from the Rwanda series due to the excessive volatility caused by the Genocide.
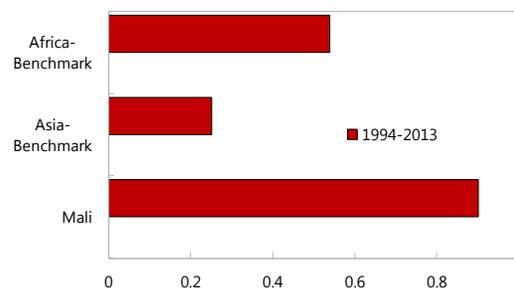
Figure 2. Productivity

Growth has been driven primarily by labor and capital accumulation over the past decade...

Average Contribution to Annual Growth Rate
(In Percentage Points, 1995-2012)

... while the levels of other factor inputs are comparativley low. Policies could thus focus on, for example...
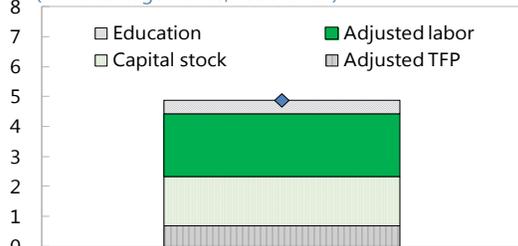
Factor inputs
(Relative to US level)
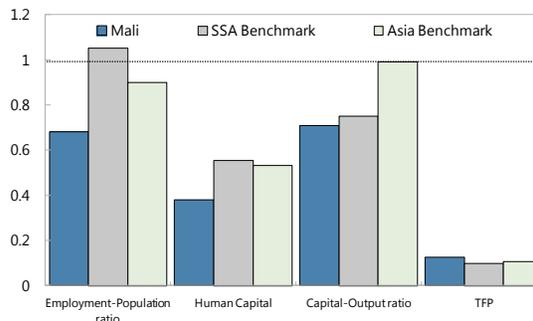
Sources: IMF (2014a).

...boosting human capital by increasing the quantity, quality and equality of education

Adult Literacy Rates, 2012 or Latest Available
(In Percent of Population)
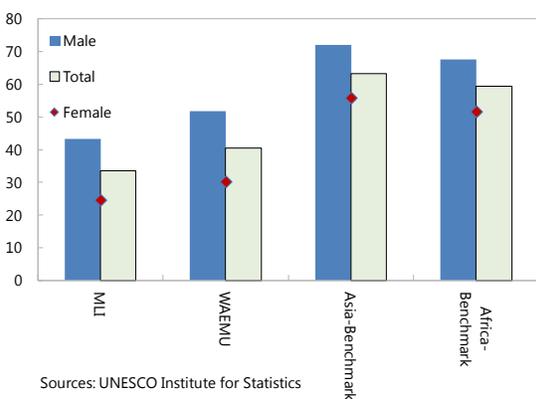
Sources: UNESCO Institute for Statistics

.... and strengthening the business environment.

World Bank Doing Business Indicator

B. Recent Trends in the Structure of Output and Exports

Output

3.   There has been some modest structural change in Mali over time (Figure 3). In 2013, the agricultural and service sectors (including public services) each accounted for around 40 percent of economic activity, with the mining and manufacturing and construction sectors accounting for 8, 7, and 4 percent, respectively. The main changes in Mali's output structure since 1970 (for when data are first available) have been the emergence of the gold mining and telecommunications sectors and the modest declines in the shares of the agricultural and manufacturing sectors (which accounted for 47 and 11 percent of output in 1970 respectively). The construction sector has also doubled its share of output over this period. The level of overall output diversification—based on a Theil Index measure (Box 1)—is also low and has increased more slowly than in faster growing benchmark countries.

Figure 3. Output Diversification

The structure of output has changed relatively little over time, notwithstanding the emergence of the mining sector.

Output structure
(In Percent of total output)

- ☐ Agriculture
- ☐ Manufacturing
- ☐ Wholesale and retail
- ☐ Other services
- ☐ Mining and utilities
- ☐ Construction
- ☐ Transport and telecommunications
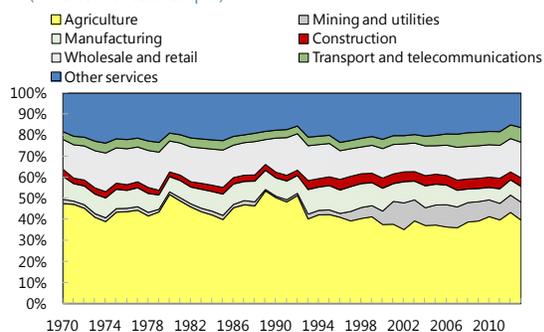
Sources: UN National Accounts

Progress in output diversification has also been slower than in other benchmark countries.

Output Diversification
(Theil Index; Lower Values=More Diversification)

— Mali   ---- Asia-Benchmark   — Africa-Benchmark
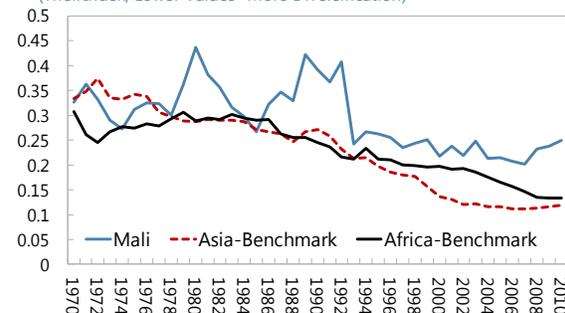
Source: IMF (2014a).

*The manufacturing sector has contracted in Mali over the past two decades compared with a strong expansion in Asian benchmark countries and stability in SSA benchmark countries..*

Manufacturing output shares
(In Percent of GDP)

---- Mali
- - - SSA Benchmark
— Asia Benchmark
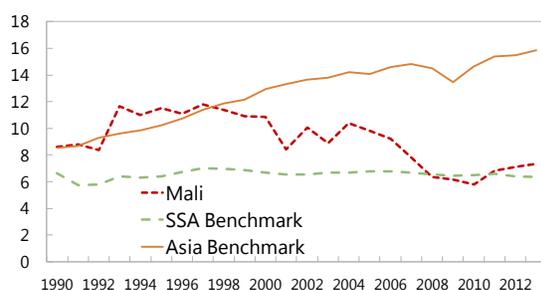
Sources: UN National Accounts

... while Mali's agricultural sector has remained resilient, in contrast to its gradual decline in benchmark countries.

Agricultural output shares
(In Percent of GDP)

— Mali
— SSA Benchmark
— Asia Benchmark
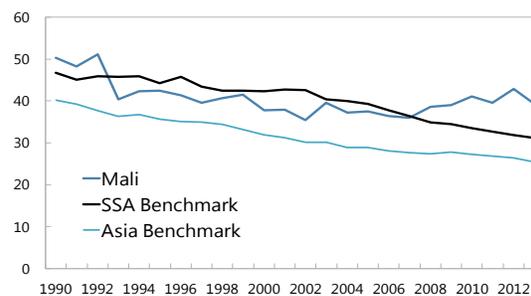
Sources: UN National Accounts

4.   Mali has experienced de-industrialization, contrasting with a sharp industrial expansion among some benchmark countries. Over the past two decades, Mali's manufacturing sector has steadily contracted as a share of output (from 12 percent in 1995 to 7 percent in 2013). In contrast, manufacturing increased from 10 percent to 16 percent of output in the Asian peer group and remained broadly flat in the SSA peer group over the same period. Conversely, the share of the agricultural sector has declined across other low-income countries over time but has remained elevated in Mali.

Exports

5.   Export diversification has improved recently, although export quality has been stagnant on average (Figure 4). Diversification of export products has increased over the past decade and the level has approached that of benchmark countries. In contrast, diversification of

export partners has remained stable although Mali appears more diversified than its peers. Relative commodity export quality has decreased steadily since 1990 and is below that of benchmark countries. While not far from benchmark country levels, manufacturing export quality has been stagnant on average.

Figure 4. Export Product and Partner Diversification

Mali's export diversification has increased over the past decade..

Mali: Export Product Diversification
(Theil Index Decomposition, Lower Values=More Diversication)

... approaching the levels of benchmark countries.

Export Product Diversification
(Theil Index Decomposition, Lower Values=More Diversication)

Diversification of export partners has remained stable over the past decade...

Mali: Export Partner Diversification
(Theil Index Decomposition, Lower Values=More Diversication)
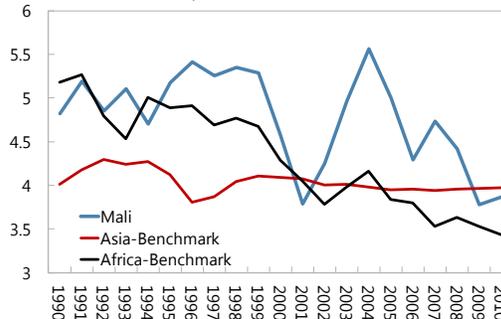
... although Mali appears more diversified than benchmark countries.

Export Partner Diversification
(Theil Index Decomposition, Lower Values=More Diversication)

Commodity export quality has declined relatively in the last two decades and is outperformed by other benchmarks..

Commodity Quality
(1 = 90 Percentile of All Countries)
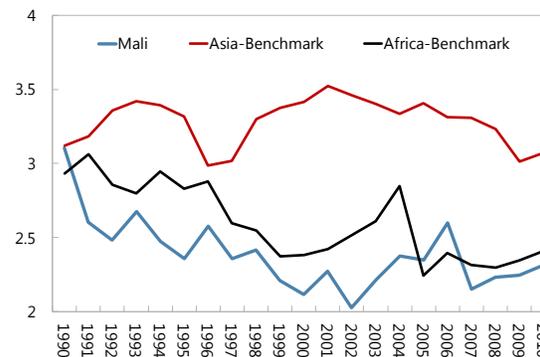
.... while manufacturing quality has remained stagnant.

Manufacturing Quality
(1 = 90 Percentile of All Countries)
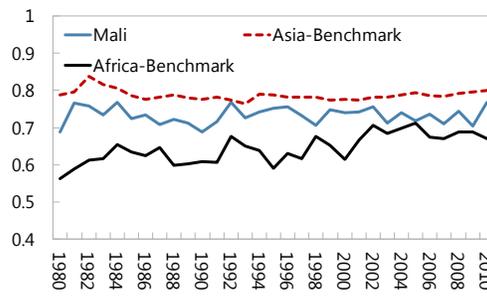
Source: IMF (2014a).

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Box 1. Export Diversification and Quality
(IMF 2014a and Henn et al, 2013)

Export product diversification is captured by the Theil index which can be decomposed into a "between" and a "within" sub-index:

$$Theil\ Index = \frac{1}{N}\sum_{i}^{N}\frac{Export\ Value_i}{Average\ Exp.\ Value}\cdot\ln\frac{Export\ Value_i}{Average\ Exp.\ Value}$$
$$= Theil_{between} + Theil_{within},$$

in which i is the product index and N the total number of products. The "between" Theil index captures the *extensive margin* of diversification, i.e. the number of products, while the "within" Theil index captures the intensive margin (product shares).

Export partner diversification. The Theil index is also available across export partners. In this case, i and N in the above relationship represent the export partner index and number of export partners, respectively.

Export quality is measured by the export's unit value adjusted for differences in production costs, relative distance to the trade partner, and the development of a country through the following relationship:

$$Trade\ Price_{mxt} = \alpha_0 + \alpha_1\ln unobservable\ quality_{mxt} + \alpha_2\ln p.c.income_{mxt} + \alpha_3\ln Distance_{mxt} + Error_{mxt},$$

in which the sub-scripts m, x, and t denote importer, exporter and time period respectively.

</div>

C. Fostering Growth through Structural Transformation and Diversification

6.   Structural transformation and diversification of output has the potential to boost growth and reduce volatility in Mali. Through the reallocation of resources from low productivity sectors, such as agriculture, to higher productivity sectors such as manufacturing, 'between-sector' structural transformation can boost overall productivity. Structural transformation can also occur 'within sectors' creating productivity gains through, for example, implementing quality improvements to existing products and services, focusing production on relatively high value-added activities, or diversifying into new high value-added products. Output diversification can not only yield growth benefits but also reduce the volatility of growth, since new products and services are likely to be subject to different demand and supply shocks than existing ones.

7.   Estimates suggest these benefits could be substantial (Figure 5). A 1 percentage point reallocation of labor from agriculture to manufacturing (keeping sectoral productivity levels constant) could raise output by 2.8 percent; such is the gulf in labor productivity levels between the two sectors (average productivity in manufacturing is around 6 times higher than in agriculture).[3] Similarly, a 1 percent increase in agricultural productivity (keeping resource allocation constant) could raise aggregate output by 0.3 percent, given the concentration of labor in this sector.

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[3] Average labor productivity levels are used as a proxy for marginal productivity levels in this thought experiment. In the case of manufacturing, McMillan and Harttgen, (2014) argue this is a reasonable assumption for SSA, where labor share in manufacturing and agriculture are likely to be similar.

Increasing output diversification to the level of benchmark countries could increase average growth by 0.1 to 1.3 percent. According to IMF (2014a), similar results hold for more export diversification. Here, a 1 standard deviation increase in LIC's export diversification raises the growth rate by about 0.8 percentage points which translates into potential ½ percentage point growth gains if export diversification was raised to levels observed in Asian or SSA benchmark countries. Output growth volatility could be significantly reduced as well.

Figure 5. Gains from Structural Transformation and Diversification

Even relatively modest structural transformation could yield significant growth gains..

Potential output gains from structural transformation
(In Percent of Real GDP)

... as could raising Mali's output diversification to benchmark levels...

Potential Growth Effects from Raising Output Diversification in Mali to benchmark levels
(In Percentage Points)

Sources: UN National Accounts, WDI and staff estimates

... as would an increase in export diversification.

Growth Effects from Increased Export Diversification in Mali
(Increase in Annual Growth Rate, Average 2001-2010)

Volatility could also decrease.

Volatility Gains from Increased Diversification in the WAEMU
(Decrease in Average 5-year Volatility, of Growth)

Sources: IMF (2014a) and staff calculations

8.   Policies to promote structural transformation and diversification should focus on addressing weaknesses that hinder entry into new lines of economic activity (IMF, 2014a). Weaknesses abound in Mali in terms of the provision of infrastructure, the accumulation of human capital, the provision of finance, the establishment of trade networks and functioning of factor markets, the regulatory and institutional environment and the creation and management of ideas. Evidence from cross-country comparisons and individual case studies suggests that policies targeting these areas can be successful in fostering structural transformation and diversification,

while the evidence is more mixed concerning the success of industry-focused and narrowly targeted measures (Box 2). That said, in Mali, the agricultural sector does warrant special attention, given its large scope for productivity and quality improvements and its high share of employment (see Box 3).

Box 2. Reforms which Foster Structural Transformation

(based on IMF 2014a)

- While there is no silver bullet of reform to foster structural transformation, the following general policies have emerged from successful country case studies and cross-country evidence (IMF 2014a, IMF 2013). Several of these policies may be addressed at both the national and regional levels.

- *Macroeconomic stability.* In Vietnam, Rwanda, Malaysia and Tanzania successful diversification has coincided with stronger macroeconomic policies and a greater degree of stability.

- *Market entry.* Reduced entry barriers can motivate entrepreneurs to expand their activities. In Vietnam collectivization was reversed which led to the emergence of a more diverse agricultural sector. In Rwanda a large divestment of state enterprises stimulated private sector activity, and in Tanzania, the dismantling of the state distribution system has positively affected the private sectors as well. The liberalization of the electricity market has been associated with higher degrees of structural transformation as well.

- *Education.* Education has been associated with higher levels diversification and export quality. In Vietnam, years of education increased by about 50 percent in just two decades. In Rwanda, education has been expanded through ninth grade for all students.

- *Institutions and the business environment.* Henn et al. (2013) report that a one standard deviation increase in institutional quality is associated with a 0.3 increase in quality upgrading. In Bangladesh, the removal of red tape has been associated with large investments in export processing zones.

- *Industrial policies.* The support of specific industries has shown mixed results. In Malaysia and Bangladesh, the targeting of specific industries has been successful, but the targeted sectors have become dominant, decreasing export diversification. In natural resource dominated economies, however, such targeting may help the economy to diversify.

Box 3. The Role of Agriculture in Structural Transformation

The agricultural sector accounts for a significant share of output, employment and external trade in Mali and is likely to continue to do so in the medium term, even if there is an expansion of the manufacturing and service sectors. Structural transformation within agriculture, through productivity improvements to existing activities and boosting the sector's external performance should thus be key focuses of growth-enhancing policies.

Agriculture has the highest share of employment in Mali and so inclusive growth depends on its prospects. Agriculture currently employs around two thirds of the workforce in Mali and is likely to remain the largest employer in the medium term. Applying the methodology in Fox and Thomas (2014), the number of workers in agriculture could double over the next two decades, with the share in total employment declining only to around 60 percent.

Policies targeting productivity improvements within agriculture may have the most traction in the medium term. The expected continued buoyant supply of agricultural labor suggests that large-scale 'between-sector' structural change (through a large shift in the share of workers in agriculture to the manufacturing sector) may be unlikely to materialize in the medium term. Instead, productivity improvements within the agricultural sector may provide a more fruitful focus for policies. The data suggest that agricultural productivity is relatively low in Mali, indicating substantial scope for progress. For example, cereal yields remain below those in benchmark countries, while the relative quality of agricultural exports has been on a declining trend.

Another set of policies could focus on the external competitiveness of the agricultural sector. Increasing the volume and diversification of agricultural exports could boost growth and reinforce external stability (see the External Stability Assessment, annexed to the Staff Report). Mali's agricultural trade performance could be improved by increasing exports of products which are produced domestically and in which Mali has a comparative advantage (such as rice and other cereals), while at the same time reducing imports of these same products. Mali would appear to have scope to increase the quantity of agricultural exports: as well as abundant agricultural labor, the share of uncultivated arable land is relatively high and several neighboring countries are large importers of agricultural products.

Mali's technical partners have proposed several avenues for increasing agricultural productivity. For example, the World Bank's 2015 Systematic Country Diagnostic for Mali suggests the following priorities: liberalization of the cotton sector, increasing support for agricultural R&D, increasing land cultivation of semi-arid agriculture in southern Mali, increasing production of export competitive fruits (mango, papaya) and vegetables (shallot/onion, potato), improving management practices of land and water, addressing governance issues at the Office du Niger, reforming fertilizer subsidies, and improving infrastructure for pastoralists.

Sectoral employment projections
(Millions, left figure and percent of total, right figure)
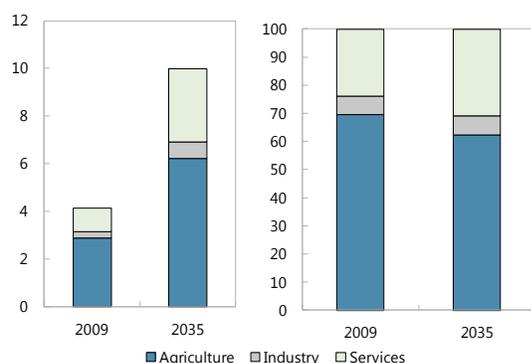
Agricultural indicators, 2011

Source: FAO
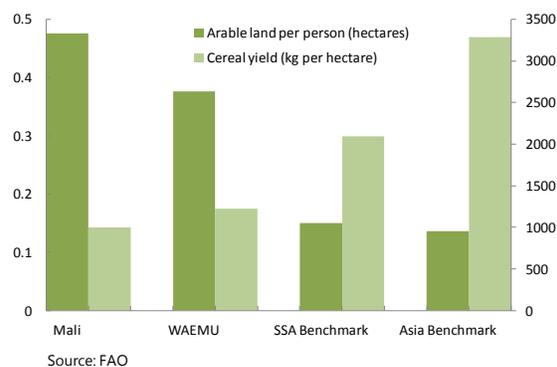
D. Demographic Trends and Employment

9.   Structural transformation and improvements in diversification will take several years and would have to take place against the backdrop of challenging population dynamics (Figure 6). Fertility rates in Mali remain among the highest in the world, despite rapid declines in child mortality. As a result, Mali's population structure is young; in 2010 almost two thirds of the population was below the age of 25. Over the next two decades, the population could double, from around 15 to 30 million, with a net annual increase in the labor force of around 200 thousand workers.

10.   A young population presents the opportunity for Mali to benefit from a potentially large 'growth' dividend (IMF, 2015). According to UN population projections, Mali will undergo a demographic transition over the next few decades, characterized by declines in infant mortality and fertility rates, with a resulting increase in the share of the working-age population relative to the overall population (Box 4). If fertility rates in Mali decline from their current level of 6.8 children per woman to 5.0 (the UN's most optimistic scenario), the share of working age population is projected to increase from 50 percent in 2010 to 55 percent by 2035. This demographic transition would be characterized by a higher share of the population that is potentially economically productive and can create income, boost fiscal revenues and ease the burden of fiscal expenditure on services such as healthcare and education. The potential impact on growth from these effects could be important. A recent paper (Drummond et al, 2014) estimated that a 1 percentage point increase in the working age population increases real GDP growth per capita by 0.5 percentage points.

11.   But the demographic 'growth dividend' could remain elusive or negligible if fertility rates continue to decline only modestly or if the labor market is unable to absorb the new workers in productive activities. If fertility rates in Mali do not decline from their current elevated levels, the share of working-age population will also stay constant and the demographic transition and associated growth dividend will remain elusive in the medium term. Moreover, this scenario would not be innocuous for growth: the rapid increase in population would still pose enormous pressure on public services and infrastructure which are inadequate even at current population levels (Guengant and May, 2013). Even if fertility rates do decline, the increase in the share of working-age population may not yield growth benefits. Recent evidence (Fox and Thomas, 2013) suggests that there are speed limits with which the manufacturing and service sectors can absorb new workers, with any excess labor forced to seek informal employment in low productivity (often subsistence) agriculture (see Box 3), or enter unemployment. Both of these outcomes would pose risks to overall productivity growth, poverty levels and social cohesion.

Figure 6. Demographics

*Fertility rates in Mali are among the highest in the world and have only declined modestly over recent decades..*

Fertility rates
(Number of children per woman)

Sources: UN population projections, 2012
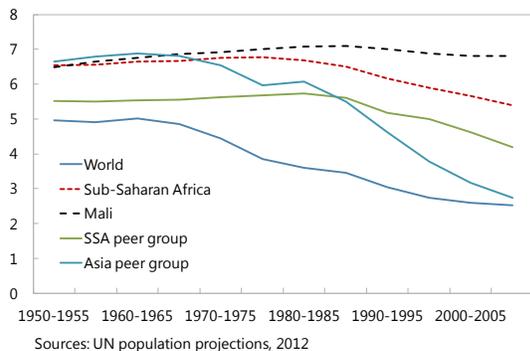
.... despite a rapid fall in child mortality rates..

Child mortality
(Deaths under age 5 per 1000 live births)

Source: UN population projections
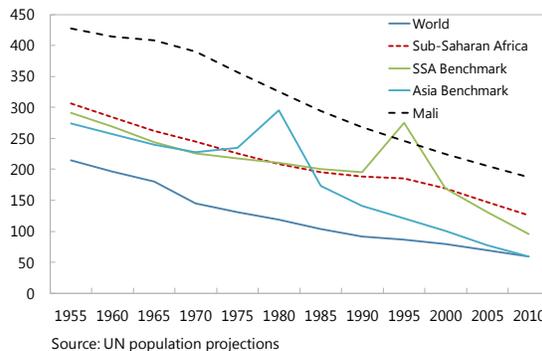
This has led to a very young population, with two thirds under the age of 25....

Population Pyramid - Mali
(In Thousands)

Sources: UN World Population Prospects, 2012
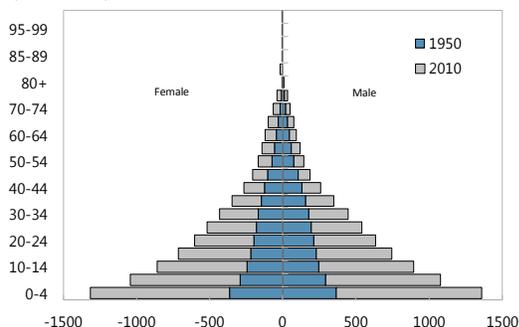
...and the labour force is expected to increase by around 200 thousand workers each year between 2015 and 2035.

Mali population projections
(In Millions (left figure) and Thousands (right figure))

Sources: UN Population Projections, 2012
Notes: Based on current labor force participation rates
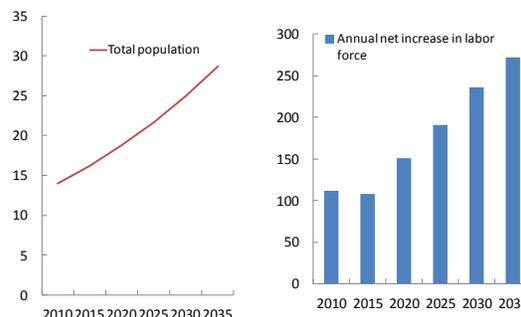
A decline in fertility rates would provide a significant boost to the working age population and the opportunity of a demographic 'growth dividend'.

Working age population share (15-64)
(Percent of total population)

Sources: UN Population Projections, 2012
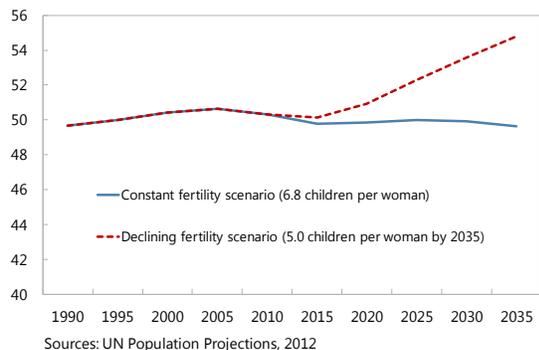
Generating a decline in the fertility rate will be challenging but one focus of policies in this area could be to increase the use of contraception among women who desire it.

Contraception : use and unmet need
(Percent of women ages 15-49)


Source: World Bank WDI
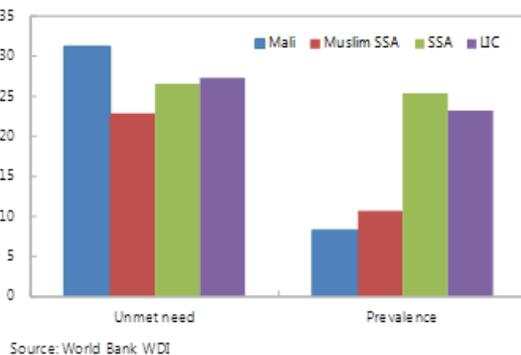
Box 4. The Demographic Dividend

There are two main channels of demographic growth dividends (Mason and Lee, 2006 and IMF, 2015). The first is the result of a rapid growth of the working age population followed by a decline of fertility rates. As a consequence, the economy's dependency ratios decline. The second one arises later when parents have fewer children and accumulate savings in anticipation of aging. With a large number of young people projected to enter the labor market in Mali in the next decades, Mali could benefit from the first dividend if fertility rates were declining.

The demographic dividend has been substantial in several countries. For the case of India, Aiyar and Mody (2011) estimate that 40 to 50 percent of per capita growth has been attributable to the demographic dividend since the 1970s. In East Asia, the demographic transition has likely contributed one fourth to two fifth to a GDP per capita growth rate of around

Dependency Ratio, 1961-2013
(People younger than 15 or older than 64 in Percent of working-age population,)
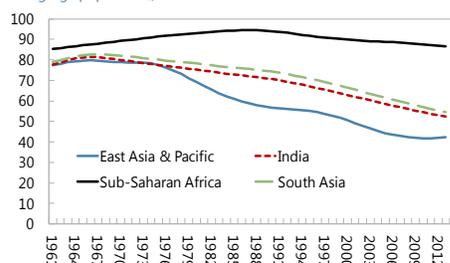
Sources: WDI, UNI World Population Prospects

Dependency Ratio, 1961-2013
(People younger than 15 or older than 64 in Percent of working-age population,)
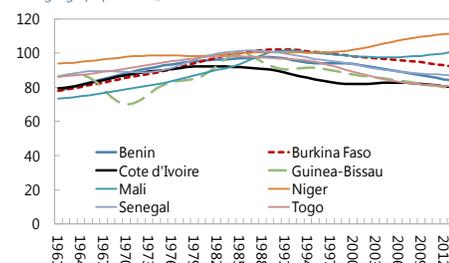
Sources: WDI, UNI World Population Prospects

6 percent between 1965 and 1990 (Bloom et al., 2003). However, even with an increasing ratio of working-age population to population, the growth effects of the demographic dividend are not automatic. The shift in the demographics needs to be complemented by investments in education to ensure the entrance of a productive workforce into the labor market at higher wages.

12.   Policymakers aiming to promote structural transformation must take these demographic challenges into account. A large number of new workers could be a boon for structural transformation and diversification as young workers are likely to be more flexible than existing ones to enter into new economic activities. Policies should thus focus on ensuring the demographic transition takes place, through managing fertility rates (for example, though promoting increased use of contraception) and harnessing the growth benefits of any transition by providing the necessary education to ensure new entrants to the labor force have the skills to be fully employed in high value-added activities.

Box 5. Gender Inequality and Growth

Mali has one of the highest levels of gender inequality in the world. The World Economic Forum ranks Mali 138 out of 142 countries for gender equality and its score has worsened over the past decade. The UN ranks Mali 151 out of 155 countries on its gender equality index, while the OECD ranks Mali 105 out of 108 countries on its measure of discrimination against women in social institutions. And on all three measures, Mali scores significantly worse than the average for Muslim-majority countries, Sub-Saharan Africa and all low-income countries.

The major macroeconomic gender-related issue in Mali is underrepresentation in the labor market. In 2015, female labor force participation was only 35 percent, almost half that in sub-Saharan Africa as a whole. And the gap with men is also over twice that in the rest of Africa. Alarmingly, this gap has actually increased over the past decade as rates of labor force participation have increased for men but stagnated for women. Moreover, once in employment, women are more likely to be employed on a temporary basis or as apprentices and less likely to be firm owners or managers.

Low participation of women in the labor force is labor is holding back economic growth in Mali. A growing body of literature finds evidence of a positive link between female labor force participation rates and economic growth (see IMF (2013) for a summary). Leaving such a large number of potentially productive workers under-utilized is a huge waste of resources and one that is particularly unfortunate for an economy as poor as Mali.

Two of the most binding constraints in terms of greater female labor market access relate to education and demography. Enrollment rates in education are low for women (only 64 percent receive primary schooling) and significantly lower than for men (for example, twice as many men go to university than women), while those women that do enroll are less likely to complete. Literacy rates are also extremely low and significantly lower for females than males (25 percent versus 43 percent). Mali's fertility rate is among the highest in the world, at 6.7 births per woman. High fertility rates and gender imbalances are mutually reinforcing drivers of Mali's poverty dynamics. High fertility rates affect women's health and productive capacity but also the time they can devote to seeking and undertaking a job.

Policymakers aiming to improve women's access to the labor market should privilege measures that are also likely to have the biggest macroeconomic impact. Policies should be chosen that not only help to alleviate gender imbalances but also to tackle the challenges posed by rapid population growth and low economic diversification in particular. For example, a key priority should be managing the fertility rate, through, for example, improved access to contraception and legal reforms that empower women within the household. Similarly, policies targeting an increase in female access to education should take into account the type of skills likely to be in short supply in a Malian economy with an expanded secondary and tertiary sector. In terms of geography, a key focus should be rural areas, where economic diversification is lowest and where fertility and gender inequality is highest.

Figure 7. Gender Inequality and Growth

Mali has one of the highest levels of gender inequality in the world. .

Gender inequality indices

Sources: WEF and UNDP

The gap in labor force participation with respect to men is high and has increased over time.

Labor force participation rates
(Percent of labour force ages 15+)


Source: International Labor Organization

Two of the binding constraints to female labor market access in Mali relate to demography..

Fertility and labor force participation, 2011
(Percent)

Source: International Labor Organization

The major macroeconomic gender-related issue is underrepresentation in the labor market

Labor force participation rates (LPFR), 2015
(Percent of labor force, ages 15+)

Source: International Labor Organization

And once in work, women tend to employed on a less secure basis than men.

Employment by type, 2009
(Percent of total employment)

Sources: Malian authorities

.... and education

Enrollment in education
(Ratio of female to male enrollment, percent)

Source: World Bank World Development Indicators
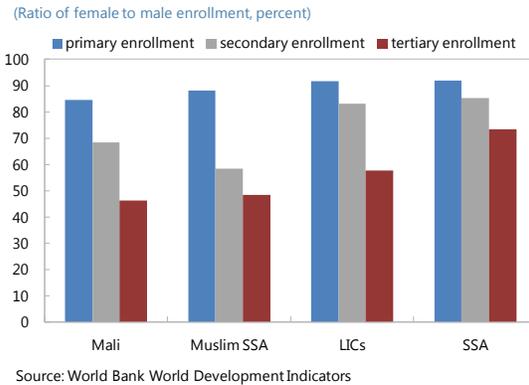
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# CORRUPTION AND ECONOMIC PERFORMANCE IN MALI[1]

Corruption is a problem in Mali. Numerous surveys and indicators have been consistent in their message, identifying it as an obstacle to growth and investment. Mali's recent experience has placed corruption at the center of public debate and the fight against corruption has been articulated as a key political objective.[2] This technical note makes the case for a fight against corruption on economic grounds. It provides evidence that real GDP growth could have been approximately 0.7 percent higher per year over the least five years if Mali had not experienced a deterioration in indicators of corruption during that period.

A.   Corruption in Mali

1.   Deterioration in Mali's standing is documented by the *Ibrahim Index of African Governance* (IIAG), which combines "over 100 variables from more than 30 independent African and global sources" into aggregated categories that measure governance, including scores on government accountability and corruption. After peaking in 2008, Mali's "Accountability" score has been sliding steadily, placing Mali behind neighboring nations such as Senegal, Niger, and Burkina Faso (Figure 1).

2.   The deterioration occurs across each of the individual indices that make up the composite, regardless of the source. Out of nine separate indicators that made up the IIAG Accountability Index, Mali's score in 2013 compared to a four-year average from 2006–09 was lower, in all but two indicators, where it remained broadly unchanged (Figure 2). This presents an even more persuasive case that corruption has worsened in Mali.

Figure 1. IIAG: Government Accountability Aggregate Score
Score/100, 100 = Best

Sources: Ibrahim Index of African Governance

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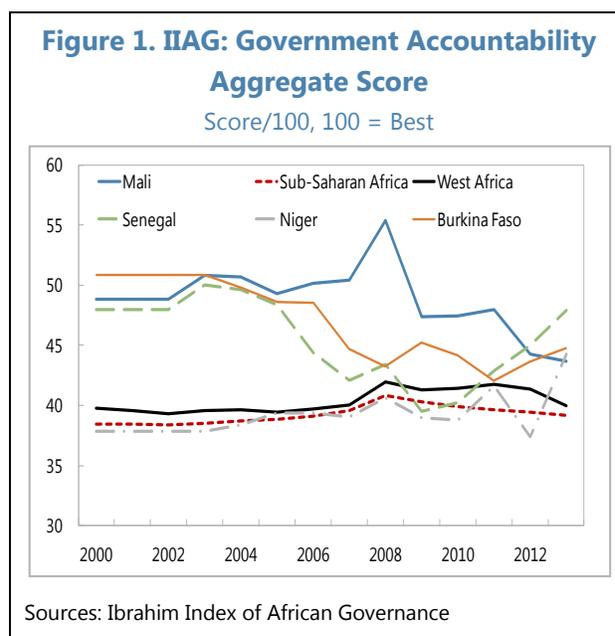
[1] Prepared by Stefan Klos and Milan Cuc.

[2] In his inaugural speech, the President identified good governance and fight against corruption as a central pillar of his political program.

Figure 2. Mali: IIAG Accountability Scores
(Score/100, 100 = Best)

Sources: Ibrahim Index of African Governance

3. **There is an economic case against corruption: although difficult to measure, cost may be significant.** In Mali, real GDP growth[3] has slowed in line tandem with a weakening trend in the World Bank's *World Governance Indicators (WGI)* indicators on Corruption Control, Rule of Law, and Government Effectiveness. This weakening trend has taken place simultaneously across the three WGI categories after 2007 (Figure 3).
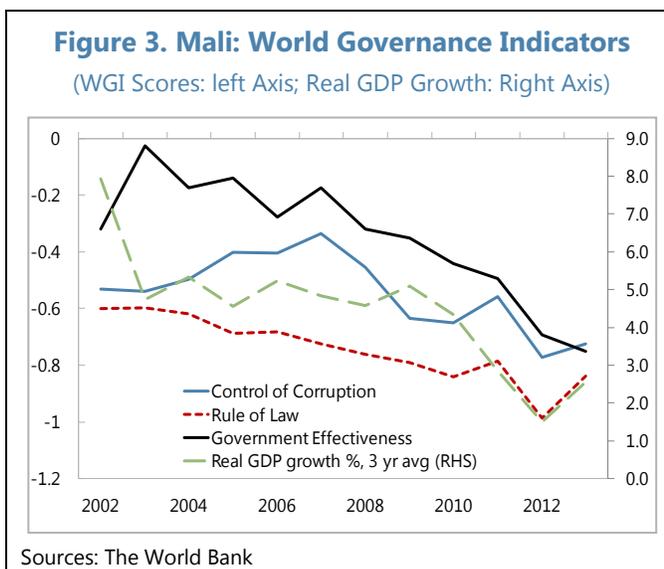
4. **To gauge the extent to which corruption weighs on the country's economy, we have undertaken regression analysis (see Box 1 for details).** Our analysis shows that the relationships between the variables across 41 sub-Saharan African countries yielded statistically significant results for the period 2005–13.

Figure 3. Mali: World Governance Indicators
(WGI Scores: left Axis; Real GDP Growth: Right Axis)

Sources: The World Bank

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[3] We chose to compare WGI with a 3-year average of GDP growth for the year in question, along with the years before and prior since corruption is something that effects growth gradually and would not explain a sharp spike or dip due to an exogenous shock that may have occurred in a particular year.

Box 1. Cross Sectional Regression Analysis

Using the WGI's "Control of Corruption Score" and the IIAG's "Government Accountability" composite score as independent variables, we tested their effects on the dependent variable, Real GDP Growth (same year and 3 year average). Our sample was 41 Sub-Saharan African countries over an 8 year period. To isolate the effect corruption had on the dependent variable, we controlled for GDP per capita and Oil GDP (as a percentage of total GDP).

This gives us the equation:

$$Y_{\text{Real GDP Growth}} = \beta_0 + \beta_1 X_{\text{Corruption Score}} + \beta_2 X_{\text{GDP per capita}} + \beta_3 X_{\text{Oil GDP (\% Total)}} + \varepsilon$$

To ensure that all of the variables in the analysis were normally distributed, we took the natural log of GDP per capita and Oil GDP, since large disparities and occasional outliers existed in the sample. Results are summarized in Text Table 1.

Text Table 1. Regression Results

	(1) r GDP	(2) r GDP 3yr		(3) r GDP	(4) r GDP 3yr
WGI Corruption	1.725**	1.562***	**IIAG Accountability**	0.0756**	0.0697***
	(2.96)	(3.64)		(3.15)	(4.47)
ln_GDP per capita	-1.090**	-1.108***	**ln_GDP per capita**	-1.140***	-1.165***
	(-3.22)	(-4.69)		(-3.77)	(-5.30)
ln_oil gdp	0.976***	1.016***	**ln_oil gdp**	1.054***	1.097***
	(3.65)	(4.82)		(3.96)	(5.67)
constant	9.433***	9.916***	**constant**	9.995***	10.46***
	(4.61)	(7.71)		(5.15)	(8.08)
r-squared	0.0393	0.0776	**r-squared**	0.0522	0.0993

t statistics in parentheses
* $p<0.05$ ** $p<0.01$ *** $p<0.001$

B.   Results

5.   Performance measured by corruption indices was a positively related, statistically significant determinant of real GDP growth, especially when the 3-year average of GDP growth was used as the dependent variable. This was not surprising—corruption can lead to slower growth in the long run, while large one-year swings in GDP growth, which is often brought about by exogenous shocks; do not necessarily represent long term trends.

6.   The regression results confirm that corruption, as a factor explaining part of the variation in GDP growth, is statistically significant at a 99.9 percent confidence level. Corruptions explains 8 to 10 percent of the variation in GDP growth—the rest of the variation being due to other factors.

7.   One can use these results to estimate the real GDP growth path should Mali had kept
its corruption scores at the level
achieved in the mid 2000s. Mali's
WGI "Control of Corruption" score
peaked in in 2007, before declining to
its present level, its lowest since data
collection began in 2000. Had the
score remained at the 2007 level, we
could have expected the 2013 real
GDP level to be 2.7 percent higher
than the actual level. This would have
added an extra $85 million to Mali's
GDP over that time (Figure 4).
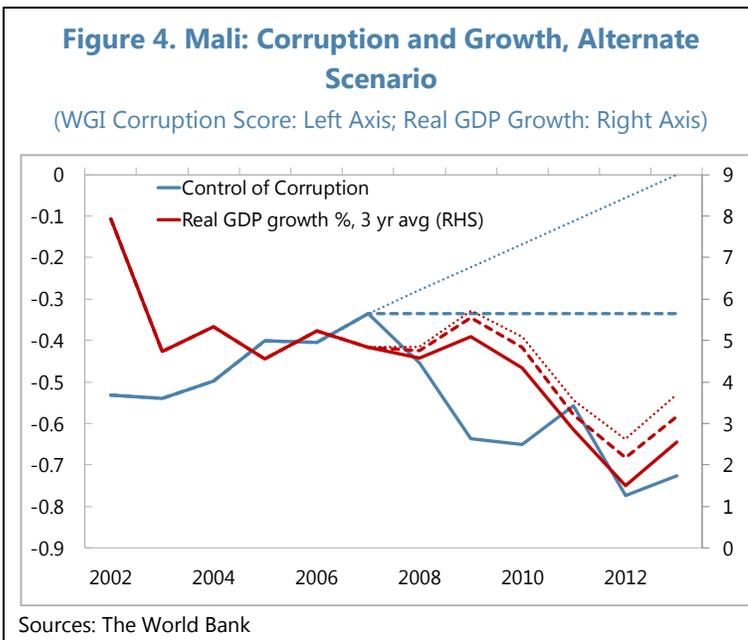
8.   In a scenario where Mali's
score would have continued to
improve along the trajectory it was
**following in the early 2000s, its**
corruption levels would have reached the global average by 2013, marked by zero on the WGI
scale. In this scenario, Mali's real GDP would have been 4.6 percent higher than the actual 2013
level. If corruption levels remained at the global average, real annual GDP growth would continue to
be 1.1 percent higher than current levels per year. The failure to do this resulted in a cumulative loss
of $150 million over the 5-year period from 2008–13.

9.   Mali's IIAG aggregated "Government Accountability" score peaked in 2008 before
declining to its lowest historical
point in 2013. Had the score
remained at the 2008 level, we could
have expected an average increase of
0.64 percent over GDP growth per
year over the following 5 years (Figure
5). Under this assumption, Mali lost
around $97 million cumulatively over
the 4-year period.
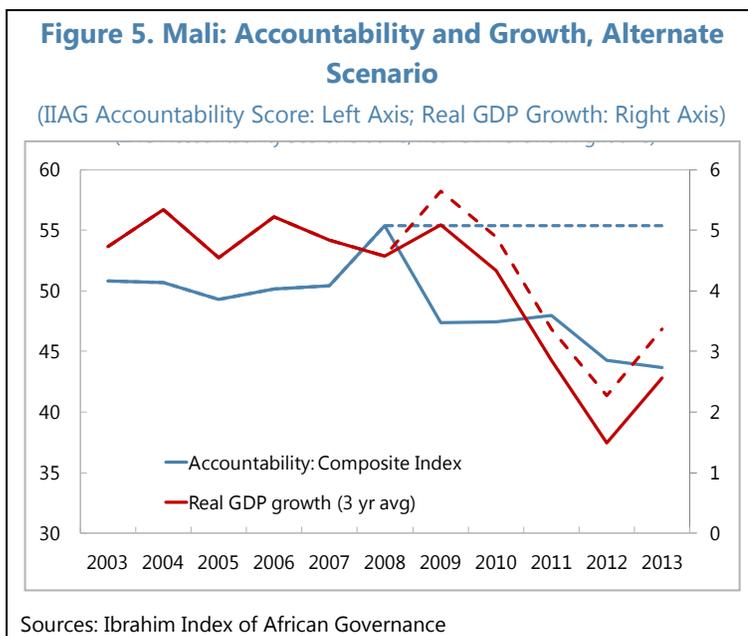
10.   While our estimates say
corruption costs Mali anywhere
from 0.6 to 1.1 percent of GDP
annually, other well-known studies
have estimated even higher costs of
corruption. The Stolen Asset
Recovery Initiative estimates that

Figure 4. Mali: Corruption and Growth, Alternate Scenario
(WGI Corruption Score: Left Axis; Real GDP Growth: Right Axis)

Sources: The World Bank

Figure 5. Mali: Accountability and Growth, Alternate Scenario
(IIAG Accountability Score: Left Axis; Real GDP Growth: Right Axis)

Sources: Ibrahim Index of African Governance

developing countries lose between 20 to 40 billion dollars a year to corruption, while a World Bank paper estimates the annual loss to be around 2 percent of global GDP (StAR; Kaufmann, 2005).

C. What Are the Implications?

11.   These results suggest that reducing corruption can have tangible economic benefits. With the high potential growth and investment opportunities available to Mali, the payoffs from reducing corruption would be immediate. It is not unprecedented for countries to make drastic improvements in reducing corruption in short periods of time. Recent history has shown that countries—including Indonesia, Georgia, and Colombia—experienced subsequent increases to investment and improvements in public services following their efforts (Klitgaard, 2014). After years of decline, Mali is in a prime position to make good on its promises to fight corruption and reap the ensuing economic benefits.

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LABOR INCOME TAXATION AND ITS IMPLICATIONS IN MALI[1]

Mali's labor market needs to function well to support the transformation of Mali's economy along the development path. At present, it is not the case: unemployment is high as job creation is struggling to keep up with labor force growth, and the overwhelming portion of jobs is in the informal sector. Labor taxation merits a closer look as a potential policy tool to help improve this situation. The first-best solution would be to lower the overall burden of labor income taxation. This may prove difficult in practice, however, particularly if no other suitable sources of government revenue can be found. Even so, steps can be taken to simplify the structure of taxation by reducing the number of income tax brackets and the number of various types of social contributions. A simpler regime that is transparent, easier to administer and easier for businesses to comply with would go a long way toward creating more favorable business conditions in Mali and facilitating job creation.

A. Introduction

1.   The labor market represents a key link through which households enter the national economy. They provide their labor services and earn labor income—income which in most countries accounts for the largest part of total national income. A well-functioning labor market is critical for good performance of an economy.

2.   In sub-Saharan Africa (SSA), the expected transformation from today's agrarian economies to developed manufacturing and service sectors will entail large-scale reallocation of resources, including labor. A well-functioning labor market is needed to ensure that this process unfolds smoothly, and economic losses and social disruptions are minimized.

3.   The chapter deals with one of the aspects of the labor market—that of labor income taxation. The central concern is that labor taxation should be designed in a way that minimizes economic distortions, which are inevitable in the presence of any taxation. In the case of Mali, any future tax reform should consider reducing the labor tax burden and simplifying its structure.

Labor Tax Wedge

4.   We start our discussion with the concept of the tax wedge. The labor tax wedge is the difference between (a) the amount it costs an employer to keep an employee and (b) the amount the employee receives. This difference is accounted for by various taxes, social contributions and fees that the employer and the employee have to pay. The labor tax wedge, just like any other tax, is a source of market distortion which can lead to a lower-than-optimal level of employment. The

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[1] Prepared by Milan Cuc.

distortionary effect of the labor tax wedge is expected to be significant in Mali, for two reasons: one, because of the relatively large size of the tax wedge; and, second, because of the relative openness of its economy, in which a large portion of the labor force consider leaving abroad in search of employment. Therefore, attempts to increase overall employment—and employment in the formal sector in particular—should also consider ways of reducing the labor tax wedge.

5.   In any market (not just the labor market), taxation leads to a deviation from equilibrium price/quantity. As a consequence, consumers pay more and suppliers receive less than would be the case in a tax-free market. This is illustrated in Figure 1.

6.   In the absence of taxation, the market would be in equilibrium at point E, with consumers paying (and suppliers receiving) price PE and trading quantity QE. As the tax is introduced, a new equilibrium is reached where consumers pay more (PC) and suppliers receive less (PS). At the same, the quantity traded falls to Qt. The difference between PC and PS is the amount of the tax.

Figure 1. Tax Wedge

Source: Malian Authorities
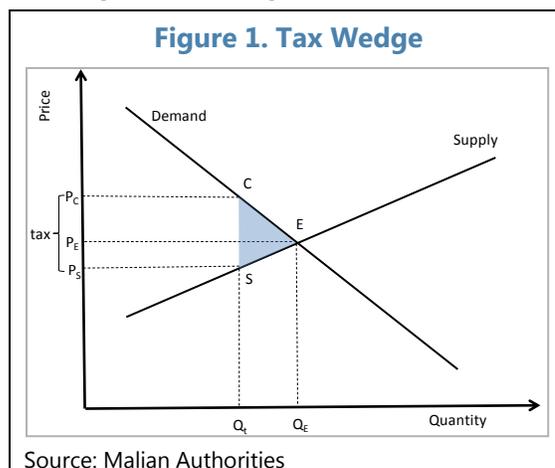
7.   For the labor market, the demand curve corresponds to the demand for labor. The demand price corresponds to the labor cost faced by firms (Pc), and the supply curve corresponds to the amount of labor that workers are willing to provide at different net salary levels (Ps). **The difference between the labor cost faced by the firms and net salary received by workers corresponds to the labor tax wedge.** The quantity traded corresponds to the level of employment in the economy (Qt), while Q_E is employment that would obtain in the absence of taxes and social contributions.

Estimating the labor tax wedge in Mali

8.   To calculate the tax wedge in Mali, all relevant taxes and social contributions paid by the employee and the employer need to be considered. These make for a long list, which includes the following:

- Personal income tax (ITS)
- Employer social security contributions (CFE)
- Tax for professional training and education (TFP)
- Tax (to finance) youth employment (TEJ)
- Accommodation tax (TL)
- Mandatory social (INPS) and health (AMO) contributions.[2]

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[2] This category has 6 separate components, each with its own rate.

9.   The taxable base for the ITS includes employment income, commissions, bonuses, tips and other compensation and benefits related to employment. The tax is progressive: there are seven tax brackets, with marginal tax rates ranging from zero to 40 percent. As the figure makes clear, the overall average tax rate rises very quickly even at lower levels of compensation.

10.   To calculate the tax wedge, the "full cost of employment" needs to be estimated first i.e., the amount an employer needs to pay by employing a person. The full cost of employment consists of (a) take-home pay, (b) taxes and contributions paid by employee, and (c) taxes and contributions paid by the employer.

11.   The Text Table 1 shows that even at relatively low levels of income the tax burden is quite substantial. With an annual income of CFAF 1 million (about US 2,000 dollars)**,** a worker's take-home pay is only two-thirds of the amount it costs his employer to keep him/her. The income tax contributes only 2 percentage points to the tax wedge, which is estimated at 33 percent of the total labor cost. Thus the picture that emerges is one of an onerous regime—in terms of the overall tax burden, as well as an excessively elaborate structure that complicates the task of tax compliance for businesses that complicates the task of tax compliance for businesses.

12.   Measured against other countries Figure 4, the labor tax wedge in Mali is relatively high—more in line with advanced EU countries than some of the more dynamic emerging economies shown here in the sample.[3]

Figure 2. Mali: Tax and Employee-Paid Contributions

(Percent of Gross Salary)
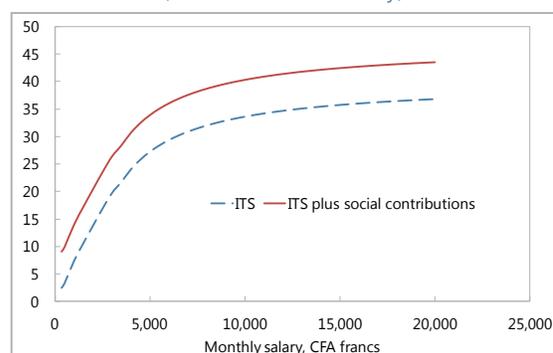
Sources: Malian Authorities

Text Table 1. Mali: Labor Tax Wedge

(Percent)

	Income level, thousands of CFAF			
	1,000	5,000	10,000	20,000
Labor cost	100	100	100	100
Take-home salary	67	51	46	44
Tax wedge	33	49	54	56
Employee paid	11	26	31	34
Employer paid	22	22	22	22

Sources: Malian Authorities and IMF staff calculations

Figure 3. Mali: Labor Taxation: Take-Home Pay and Tax Wedge

(Percent of Total Labor Cost)
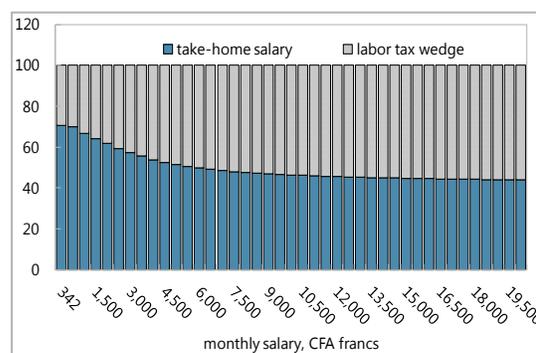
Sources: Malian Authorities and IMF Staff Calculations

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[3] Sources: OECD, IBFD, IMF-FAD Tax Database, and IMF staff estimates.

13.   Neither does Mali come off favorably in a comparison with its peers from the WAEMU—Cote d'Ivoire and Senegal (next two figures). Both these countries have a lighter tax burden than Mali, and a simpler regime.[4]

Figure 4. Labor Tax Wedge: Percent of Total Labor Cost

(2010-11)

Sources: Malian Authorities and IMF staff calculations.

Figure 5. Country Comparison: Tax Wedge

(Percent of Labor Cost)

Sources: Malian Authorities and IMF staff calculations.

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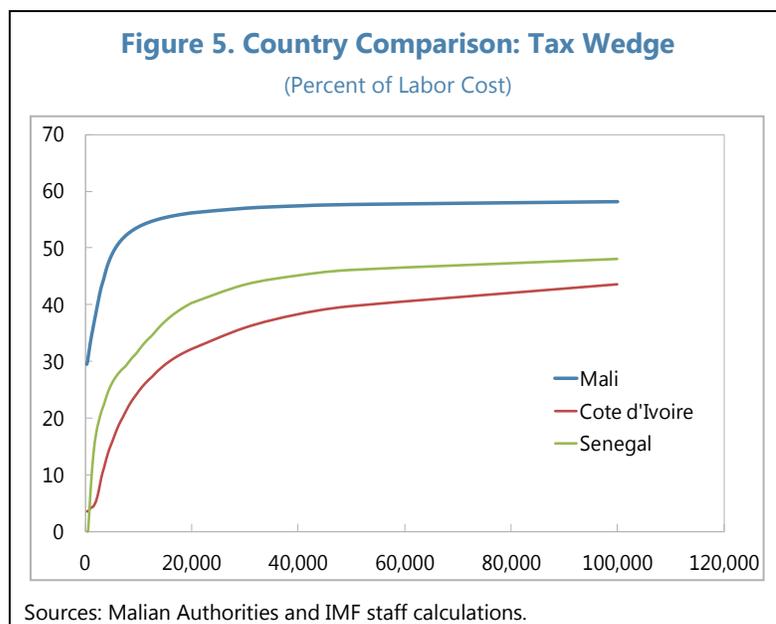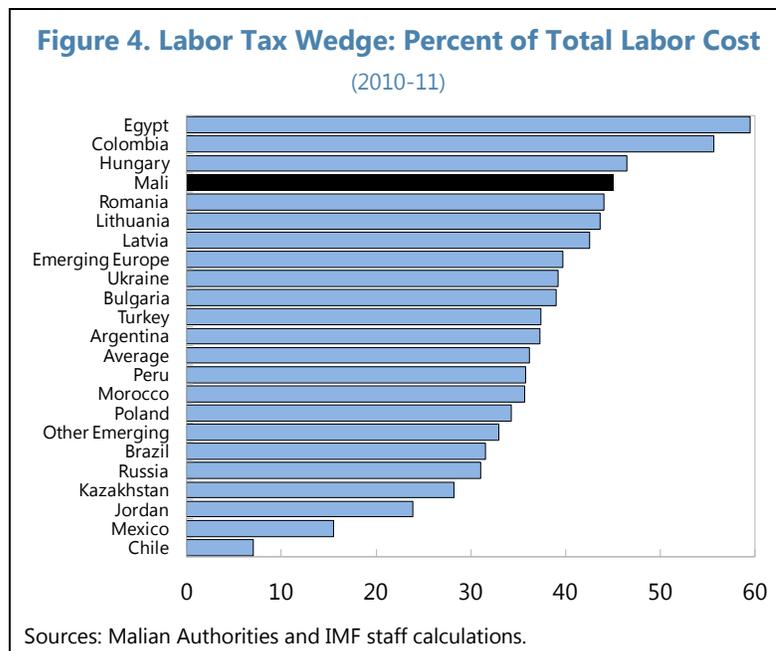
[4] It's simpler, but not simple. In both these countries, Fund staff has made recommendations to streamline the regimes and make them fairer. See for example: *République de Côte d'Ivoire—La poursuite des réformes de la politique fiscale*, Mario Mansour et al. (October, 2013); *République du Sénégal—La réforme fiscal sénégalaise: un succeès menace*, Petit et Codbout (October, 2013). Their current personal tax systems are complex, heavy, non-transparent, and inequitable.

Box 1. Labor Taxation in OECD Research

The OECD has done extensive research on labor taxation and its implications for the functioning of labor markets. The conclusions of its studies may serve as a guide for economic consequences of large labor taxation in a country like Mali. In OECD countries, labor taxes (wage income taxes and social-security contributions) account for about half of government revenue. Studies done by the OECD find that these taxes influence both workers' decisions about how much labor to supply (supply side of the labor market) and firms' decisions about how much labor to hire (demand side of the labor market).

On the demand side: demand for labor tends to decline in response to an increase in labor taxes, if worker resistance to such taxes boosts wage demands, which in turn leads to higher cost of labor. Thus, in such a case, the incidence of the tax will fall on the employer, as the tax shifts into labor costs, profitability will suffer. And, employment will fall, for two reasons: lower profitability will lead the firm to reduce its output, and, with an increase in the cost of labor relative to capital, the firm will also favor more capital-intensive forms of production.

On the supply side of the labor market: personal income taxes and employee social security contributions reduce the return to work. This will lead workers to reduce the number of hours they wish to work or discourage them from entering the labor market altogether. Potential and actual output may fall as a result. Even if the higher labor taxes do not affect the labor supply directly, they may distort economic agents' behavior: they may intensify their efforts to avoid or evade taxes (by switching to the informal sector). Tax may also influence the way in which workers' compensation will be structured: greater part of the compensation may be paid in the form of tax-favored forms (fringe benefits) rather than salary.

In practice, labor taxes interact with other labor market institutions (presence of trade unions, bargaining arrangements, minimum wage laws, etc). For example, generous minimum wage provisions combined with large payroll taxes or social security contributions may push low-wage workers out of employment.

Sources: Taxation and Employment (2011), OECD Tax Policy Study No. 21, and Taxing Wages, 2010, OECD (2011).

Assessing Mali's Labor Market

14.   The features of Mali's labor income taxation system, which make it heavy and complicated, are expected to have some negative implications for economic performance.[5] The large tax wedge and its complex structure will discourage businesses from hiring workers. In some cases where hiring takes place it may occur on an informal basis. In other words, the system strengthens incentives for firms and workers to avoid becoming part of the formal sector of the economy. For international firms that consider investing in Mali, the labor taxation regime will lead them to view the country less favorably as a potential destination for their investment compared with other countries. The size of the formal sector is rather small—5.3 percent of the estimated total employment. That portion corresponds broadly to the figures used by the ILO to estimate distribution of employment across five categories of jobs ranked by the degree of their attractiveness and formality: the top two categories account for close to 5 percent of total employment in 2010.[6]

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[5] For lessons from other countries, see Box 1.

[6] "*Croissance, emploi et politiques pour l'emploi au Mali*", (ILO, 2012), page 33.

Text Table 2. Mali: Formal Sector Employment, 2010–14 (Thousands)					
	2010	2011	2012	2013	2014
Total	284.9	295.8	310.9	324.8	...
Government	61.0	61.0	62.2	64.0	62.1
Enterprises	223.9	234.9	248.7	260.8	...
Total formal, percent of total employment	5.3	...	...	...	...

Sources: Malian Authorities and IMF staff calculations.

15.   Besides labor taxation, the size of the formal sector, and with it, the number of quality jobs—salaried, well-paid, permanent positions—will depend on the quality of the labor force. The education level and the acquired skills will affect labor productivity and labor remuneration. The higher they are, the higher the probability that the job will be a salaried job in the formal sector. Inadequate education is one of the reasons Mali's formal sector is relatively small: a large number of firms identifies inadequately educated labor force as a major constraint (Figure 6).

Figure 6. Percent of Firms Considering Inadequately Educated-Labor Force as a Major Constraint
(Multiple Countries)
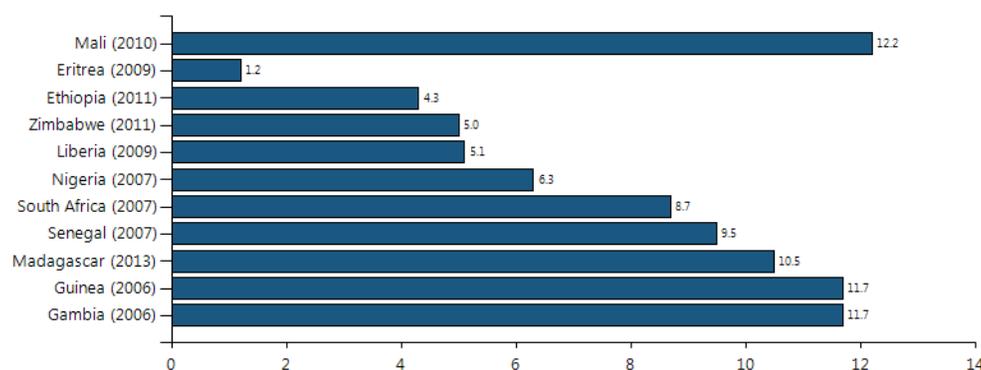
Source: Enterprise Surveys (www.enterprisesurveys.org); The World Bank

16.   The presence of a large informal sector is not benign. It undermines the ability of the formal sector firms to grow and create "good" jobs. A World Bank Survey reports on percent of firms competing against unregistered firms:

Figure 7. Percent of Formal Sector Firms Facing Competition from Unregistered Firms

(Multiple Countries)

Country	Value
Mali (2010)	75.4
Eritrea (2009)	28.2
Namibia (2006)	33.1
Ethiopia (2011)	37.3
Swaziland (2006)	39.7
Angola (2010)	41.3
Cabo Verde (2009)	44.5
South Africa (2007)	45.3
Mauritius (2009)	51.0
Guinea-Bissau (2006)	53.7
Botswana (2010)	54.6

Source: Enterprise Surveys (www.enterprisesurveys.org); The World Bank

Figure 8. Percent of Firms Identifying Competitors' Practices in the Informal Sector as an Obstacle

(Multiple Countries)

Country	Value
Mali (2010)	59.8
Eritrea (2009)	0
Namibia (2006)	11.0
Ethiopia (2011)	11.3
South Africa (2007)	11.3
Sierra Leone (2009)	14.2
Nigeria (2007)	15.9
Madagascar (2013)	18.7
Côte d'Ivoire (2009)	21.5
Gambia (2006)	22.6
Liberia (2009)	22.9

Source: Enterprise Surveys (www.enterprisesurveys.org); The World Bank

17.   The reluctance of foreign firms to invest in Mali weighs down on the country's development prospects. Development of SSA countries is expected to involve a major structural transformation of the economy (please see Chapter I, *"Growth, Structural Transformation, and Diversification in Mali"*). The share of output (and ultimately of employment) in the low-productivity agriculture should decline, while higher productivity sectors should expand and absorb labor resources freed up from agriculture. If this transformation is to take place, Mali will require a stronger, healthier private sector supported in large part by external funding. A well-functioning labor market, where the tax regime is not onerous to the point of discouraging job creation, will help facilitate this process of transformation.

18.   Ideally, a country that aspires to achieve rapid growth will be characterized by high labor participation and a low unemployment rate. While labor market analysis in Mali (and in

SSA) is complicated by paucity of data; some tentative observations can be made. They could be based on combined information from different sources, some of which may use more reliable methodologies. For example, according to the 2009 Malian census, the unemployment rate was 1.7 percent. That does not seem realistic given the anecdotal evidence which suggests that the economy has difficulty absorbing fast-growing young population that is looking for work. According to the ILO, Mali's unemployment rate was 8.1 percent—a more plausible figure and one that looks more in line with the situation in similar SSA countries.[7]

Text Table 3. Mali: Labor Market, 2009

(Thousands, unless otherwise noted)

Population, total	A	14,522
Population of working age	B	11,109
Inactive population	C	5,618
Labor force	D	5,491
Employed	E	5,396
Unemployed	F	95
Participation rate, percent	D/B	49.4
Unemployment rate, percent	F/D	1.7

Sources: Malian Authorities and Fund staff calculations.

Figure 9. Unemployment Rate

(Latest Observation, Percent)

Sources: ILO and IMF staff calculations
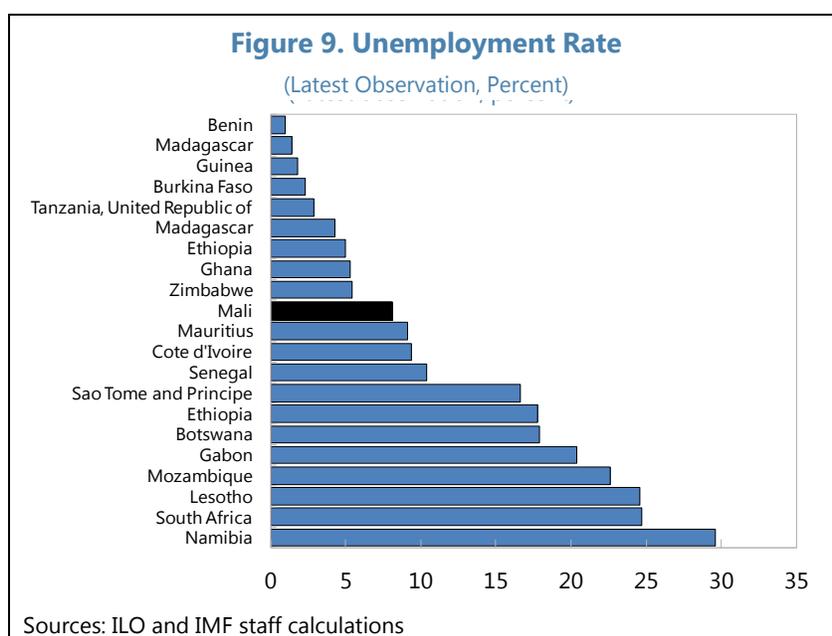
19.   For the participation rate (portion of working-age population active in the labor market—either employed or unemployed), the two sources differ as well. 49.4 percent according to the census, 65.3 percent according to the ILO.[8] Using the ILO's data, which are based on the same methodology across countries, we observe that the country ranks in the lower half among

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[7] ILO database. In its 2012 study "Croissance, emploi et politiques pour l'emploi au Mali", ILO uses the following estimates for the unemployment rate (page 37): 8.8 percent (2004), 9.6 percent (2007), and 8.3 percent (2010).

[8] These differences suggest methodological problems and inconsistencies. One of the reasons for the difficulties with data is the structure of the economy. Most of the employed are in agriculture, which accounts for the bulk of the informal economy where data are difficult to obtain.

SSA countries. This "low" participation rate may be indicative of the presence of discouraged workers who drop out of the labor force, because they have simply stopped searching for work.

Figure 10. Participation Rate

Sources: ILO and IMF staff calculations
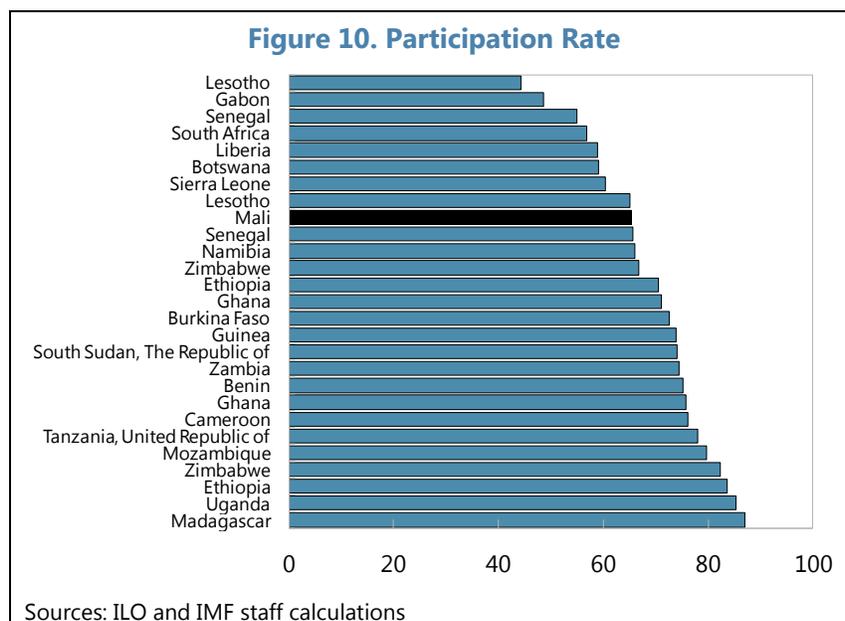
20.   **Underestimation of the size of the labor force—and, by definition, of the participation rate—will, in general, affect the estimates of the unemployment rate.** This is shown in the next figure. The curve has been calibrated to pass through the two data points that are available: the Malian census estimates and the ILO estimates. Given that any estimates of the labor force in Mali are highly tentative, it is possible that its "true" size is larger. That would imply a higher unemployment rate as well.

Figure 11. Mali: Relationship between Estimates of Participation and Unemployment Rates

(Percent)

The curve is calibrated for the Malian census data and ILO data.

Sources: Malian Authorities, ILO, and IMF staff estimates
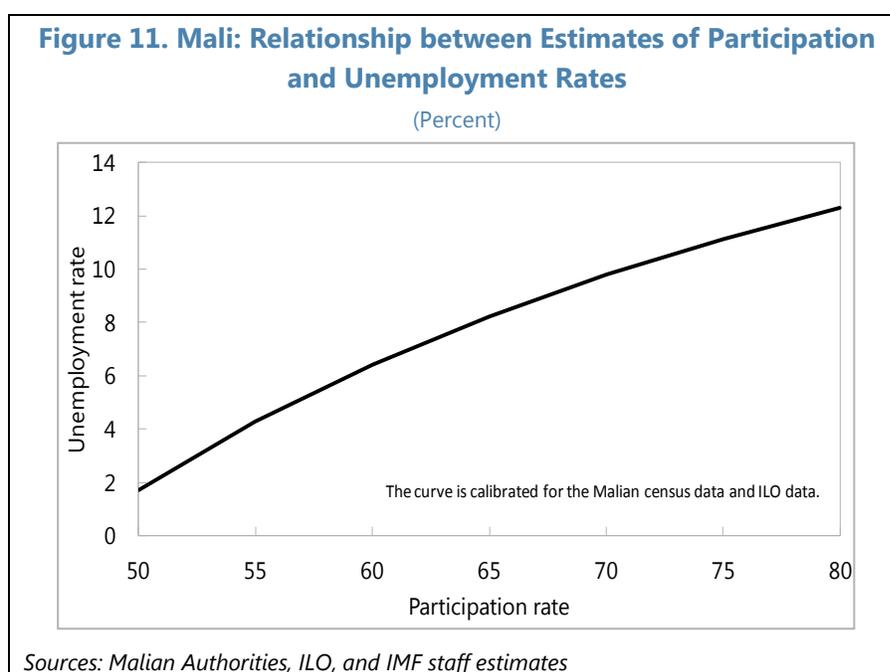
21.   Mali's labor market can be viewed in an international context using data from the World Economic Forum's annual Competitiveness Report. One set of indicators in the report aims to gauge labor market efficiency. The table below shows the results for Mali, its two peers—Côte d'Ivoire and Senegal—and the SSA average. While Mali scores close to the SSA average for the overall labor market efficiency, it falls behind its two peers. The difference becomes quite pronounced for the component "effect of taxation on incentives to work". Here, Mali falls also behind the SSA average.

Text Table 4. Global Competitiveness Report, 2014–15: Labor Market Efficiency

	Côte d'Ivoire	Mali	Senegal	Sub-Saharan Africa	Mali's score, as percent of: Côte d'Ivoire	Senegal	Sub-Saharan Africa
A. Flexibility	4.748	4.606	4.618	4.072	97.0	99.8	113.1
Cooperation in labor-employer relations, 1-7 (best)	4.685	4.505	4.443	3.819	96.2	101.4	118.0
Hiring and firing practices, 1-7 (best)	4.354	4.272	4.076	3.584	98.1	104.8	119.2
Flexibility of wage determination, 1-7 (best)	4.718	4.738	4.456	4.451	100.4	106.3	106.5
Effect of taxation on incentives to work, 1-7 (best)	3.708	3.323	3.926	3.528	89.6	84.6	94.2
B. Efficient use of talent	3.673	3.169	3.835	3.777	86.3	82.6	83.9
Pay and productivity, 1-7 (best)	4.120	3.494	3.752	3.281	84.8	93.1	106.5
Reliance on professional management, 1-7 (best)	4.016	2.931	4.078	3.694	73.0	71.9	79.4
Country capacity to retain talent, 1-7 (best)	3.751	3.443	3.352	3.026	91.8	102.7	113.8
Country capacity to attract talent, 1-7 (best)	3.883	3.332	3.660	3.202	85.8	91.1	104.1
7th pillar: Labor market efficiency	**4.211**	**3.888**	**4.226**	**3.925**	**92.3**	**92.0**	**99.1**

22.   The labor market weaknesses are also highlighted by contrasting Mali's ranking in (a) overall competitiveness, and (b) labor market efficiency. This is shown in the two following figures. It is apparent that Mali is falling noticeably behind the pack in labor market efficiency.

Figure 12. Global Competitiveness Index, 2013–14
(Index, 1 to 7)
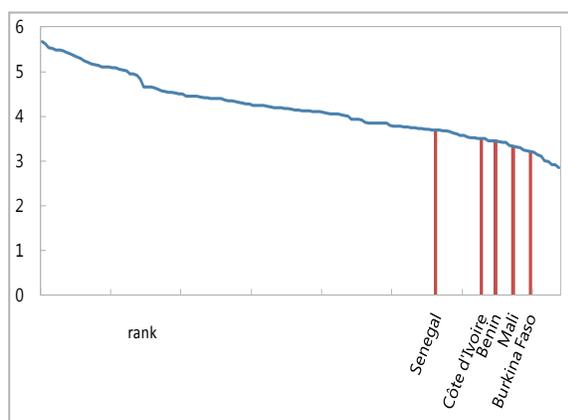
Sources: World Economic Forum

Figure 13. Labor Market Efficiency
(Index 1 through 7 (highest))
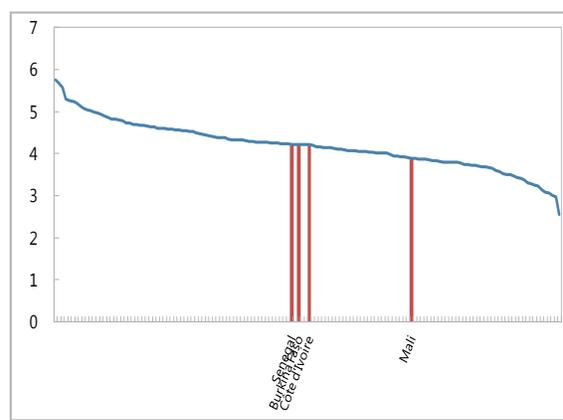
Sources: World Economic Forum

**23.   The relevance of labor taxation for the overall functioning of the labor market is
confirmed by data from the FAD sample on labor income tax wedges.** Data limitations
notwithstanding, cross sectional comparison featuring tax wedge data and unemployment rate data
for a group of emerging economies, reveals correlation between the two. Figure 14 suggests that the
lower the labor income tax wedge, the lower the unemployment rate.[9]

Figure 14. Tax Wedge and Unemployment Rate
(Percent)

Sources: ILO and IMF
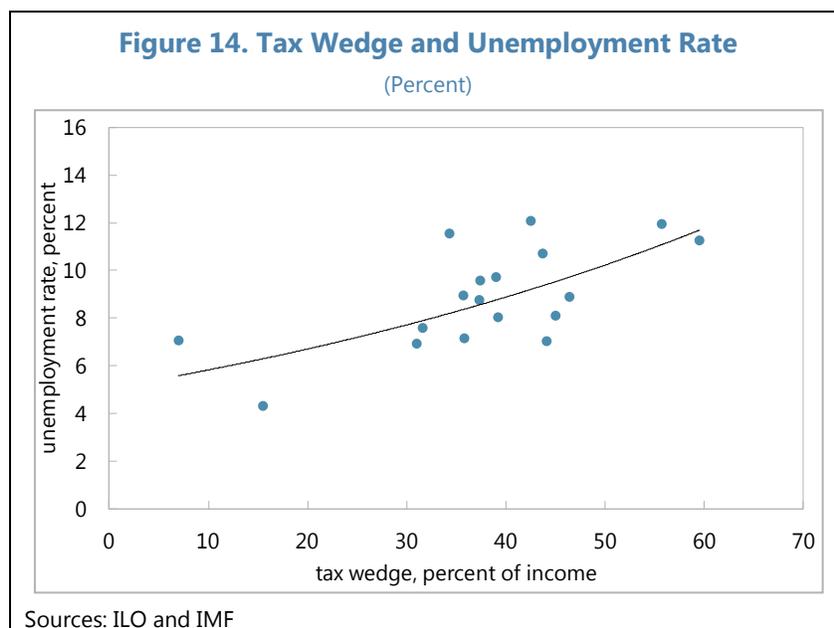
B.   In Conclusion

24.   How well a country's labor market functions affects the economy's performance. A
well-functioning labor market leads to high employment—a situation where all (or nearly all) those
available and willing to work will find jobs. In turn, labor income taxation matters to the functioning
of the labor market. Mali's current labor taxation regime has weaknesses that deserve a closer look.
This is all the more important considering the key role the labor market needs to play in facilitating
the envisaged transformation of Mali's economy along the development path. Fund technical
assistance offers an opportunity to address at least some of them. Ideally, the overall burden of the
labor income taxation should be lowered. In practice this may be difficult to do if no suitable other
sources of government revenue can be found. In Mali's case, steps can be taken to simplify the
structure of the taxation: reduce the number of income tax brackets and the number of various types
of social contributions. A simpler regime that is transparent, easier to administer and easier for
businesses to comply with will contribute toward creating more favorable business conditions in
Mali.

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[9] Sources: OECD, IBFD, IMF-FAD Tax Database, and IMF staff estimates.

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FISCAL DECENTRALIZATION IN MALI[1]

Mali is embarking on a path toward fiscal decentralization to accommodate rising regional aspirations for greater autonomy. This fundamental transformation in fiscal arrangements between subnational (regional and local) governments and the central governments poses multiple challenges. This calls for a cautious, step-by-step approach to maintain overall fiscal stability. On the positive side, if done well, the reform promises to increase efficiency of public spending by improving responsiveness of government services to the needs of local populations and raise government accountability. From the experience of other Sub-Saharan African (SSA) countries we know how challenging similar reforms can be. They pose a number of practical questions that need to be addressed to ensure that Mali reaches its destination in the reform process and that the process itself is as smooth as possible. This note provides an overview of the related issues and discusses options of addressing them.

A. Case for Decentralization

1. **In Mali, decentralization is viewed as critical to addressing the root causes of the recent political and security crisis.** Specifically, it should help restore national integrity; increase the effectiveness of public services by bringing the spending decisions to the intended beneficiaries. This, in turn, would help strengthen local autonomy and public accountability; promote local development; and reduce poverty and inequalities (main objective).

2. **The immediate spur for decentralization has been the desire to secure a lasting peace on the entirety of Mali's territory.** A sense of disenfranchisement in the North caused by decades of benign neglect by the central government has been one of the root causes of social and political tensions. Recognizing the North's aspirations for a measure of control over public services delivered there is a necessary first step in national reconciliation.

3. **However, the case for decentralization goes deeper**. It has to do with particularly rapid demographic changes in urban centers that have strained the local governments' capacity to provide adequate basic services.[2] It has been observed that the fiscal structure for the allocation of resources to urban local governments does not support sound investment planning and service delivery.[3] There is a disconnect between the functional mandate given to cities and the amount of resources allocated to them to carry out this mandate. The resources are inadequate, but also unpredictable— in terms of quantity and frequency--and most of them are earmarked according to priorities established by the center. This leaves cities with insufficient discretionary resources that would allow

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[1] Prepared by Moussé Sow and Milan Cuc.

[2] For example, Bamako's population growth has been estimated at 5.4 percent, with some of its outer areas increasing at a rate of 10–15 percent.

[3] World Bank (2011).

them to determine priorities based on local needs and respond to them in a systemic, sustained, predictable manner.

4.   The Peace Accord is not the first time decentralization has been on the policy agenda. The beginnings of the decentralization reform date back to Mali's 1992 constitution. In 2005, an attempt was made at devolution of some central government function to lower levels of government, but it has left some ambiguities in the transfer of functional assignments.[4] Today, more clarity is needed to free up the development of local capacity and improve the effectiveness of delivery of local services.

5.   Mali's decentralization efforts reflect a trend within SSA, where other countries have undertaken decentralization for much the same reasons as Mali (boxes 1 and 2). The trend toward devolution of spending—and to a lesser degree, devolution of revenue-raising responsibilities—to lower (sub-national) governments reflects, in part, the political evolution toward more democratic and participatory forms of government. At the same time, the economic efficiency argument has been used to advance this process—namely, ensuring a closer alignment between quantity, quality and composition of public services and the preferences of their beneficiaries.

Box 1. Decentralization in Mali

Decentralization in Mali has been undertaken since the early 90's, with the objective of increasing authorities' responsiveness to local citizens and promoting local development; but the pace of implementation has been slow. Authorities have devolved several responsibilities, including the provision of education and health services, public transportation, rural and urban development, hydraulic and water provision.

Under the current framework, the average level of expenditure decentralization is 8.3 percent measured over the period 2011–13. In addition to the budget allocations and grants transferred, a significant amount of expenditures is executed at the central level (multi-regional projects, etc.). Combining decentralized expenditures and spending executed at the central level, but benefiting mostly the local authorities, the decentralization ratio amounts to 19 percent. Also, authorities share slightly more than ten percent of the domestic revenue with the local authorities, taking into account transfers.

Decentralization as a policy to boost local development has showed limited benefits so far. Performance in improving education and health services, water access and sanitation facilities has not been strong. This could be partly attributed to an inappropriate decentralization framework, namely the asymmetries between spending responsibilities and revenue capacities of local authorities, and the failure to account for regional and other local specificities. Other factors, such as the insufficient human capacity and weaknesses in the local administrations, may also be at play.

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6.   In the remainder of this note we consider the steps to achieve a greater degree of fiscal decentralization and discuss some related practical considerations. First, there has to be

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[4] A National Decentralization Policy Framework was adopted in 2005 with the key objective of increasing local
   governments' responsibilities, accountability, and skills.

agreement on the quantity and quality of the services to be provided by each government level. This, in turn, has implications for the amount of total financing required. The difference between the needed financing and the available (own) financing at the subnational government level is the implied amount of transfers from the center.

Box 2. Decentralization Lessons from SSA

Several SSA countries have embarked on a decentralization path for various reasons. Experiences of Ethiopia, Kenya, Rwanda, and South Africa provide a useful reference for a country like Mali that is about to initiate the reform.

- In the mid-1990s, Ethiopia developed an ambitious and multi-stepped decentralization program, pursuing the objective of preserving the integrity of the ethnically fragmented country. Services devolution started at the regional level. Further, authorities pursued the process and decentralized one tier below the regions. To accompany the reform and give greater responsibilities to decentralized levels, Ethiopia developed a significant intergovernmental transfer program, with clear rules governing the program and making it easier for concerned parties to understand. Additionally, continuous efforts have been undertaken to develop capacity building at the local levels, particularly in the form of training programs.

- Kenya, a moderately large country, has a very recent experience with decentralization. With a decentralization ratio[5] of 2 percent, local authorities (the counties) are responsible for agriculture, health services, rural electrification, and other social services. About 80 percent of counties' revenue consists of transfers from the central government. Counties are accountable to local citizens and have limited reporting obligations to the central government.

- Rwanda offers an example of successful decentralization. The reform was associated with rapid economic and social development. Although with a relatively low decentralization ratio, perceptions of the quality of governance have improved. Additionally, local citizens have been experiencing better access to schooling, healthcare and other public services with satisfaction. Most importantly, these benefits did not come at the cost of fiscal discipline. Among the key aspects of Rwanda's success history, the devolution of services was timely undertaken. While pursuing the reform, central authorities maintained control over local jurisdictions. Tax rates at the local level were set by the central authorities, and tax revenues collected by the central revenue administration. local jurisdictions have reporting obligations of monthly and annual financial statements. To minimize vertical and horizontal imbalances, central authorities rely upon a transparent, but simple transfer and equalization formulas.

- With a decentralization ratio of 16 percent, South Africa offers a relatively rich experience. Municipalities, which constitute the decentralization layer, are responsible for a wide range of local services (electricity and water supply, waste water and solid-waste disposal, and street lighting). Unlike in the Rwanda case, local jurisdictions determine their own tax rates, but within the constraints of the national tax policy. Municipalities, as in Rwanda, have legal reporting obligations to the national government which monitors the fiscal risks. The national government cannot guarantee municipalities' debt. However, municipalities can borrow on the strength of their balance sheets. A formula-based transfer mechanism facilitates attainment of specific national goals.

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[5] The decentralization ratio is calculated as the ratio of local government expenditure (revenue) to general government expenditure (revenue). In situations where local public finance information is not reliable, the decentralization ratio is calculated as the ratio of general government expenditure minus central government expenditure over general government expenditure.

B. Assign Spending Responsibilities to Different Levels of Government

7.   Identification of functions to be decentralized and associated transfers is likely to be a complex issue that requires careful deliberation. The alignment of spending responsibilities can entail welfare gains if done "right". There is broad consensus that efficiency in the allocation of resources is best served by promoting a closer correspondence of expenditure priorities with the preferences of affected population by assigning responsibility for each type of public spending to the level of government that most closely represents the beneficiaries of these outlays.

8.   However, the design of intergovernmental fiscal relations cannot be determined exclusively by allocative (economic) efficiency considerations. Noneconomic factors--political, social, and cultural—will also play a role. Within economic factors, allocative efficiency needs to be weighed against the objectives of income distribution and macroeconomic management.[6] The design of intergovernmental relations will have implications for public financial management (PFM). Decentralization entails additional cost for lower levels of government; it complicates budgetary coordination (in particular where the number of local government entities is large); and it usually requires special treatment of large cities, which have their specific problems.

9.   Efficiency gains expected from decentralization can turn out to be more modest in the presence of institutional constraints. [7] For example, administrative capacity of regional and local governments may be weak. Development of modern and transparent public expenditure management systems—including mechanisms of financial control, reporting and accounting—has proven to be a considerable challenge at the national government level. It is likely that it will be more so at lower government levels. It is also generally the case that the degree of decentralization is not an outcome of some optimizing decision-making, but rather an outcome of historical developments or political factors. For these reasons the size spending by subnational governments varies greatly from country to country.[8]

10.   Central government spending has the advantage of assuring uniformity in the provision of public services. In many cases, where decentralization creates differences in policy and the level of provision between jurisdictions, undesirable population and capital movements follow. The case for central spending could be made for provision of national public goods—defense, foreign affairs, trade, interstate transport and communications. In these cases decentralization would lead to inefficient outcomes. Decentralization could also be inefficient in cases where significant economies of scale are present.

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[6] In countries with regional disparities, the ability of subnational governments to provide public goods and services to residents can vary widely—which may lead to strong social and political tensions. Mali can serve as an example.

[7] This may occur due to the lack of modern and transparent management systems.

[8] From under 8 percent of total spending (Mexico), to 40–50 percent of total spending in loose federations (Canada, Australia, and India).

C.   Provide Subnational Governments with Adequate Resources

11.   Assignment of spending responsibilities needs to be accompanied by assignment of commensurate own sources of revenue for regional and local governments. This raises question how the powers to tax should be distributed across government levels. At one end of the spectrum, most or all taxation powers could be assigned to subnational governments. This would not be desirable—both distributional and macroeconomic management considerations argue against such an arrangement, as this would deprive the central government of necessary policy instruments. At the other end of the spectrum, all or most taxing powers could be assigned to the central government. This would also be undesirable: by separating spending authority from revenue-mobilization responsibilities, such arrangements obscure the link between the benefits of public expenditures and the taxes levied to finance them. They do little to promote fiscal responsibility by subnational politicians and their electorate.

12.   Reliance on own sources of revenue tends to promote greater fiscal responsibility by regional and local governments, and political accountability of government officials to their electorate. Revenues associated with local governments comprise three main types:

- Charges linked directly to the service provided by the local government (parking, school fees, medical fees, rental of space at local markets, etc.).

- Licenses (professional licenses, business licenses)

- Taxes; property taxation (typically in cities, where a land register is available).

13.   Taxes that have proven to fit well the regional and local government requirements are those characterized by low mobility and fairly-even distribution of the base over the national territory and relative stability over the cycle. These considerations favor assignment (full or partial) of the personal income tax, general retail sales taxes and some excises to subnational governments. It is also desirable, although not strictly required, to harmonize the definition of the tax base across the national territory. This will tend to minimize distortions and tax-induced movements of labor and capital.

14.   An inexperienced tax administration at the subnational government level will initially constrain the effectiveness of revenue decentralization. One way to safeguard revenue performance is by providing technical training to the new tax administrations. Alternatively, the sub-national governments could continue to rely on the central tax administration for tax revenue collection and receive a set percentage from the national take of a particular tax.

D.   Intergovernmental Transfers

15.   Subnational governments' "own resources" are typically complemented by transfers from the central government. There are two possible reasons why a system of transfers is put in place:

- the need to correct *vertical imbalances* arising from a mismatch between the large expenditure responsibilities of subnational governments and the assignment of major taxes to the central government; and

- with the need to reduce *horizontal imbalances* (among regions) arising from uneven capacities of subnational governments to raise their own revenues. Horizontal imbalances may also arise because different regions face different costs and demand pressures in the areas of their responsibilities.

16.   A higher degree of decentralization tends to complicate achievement of distributional objectives, particularly if regional differences are large. Reducing the regional disparities becomes critical if a country strives to maintain adequate economic and social cohesion. In countries where large disparities exist, it is important that the central government retain sufficient resources to undertake some form of "equalization" transfers. Last, but not least, a system of transfers should be designed in a way that will not discourage subnational governments' own tax effort and their cost effectiveness.

17.   The most common way of topping up subnational governments' own revenue is through revenue-sharing arrangements. These arrangements can be structured in different ways:

- Some are designed to address vertical imbalances only; others address both vertical and horizontal imbalances.

- Distribution of shared revenues can be based on a derivation principle, or it can utilize formulas based on redistributive criteria.[9]

- Sharing can be done on a tax-by-tax basis, or on the entire pool of central government tax revenues.

18.   Distribution of shared revenues on a derivation principle means that each jurisdiction receives a part of the revenue in proportion to the amount collected on its territory. Such a system would do little to reduce regional disparities, as it would only reflect the existing taxing capacity of the regions. Per-capita income or other variables can introduce an element of redistribution into the revenue-sharing formula.

19.   Revenue sharing done on a tax-by-tax basis (with each tax having its own set of distribution coefficients) tends to be rather complex and may distort the central government's incentives in collection and enforcement. Thus it may be preferable to apply revenue sharing on the entire pool of government revenues. But even here, care needs to be taken to define tightly the

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[9] For example, in Germany, shared revenue from the VAT is apportioned on a per-capita basis, which entails a moderate degree of redistribution. In other countries, additional factors are included in calculating subnational governments' revenue share to ensure a higher degree of redistribution in favor of poorer regions.

revenues to be included.[10] A sharing arrangement for a single tax—the VAT, for example—might be a clean solution, assuming it is relatively stable, generates sufficient revenue and can be clearly delineated. Such an arrangement would be following successful examples of countries like Cameroon and Senegal.

20.   Revenue-sharing parameters can be codified in a law, or sometimes even in the Constitution. However, there is a trade-off between predictability (which is aided by a law that fixes the coefficients) and flexibility, which may be needed in some situations. For example, fixed coefficients may make the tax revenue pro-cyclical and force subnational governments to make pro-cyclical spending adjustments. For example, a tax revenue shortfall will lead to spending cuts if the government doesn't have other financing options.[11]

21.   In a number of countries, the revenue-sharing arrangements are monitored by specialized independent bodies. In some cases, these bodies are also tasked with determination of the sharing coefficients.[12] To make the revenue-sharing schemes credible, it is important to develop reliable, transparent and timely statistics.

22.   Allocation of national revenues in favor of subnational governments can be also effected via grants. There are three types of grants: general purpose (non-targeted) , specific purpose (targeted), and sectoral (block) grants.

- General purpose grants represent unconditional transfers of resources from the central government to subnational governments. They typically aim to address vertical and horizontal imbalances.

- Specific purpose grants come with conditionality—they are meant to be used for a specific purpose and therefore are not fungible. They can be recurrent and finance some type of current expenditures, or one-off, in which case they can finance investment projects. Their advantage, from the central government's point of view, is control over local governments' spending. The strings that are attached to these grants represent a drawback from the point of view of the beneficiary level of government. That is because they reduce the subnational government's room for maneuver and its power to choose. As such, they seem to go against the main (efficiency) argument in support of decentralization.

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[10] In Kenya the constitution envisages minimum transfers of 15 percent of "national revenues" to 47 counties. Today, the public debate has sprung about the 15 percent figure, as well as about the definition of "national revenues".

[11] For example, subnational governments may be prevented from borrowing. See below.

[12] In Ethiopia, it was initially the Ministry of Finance, now it's the second house of Parliament; in Kenya, a permanent commission that reports to Parliament; in India, a commission—in which the Ministry of Finance is represented—meets every five years to review the sharing formula.

- Sectoral grants fit somewhere between the two preceding types of grants. They are not narrowly specific, but they are destined for some broad area of expenditure (health, education, etc.).

23.   It is important that the system of intergovernmental grants be clearly defined. This facilitates planning and budget execution, as each level of government can better anticipate the amount and timing of these transfers. From this point of view, general purpose grants are superior to narrow-purpose grants, which are subject to uncertainty for both donor and recipient governments.

E.   Subnational Government Borrowing

24.   There is great diversity in the way in which countries control borrowing by subnational governments. These ways can be divided among four broad categories: (i) autonomy in borrowing decisions (countries rely on market discipline to provide the necessary incentive for restraint); (ii) cooperation between different levels of government in developing controls over borrowing; (iii) rules-based controls; and (iv) administrative controls.

- Examples of rules-based controls include the rule by which borrowing can only be for investment purposes (classical golden rule); or the amount of annual debt service cannot exceed a certain percentage of government own revenue. A particular rule is the one which prohibits borrowing by subnational governments altogether. For example, in Ethiopia, regions can only borrow for the treasury management purposes. Of course, where local government borrowing is prohibited, the central government needs to ensure that local governments have sufficient resources to carry out necessary investment.

- Administrative controls can include setting an annual ceiling for government borrowing. Often, this ceiling is set (approved) by the national legislature at the same time as the national budget. The central government can also exert control over borrowing by subnational governments by selective issuance of guarantees.

25.   For Mali, at least initially, borrowing by subnational governments should be forbidden. This arrangement could be revisited if (and when) these governments develop adequate debt management capacity. Administrative controls, involving, for example, approval of individual loan operations, would allow tight control over government borrowing. Nevertheless, such a regime might sit uncomfortably alongside the trend toward greater decentralization and autonomy. Thus some of the rules-based approaches could be explored. Linking borrowing decisions to the debt-servicing capacity of subnational jurisdictions may be an effective way of keeping overall debt within sustainable bounds.[13]

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[13] External borrowing should be subject to tighter controls as a rule, given its macroeconomic implications.

F. Macroeconomic Policy Coordination and Overall Policy Coherence

26.   Decentralization needs to be accompanied by the center's stronger capacity to coordinate the country's overall fiscal policy in order to safeguard macroeconomic stability. In Mali, which belongs to a monetary union and thus cannot use monetary and exchange policy for macroeconomic stabilization, national fiscal discipline becomes critical. This requires some degree of policy coordination between the central and subnational governments in the area of budgetary and borrowing policy.

27.   The center needs to develop a set of rules to guide spending and borrowing decisions of subnational governments, as well as policy levers to influence those decisions. At the same time, it is necessary to develop a monitoring capability to track the finances of lower levels of government.

G. Selected Practical Aspects of Decentralization

28.   Fiscal decentralization raises both policy and technical issues. Devolution of revenue mobilization and spending responsibilities will pose new challenges for tax administration and for public expenditure management. In Mali, prudence argues in favor of a gradual approach. The central government may need to continue maintain some measure of control over tax administration and most of the spending for some time. The speed of the transition to a more devolved model will depend on how fast the subnational governments develop their own systems and procedures, technology and human resources.

29.   To minimize the risk of disruption, tax administration could remain in the hands of the central government even for taxes that have been assigned to subnational governments in the process of decentralization. The advantages would include continuity, consistency of treatment of taxpayers across the country, lower compliance costs, and economies of scale. On the other hand, a decentralized administration would promote greater ownership (responsibility and accountability) in subnational governments for tax revenue performance.

30.   Transition is likely to involve incremental costs. It will be important that, once the transition phase is over, the overall cost of the provision of public goods and services remains comparable to the overall cost of the centralized system. That will require, among other things, a redeployment of personnel from the center to the regions—a process that will require long advanced planning.[14] Transfer of personnel is expected to be accompanied by a transfer of relevant assets (real estate, vehicles, equipment). That will require careful registration of this property as well as development by subnational governments of the capability to carry out necessary maintenance of

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[14] Affected personnel must be given a reasonably long notice, so that they can make alternative plans if they are not prepared to relocate.

these assets. Some practical questions that are likely to arise include the following (shown with possible indicative responses):

- How are government services to be shared between levels of government? The Malian law provides for the following services to be shared: education, health, water (rural and urban hydraulics) public transportation, road infrastructure, housing and urban development, sports and culture.

- Which government is responsible for human resource management? (In the sectors of health and education in particular). Given the Malian administrative architecture and the lack of capacity (outside the capital city, Bamako), the initial devolution of responsibilities should not go beyond the regional level. In the first stage of the reform, the responsibility for human resource management should remain central, or be indirectly monitored through earmarked transfers.

- How to coordinate policies in areas that are shared by two (or more) levels of government? The central government should be responsible for maintenance of national policy coherence and application of nation-wide uniform standards.

- Budgetary impact of decentralization should be neutral (reduction in the center and augmentation in subnational government levels). Who will assure that? (Kenya had an independent commission to steer the transition.) As in Rwanda and South Africa too, local jurisdictions should have reporting obligations of monthly and annual financial/ fiscal accounts. To enforce compliance, central government transfers should be conditional the credibility of the local budgets and local (fiscal) discipline.

H. In Conclusion

31.   Mali's project of fiscal decentralization is supported by economic and political considerations. At the same time, it is fraught with risks. This note identified a number of practical issues that need to be addressed to ensure that fiscal and macroeconomic stability are maintained. The reform entails a radical transformation of intergovernmental relations consisting of a number of interlocked steps. Policy coordination will be critical, and each step needs to be carefully prepared. Where feasible, a gradual approach is preferable—it will allow time for development of relevant policy and administrative capacity at subnational government levels, and for the central government to strengthen its monitoring capability and establish its policy coordination credentials.

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