Mozambique Situation Analysis

Fiscal space and financing scenarios in the context of the resource boom

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1 Introduction

This report provides a discussion of possibilities of fiscal space expansion related to the discovery of natural gas and the implications of this for future fiscal revenues. The analysis looks at fiscal developments and builds on recent macro-fiscal projections by the IMF to assess how much extra room is likely to be created until 2023, considering a number of alternative assumptions regarding future natural gas revenues.

The report starts with a brief discussion of concepts and debates around fiscal space, by emphasising the different ways of understanding and measuring fiscal space in competing approaches. Since the IMF fiscal projections will be used, in absence of alternative data for the period under consideration, implicitly the dominant notion of fiscal space (Heller definition) will guide the methodology for alternative fiscal space scenarios related to LNG revenues.

The report then presents a simple methodology for the presentation of different scenarios and the consideration of key fiscal indicators. This is followed by a more detailed analysis of the potential sources of fiscal space and their projected evolution until 2023. Based on these expectations a summary of projections and different estimates of fiscal space will be provided and compared in real terms with the results of the costing exercise undertaken by…

The report then moves onto a critical reflection of the political economy of the use of fiscal space and the trade-offs between competing uses, which will be largely politically determined.

The main argument of this report, following most recent updates on fiscal projections and LNG revenue forecast, is that up until 2023 the potential additional fiscal space will be positive but limited terms relative to non-resource GDP. This is partly because LNG revenues are expected to be delayed from original plans but also because of the special situation in 2013 and 2014 when expenditures, domestic revenues and deficit rose very significantly. Comparing 2013 with 2023 therefore means that estimates of additional fiscal space as a proportion of non-resource GDP will be limited. However, given assumptions of strong growth in current projections of non-resource GDP, the potential fiscal space in *absolute* terms is considerable and therefore the scope for expanding the volume of expenditures in priority sectors is important, particularly towards the end of the period under consideration.

2 Methodology and key conceptual issues

2.1 Key conceptual issues on fiscal space

This section introduces the notion of fiscal space and a contrast between conventional and alternative approaches and definitions of fiscal space, following Roy and Heuty (2009). This brief analytical discussion is followed by a description of the methodology for the estimation of fiscal space scenarios in relation to LNG revenue projections.

To frame our research questions on the impact of expected mineral rents on fiscal space and the capacity to meet the fiscal needs estimated in component 2 we need a solid definition of fiscal space. The challenge is that the concept of fiscal space, although intuitively straightforward, is rather fluid in terms of its measurement. Heller (2005) considers it a 'fuzzy concept'. There are two main alternatives available:

a. Heller's definition (Heller 2005), which usually prevails in most analysis of projected fiscal space (especially IMF projections): 'fiscal space can be defined as the availability of budgetary room that allows a government to provide resources for a desired purpose without any prejudice to the sustainability of a government's financial position'. This approach is linked to the inter-temporal budget constraint, i.e. fiscal space is essentially seen in residual terms (as 'room' or gap) and mostly focused on short-and medium-term consequences, especially in terms of fiscal and macroeconomic stability and debt sustainability. More precisely, the concept of fiscal sustainability 'relates to the capacity of a government, at least in the future, to finance its desired expenditure programs, to service any debt obligations (including those that may arise if the created fiscal space arises from government borrowing), and to ensure its solvency' (Heller 2005, 3).

b. Roy and Heuty (2009) define fiscal space as ' concrete policy actions for enhancing domestic resource mobilization, and the reforms necessary to secure the enabling governance, institutional and economic environment for these policy options to be effective'. Though rather vague in its formulation, this is a definition that (a) is more consistent with a long-term outlook; (b) incorporates more macroeconomic relations into the picture and (c) is more pragmatic in terms of integrating an analysis of feasible policy options in light of the existing political settlement in the country. The mobilization of fiscal space must be in a sustainable manner and this depends on the political economy context.

These two approaches differ structurally. Indeed, the IMF approach is prudent and residual in the sense that it identifies fiscal space as an extra 'room' created by revenues or better allocation of expenditures which does not compromise solvency, considering a reasonable 'fiscal anchor'; the second approach on the other hand argues that fiscal space can be created even when additional revenues have not been generated yet and that fiscal space must be analysed in relation to two factors:

- the pattern of accumulation and political economy of growth in the country and
- the expected use of fiscal space (extra public investment) and its *crowding-in* effect on private investment, which can bring social returns in the long-term. In this regard, the notion of fiscal space is directly related to the dynamics of fiscal expansions, which we consider below.

According to the second approach, fiscal space calculation should consider the occurrence and consolidation of fiscal expansions[1] driven by expenditure boosts (Rodriguez, 2009). Indeed, whether any increase in public expenditure is sustainable or not in the long run should depend on the uses to which the additional expenditure is put. A long-term perspective would then be necessary and a consideration of the dynamic relationship between fiscal expansions, economic growth and the social returns to public investment. Thus, as suggested by Rodriguez (2009), the key choice for a government is whether to increase, or not, spending, rather than to achieve a particular fiscal deficit target, which depends on uncertain revenues.

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[1] Note that fiscal expansion is understood as an increase of more than 10% in real per capita expenditures and am increase of 5% in G/GDP.

Two issues should be kept in mind for the analysis and interpretations of projections, trends and so on, even if we opt for a simple IMF-type definition of fiscal space:

- What are the feasible policy options (to expand fiscal space in a sustainable way and to use it)?
- What is the political and economic environment and how can it create positive/negative spillovers and risks/opportunities?

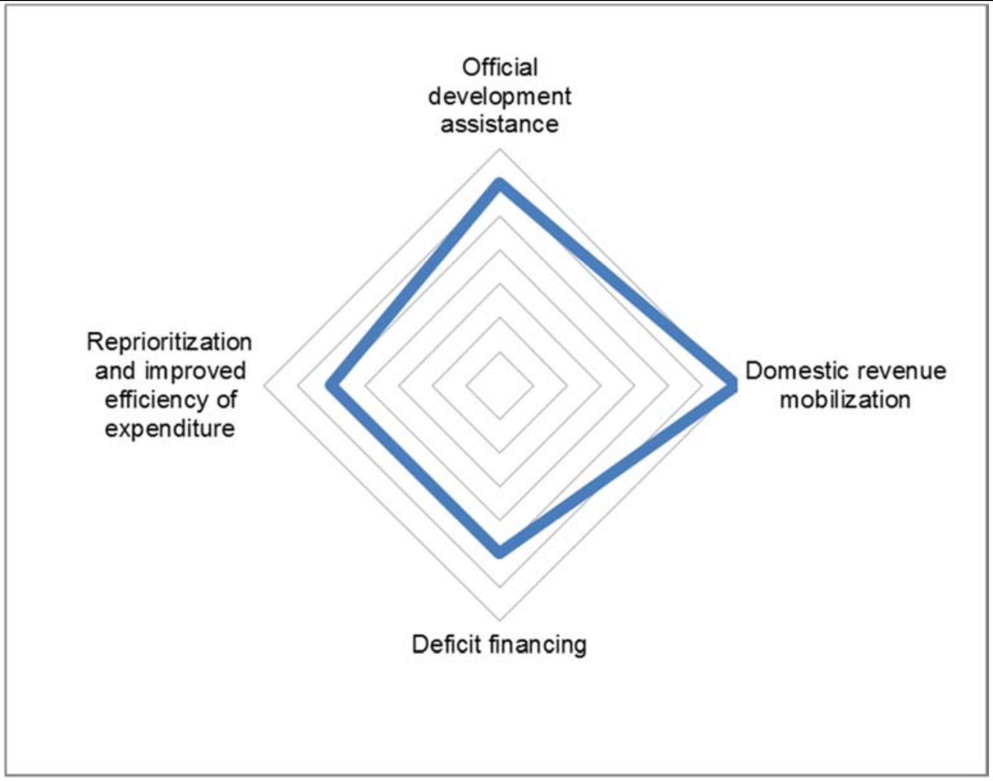
One of the key insights from the various contributions in the book *Fiscal Space* is that debates on fiscal space are not simply technical. The political dimension is critical. In this respect, it is central to address the question of fiscal space for what? This depends on the regime of accumulation in the country, the configuration of different economic and political forces that lead to a particular direction in terms of priorities and where the additional resources go. In this regard the kind of work undertaken by Castel-Branco (2010, 2011 and 2013) and IESE's researchers (see, for example de Brito et al. 2013) is highly informative. See section 4 in this report.

Finally, a useful descriptive tool is the fiscal space diamond, which will help us structure the analysis of fiscal space in Mozambique into the four key sources/components of additional fiscal space, although our calculations will only focus on three of these components, namely ODA, domestic revenues and deficit financing (see Box 1 below).

Box 1: Fiscal space diamond (Roy & Heuty, 2007)

Governments can create fiscal space through the following types of fiscal instruments

1) Official Development Assistance (ODA) through aid and debt relief
2) Domestic revenue mobilization through improved tax administration or tax policy reforms
3) Deficit financing through domestic and external borrowing
4) Reprioritization and raising efficiency of expenditures


Official development assistance
Domestic revenue mobilization
Deficit financing
Reprioritization and improved efficiency of expenditure

The diamond is constructed by (a) mapping the four pillars, one on each axis, with the total resources available under each head representing a point on the axis; (b) joining the points.

There are a number of key messages and lessons emerging from this brief discussion of analytical issues around fiscal space:

1. There is no one single definition of fiscal space, but generally a static rather cautious one dominates.
2. Different definitions of fiscal space have different implications in terms of conditions for fiscal space creation and generally for fiscal expansions
3. The institutional and political economy environment are critical to examine fiscal space potential in future scenarios but political and institutional development are intrinsically hard to predict with any precision.
4. A fiscal diamond is a useful tool to decompose the different sources of fiscal space and therefore distinguish between different types of fiscal space creation, whether endogenous or exogenous and whether more or less fiscally sustainable.

The empirical analysis presented in the rest of this chapter will partly build on some of these insights, in terms of the organization of the evidence for fiscal space and of the interpretation of potential scenarios and the different assumptions underlying these scenarios. The definition for the timeframe in the case of this study is 2014-2023, which will include the initial period of gas export revenue generation (roughly flowing from 2020).

2.2 Methodology for simple fiscal scenarios in light of future LNG revenues: main sources of evidence

This report is essentially based on a combination of secondary sources and direct interviews with a selection of key informants. First, a literature review of issues around fiscal space, its definitions and approaches was undertaken to analytically frame the problem and guide the analysis of fiscal and economic data. The primary objective of this part of the literature review was to gain clarity on the concept of fiscal space and highlight important challenges in its definition and measurement. This is important as the existence of at least two different approaches to fiscal space may have implications for the interpretation of the results of the analysis in this report. Second, part of the literature review also addressed the context of Mozambique with a special focus on the recent developments that have shaped a pattern of growth increasingly dominated by a combination of mega-projects and the emergence of extractive industries, which may have implications for future fiscal space scenarios and especially for the use of fiscal space. Third, the report analyses existing macroeconomic and fiscal data, both historical and current projections, to explore the potential expansion of fiscal space under different scenarios. The report recognises the significant number of uncertainties that surround any attempt to predict fiscal space for the period 2014-2023. Therefore the discussion of projections will be focused on these uncertainties. The unknowns apply to different potential components of fiscal space. Thus the report will be organised around these different components of fiscal space, but special attention will be given to the tax mobilisation component which is object of primary interest in this analysis, given the potential role of mineral revenues for fiscal policy in the near future. Fourth, a number of qualitative interviews with key informants (experts, aid agency representatives and government officials – see attached list) were conducted to provide more background and different assessments of the main themes in this report, namely: projections of fiscal space and potential impact of future mineral revenues; the role of the IMF in the calculations of these projections; taxation issues and especially taxation of mega-projects and mineral extraction; the use of fiscal space and the trade-off between economic and social infrastructures; the future dynamics of aid flows and its relationship with the rise of mineral revenues; broader issues on the political economy of growth and fiscal policy in Mozambique. These interviews were very useful in terms of ascertaining the main uncertainties affecting forecasting of future of fiscal space as well as in terms of providing the necessary background to understand developments in the emerging mineral extractive sector and their implications for economic and social outcomes in the future. Moreover, additional valuable feedback was provided on the main draft of this report, which was presented to various stakeholders in March 2014. The comments, criticisms and suggestions were very useful and confirmed the uncertainty faced in these projections and the different options available.

It is important to note that this study has not developed its own model of fiscal projections and fiscal space. This is a major constraint, especially since it means that the scenarios and projections are tied to existing projections provided by the IMF. Therefore, the simple scenarios projected here follow the IMF approach and Heller’s definition rather than alternative approaches, which might be more relevant for a deeper consideration of long-term scenarios but are not feasible given data constraints.

The exercise builds on the core projections developed by the IMF through its DINAR for LNG revenues (Melina and Xiong 2013 and IMF 2013b). As Melina and Xiong (2013, p. 9) explain: the "Debt, Investment, Growth and Natural Resources" (DIGNAR) model is designed to analyze the public investment and growth nexus together with debt sustainability and natural resource revenue management in developing countries'. These projections have been used by different studies about the future impact of mineral revenues on fiscal and social policies. **Our own calculations are then based on the latest projections for fiscal indicators and other macroeconomic aggregates included in IMF (2014).**[2] This procedure has advantages and disadvantages. The obvious *advantage* is that there is no need to replicate a complex dynamic general equilibrium model that is extremely data-intensive. This would have been anyway impossible since the data and model were not made available. Therefore the key aggregates derived from IMF projections can be used to explore alternative scenarios that can inform a discussion of fiscal space issues. They also clearly allow to see the temporary fiscal space constraints (fiscal gaps, in fact) likely to occur before LNG revenues start to flow if a conservative fiscal deficit benchmark is considered (2-4% of GDP) (see IMF 2013b, Milena and Xiong 2013 and Segura 2013). The main *disadvantage* is not controlling and not being able to replicate and adapt the IMF model, so that alternative assumptions for several other key parameters in the main behavioural equations can be considered in the estimation of projections. For example, we cannot assess alternative scenarios in the relationship between fiscal policy and economic growth, different hypotheses about the relative 'crowding-in' effect of public investment on private investment, and different hypotheses about the behavioural parameters of key macroeconomic aggregates. In other words, **this empirical exercise is fundamentally tied to the assumptions and parameters of the IMF model for fiscal projections**. We are certainly not alone in this. As corroborated by the interviews conducted with various stakeholders, all studies of fiscal space (eg. ILO 2013) essentially follow the projections provided by the IMF. In addition, the government's fiscal map is also tied to IMF projections on key macroeconomic parameters, as suggested in several interviews.

The key linkages between fiscal policy and broader sector-level and macroeconomic variables cannot unfortunately be explored in depth because of lack of access to the model and its data. Equally it is not possible to assess the assumptions and parameters of the model related to the long-term impact of different scenarios of public investment (in terms of its composition) on economic outcomes (growth at sector level, private investment, employment, etc.). These assumptions are crucial for estimates of fiscal space, since fiscal policy can have different impacts on the economy depending on the type of public investment and the links between government expenditures and sector-level and aggregate performance (growth, productivity, diversification, employment creation, real wages, etc.). These different effects and a wider range of assumptions about different growth paths could also substantially affect the results of this basic exercise. In fact GDP growth projections are quite crude and assume path dependency, whereas wider fluctuations may be quite possible in the period analysed. An analysis of future tax revenues accruing from the non-extractive sector requires information about these parameters and complex dynamic modelling techniques that are outside the scope of this study. Nonetheless, the report will flag, at least at a hypothetical and theoretical level, the implications for fiscal space of different possible trajectories in the pattern of economic growth, investment and fiscal policy until 2023.

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[2] At the time of revisions in March 2014, the IMF provided some additional updates but these were at to aggregate a level of presentation (revenues and grants together, for example) and not relative to non-resource GDP. At the time of revisions the IMF was still re-estimating the various components of the main aggregates for a new round of fiscal projections which will be available probably after this final report is released.

2.3 Methodology and assumptions in projections of fiscal space

For the calculation of the creation of *potential fiscal space* we followed a simple method based on existing projections developed by the IMF in different reports (mainly IMF 2014 and Melina and Xiong 2013), combined with actual data (not projections) from the *Mapa Fiscal*, offered by the DNO-Ministry of Finance - see appendix 1 for more details -. According to the IMF, government expenditures are projected to decline in relation to 2013-14, when an unusual increase in expenditures, following a one-off windfall capital gains tax in 2013, put total expenditure at 40% of GDP, well above the 29% recorded in 2009. From this situation the IMF expects a decline in public investment from the peak of 15% expected in 2014 to less than 11% in 2018. The implication for fiscal deficit after grants is that the fiscal deficit is expected to shoot up in 2014 and then only gradually decline into 2018 and beyond.

IMF core projections for disaggregated revenues and expenditures only run until 2018. Between 2018 and 2023 we used a number of simplifying assumptions to complete the ‘base’ scenario (see below and appendix). From Melina and Xiong (2013) we extracted the estimates for LNG revenues as proportions of GDP, which were added to domestic revenues during that period. In our calculations we consider three different scenarios for LNG revenues:

1. **Base ‘optimistic’ scenario from IMF projections**, which assumes the start in production in 2020 and LNG revenues flowing slowly at first and accelerating from 2023 onwards.
2. **A more conservative scenario, which considers only 50% of the LNG revenues projected in the first scenario**. This could be due to lower international prices or more limited than expected production.
3. **A very pessimistic scenario in which there are no LNG revenues during the period under consideration (2014-23)** either because of a substantial delay in operations or because of collapse in LNG deals.

The projections presented in section 4 are based on the following assumptions, considerations and sources and always presented as % of GDP for consistency purposes and clarity (more details in appendix 1):

1. **For domestic revenues we use IMF (2014) projections until 2018, Melina and Xhiong (2013) for LNG revenues flowing from 2020 and some simple rules to extrapolate from 2018 to 2023 for other tax and non-tax revenues** (see appendix 1).
2. **For government expenditures we use IMF (2014) projections until 2018, then kept constant as % of GDP between 2019 and 2023**.
3. **External grants are also based on a combination of DNO data until 2012 and IMF (2014) until 2018**. From 2019 until 2013, we assume smaller gradual reductions in different components of external grants, consistent with the overall IMF forecast on the steady decline of external grants to Mozambique from 2012 onwards (IMF 2013b).
4. The fiscal deficit after grants is then calculated on the basis for the projections above and compared with a series of ‘deficit benchmarks’ which allow us to ‘close’ the

calculations by imposing a prudent level for fiscal deficit, that varies in connection with trends in external grants (assuming a substitution effect between external grants and external loans from 2014 onwards) and the arrival of LNG revenues.

5. These fiscal deficit benchmarks, which can be seen as ‘fiscal anchors’ for calculations of potential fiscal space and resource envelopes, range between 2% and 4% of GDP and are most likely to be consistent with debt sustainability following historical record in the past 5 years and debt sustainability analysis by the IMF (Melina and Xiong 2013). We also consider an alternative, less conservative, fiscal benchmark scenario of 5.5% of GDP, which is closer to actual fiscal deficits in recent years and is also considered fiscally sustainable in light of discussions had in Maputo during the presentation of a draft of this report. The consideration of these different fiscal benchmarks allows for a wider range of fiscal space scenarios. However, these ‘fiscal anchors’ are only approximate indications that help us understand the implications of different resource scenarios given projections for domestic revenues, external grants and expenditures. The idea of a ‘fiscal anchor’ is consistent with the IMF approach to the measurement of fiscal space. Following Heller et al (2006), ‘underlying any operational approach to the management of fiscal policy is the choice of a credible fiscal anchor. This method produces estimates of additional (or reduced) fiscal space per year, showing in particular the relative impact of LNG revenues between 2020 and 2022. The assumption is that these benchmark fiscal deficits would be covered by **sovereign debt,** i.e. external and domestic borrowing, which will always remain, as argued in this report, an important source of fiscal space over the period analysed.
6. **We do not consider fiscal space generated by reallocation of expenditures and efficiency gains**. We do not have sufficient information about these potential gains and it would be difficult to suggest reasonable estimates in the absence of consistent data for the period considered. This is however discussed in section 4 and some possible opportunities for fiscal space generated through reprioritization will be briefly discussed. Several readers of previous drafts of this report certainly emphasised the importance of efficiency savings as a way of carving up fiscal space particularly when tax revenues do not increase so fast.

For the purposes of presentation of results in section 4 we will consider two different ideas or manifestations of ‘fiscal space’:

1. **Fiscal space as ‘cushion’ or ‘budgetary room’** that is created ‘without any prejudice to the sustainability of a government’s financial position’ (Heller 2005). This is calculated by comparing the actual or predicted fiscal deficit after grants with the ‘fiscal deficit benchmark (which ranges between 2% and 4% depending on the year for a conservative scenario, and 5.5% for a less stringent scenario). If the actual or predicted fiscal deficit is lower than the ‘prudent’ benchmark then we have *positive* fiscal space, i.e. room for further expenditure increases in that given year. If the actual/predicted deficit exceeds the benchmark we would be in a situation where there is no extra room and the excess deficit may not be sustainable.
2. **Fiscal space simply as ‘potential resource envelope’** including the fiscal benchmarks mentioned above. This is obtained by adding domestic revenues, external grants and the fiscal deficit benchmark. The latter would thus be a proxy for prudent external and domestic borrowing, i.e. deficit financing as one of the components of

fiscal space. By comparing the different resource envelopes in different years we can thus have an estimate of additional fiscal space and its main components.

Obviously **the results obtain depend largely on the accuracy of IMF projections and our extrapolations and on what we can consider an acceptable or fiscally sustainable deficit**. Indeed that fiscal benchmark' can be altered to allow for more room for expenditures. Since expenditures are endogenous to these benchmarks insofar as expenditure ceilings can be imposed to maintain reasonable levels of deficit, there is a wide range of possibilities in the potential results but we only consider few alterations to make interpretation of scenarios as straightforward as possible.

It is also important to note that all the results are shown as % of GDP so fiscal space and resource envelope calculations are presented in *relative* terms. The estimates in relative terms always involve some kind of comparison, either to what is fiscally sustainable any given year or to relative fiscal effort and potential between two different years. Given that GDP growth is expected to be rapid during the period under consideration - hovering around 8% for the whole period, excluding LNG-related investments and revenues-, even when there is no or little addition to fiscal space in *relative* terms there may be a significant expansion in absolute terms. In other words, GDP growth alone and its trickling down into fiscal revenues and deficit financing, can create substantial space for expenditure increases as will be shown in section 4.

2.4 Main limitations of this study

Some conceptual and statistical limitations have already been introduced but it is worth listing the most important ones below so that the reader understands the uncertainties surrounding any consideration of fiscal space in Mozambique:

- As noted above, the reliance on secondary sources, particularly other existing reports published recently since 2012.

- In particular, reliance on IMF projections and therefore implicit acceptance of their core assumptions and calibration of fiscal projections for the period under consideration. Any alternative projection of expenditures and revenues would have to be justified on the basis of an alternative model or an alternative calibration of an existing model, but this resource was not available and the task was not part of the TOR.

- Lack of access to raw data beyond the *Mapa Fiscal* (running until 2016), obtained from DNO; this constraint, for example, entailed the need to translate graphical representations into actual numbers from IMF reports given refusal to share model or actual raw macroeconomic information on LNG revenues and their components.

- Lack of sufficient raw data and documentation on the expected decline in foreign aid, particularly grants, which greatly affects calculations of fiscal space.

- The frequency of changes in projections and updates on recent fiscal developments making the calculation of alternative scenarios difficult.[3] This was due to the normal uncertainties concerning some macroeconomic aggregates and fiscal indicators and also as a result of unanticipated events affecting fiscal policy (the debt emission to partly finance an investment in tuna fishing and patrol boats) or changes in outlook for future mineral revenues.

- Discrepancies between sources in relation to mineral revenue resources and impact of mineral extraction on GDP projections. Therefore GDP projections may carry a significant degree of uncertainty, making indicators in % of GDP also rather uncertain.

3 Mozambique's resource-driven economic growth

This section offers a brief overview of the political economy of growth in Mozambique since the 2000s, highlighting the main opportunities and risks and especially the extent to which diversification and inter-sector linkages have not been addressed.

The Mozambican economy is being transformed from an agriculture-based and aid-driven economy into a resource extractive economy. Mozambique displays contradictory outcomes combining positive ones like fast economic growth, substantial increases in FDI, low and stable inflation, sound macroeconomic management and slight improvement in the trade balance, with negative ones, in the form of sluggish food production per capita and inflation in food prices, no improvements in nutritional status indicators, inconsistent poverty-reduction trends and capital flight. In this respect, over the years a pattern has settled consisting of a the dual strategy of maximising FDI in resource extraction, in which the political elite has important interests, and maximising ODA to maintain improvements in social infrastructure and buy political stability (Hanlon and De Renzio 2009; Castel-Branco, 2010).

There are two types of narratives that have provided different interpretations of the trajectory of the Mozambican economy over the past 15 years. The first narrative usually presents a success story of sustained economic growth and improvements in social infrastructure and social indicators (Nucifora and Pereira Da Silva 2011). The second narrative, while recognizing some of the positive outcomes of the growth acceleration, emphasizes and focuses on the contradictions and dysfunctional features of the pattern of growth, which are transforming Mozambique into an extractive economy with a disappointing in poverty reduction and economic diversification (Castel-Branco 2013). A discussion of fiscal space in this context therefore requires a basic understanding of these two narratives in order to analyse the real prospects for fiscal expansions, and the missed opportunities, as well as to tackle the question of the use of potential fiscal space.

The optimistic narrative focuses on the **record in terms of economic growth**. For the period 1993-2009, Mozambique was the fastest growing non-oil economy in Africa (Nucifora and Pereira da Silva 2011). As Figure 1 shows, growth rates were remarkably consistent throughout the period with a couple of drops in 1995 and 2000 (year of the famous floods) and otherwise always above 6% in real terms. On the social front, and as documented in this Situation Analysis (component 1) and Nucifora and Pereira Da Silva (2011), **much progress**

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[3] As this report is being revised the IMF is already working on new corrected projections for the next few years.

has been achieved quite rapidly in a number of areas, notably child survival, access to health services for children, school enrolments, access to water and sanitation and rise in life expectancy.

The 'miracle' narrative can be contrasted to a less optimistic assessment of performance in the past 15-20 years. The less optimistic literature first emphasises the relatively **low elasticity of poverty reduction to growth**, something that is not unique to Mozambique. Martins (2012: 4) analyses evidence of countries in Africa that have achieved good growth but have not performed well in terms of poverty reduction and mentions specifically Mozambique: '…while Mozambique and Tanzania experienced high average growth rates – at around 7 per cent per year – their poverty trends were very disappointing'. The poverty elasticity of growth in many African countries compares unfavourably with the experience of successful Asian economies as well as countries like Brazil, where even without very impressive economic growth rates in the 1990s and 2000s, there was a remarkable reduction of poverty, driven by direct pro-poor state interventions.

Moreover, progress in social indicators is mixed, as discussed in the Situation Analysis (component 1) with **some areas of substantial concern: lack of progress on maternal mortality; little change in child undernutrition and malnutrition indicators; stalling of progress in education and concerns over the quality of learning at different levels; substantial rural-urban and regional disparities in social outcomes**. This evidence throws a mixed picture on one of the allegedly strongest areas in Mozambique's performance since the 1990s. It is also somewhat concerning given that fiscal space has substantially increased since the 1990s as a result of sustained flows of aid and increasing domestic tax mobilisation.

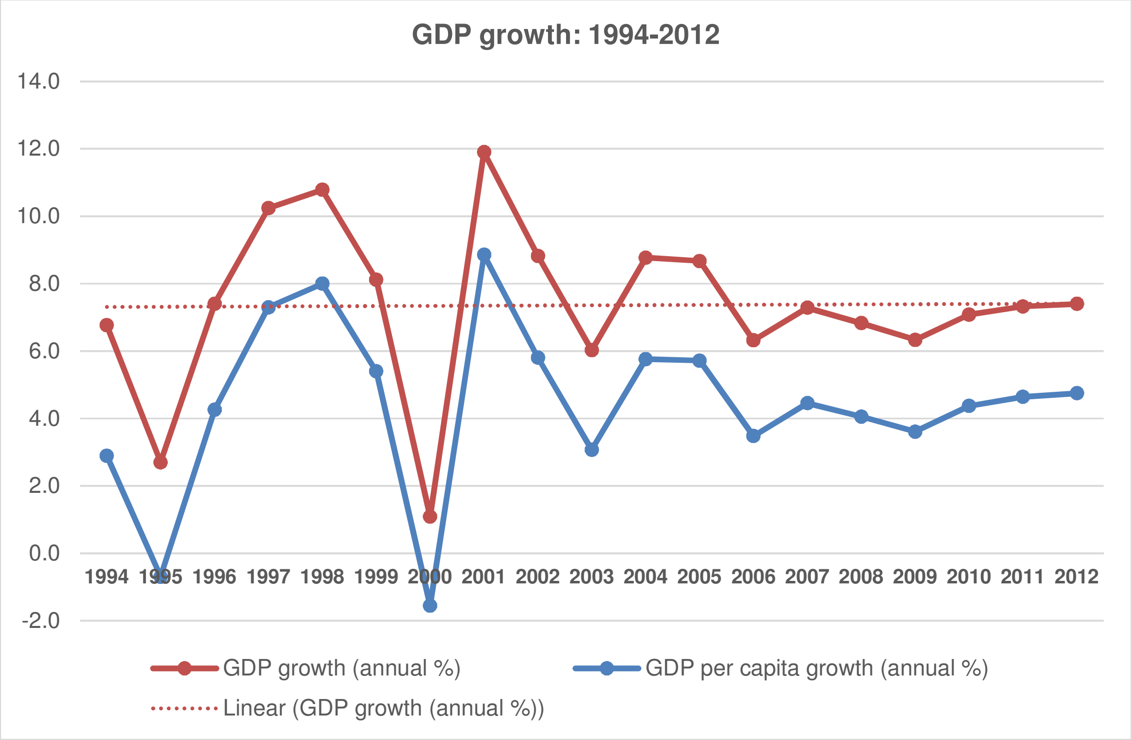
There are also concerns about the sustainability of the current pattern of growth and accumulation in the long-term. A critical aspect of the growth and accumulation pattern especially in the last 15 years is a dynamic of structural change that has **deepened commodity dependence rather than fostered diversification towards labour-intensive sectors**. This can partly explain the relatively disappointing performance in terms of poverty reduction. Castel-Branco (2010 and 2013) argues that Mozambique's growth trajectory has in fact deepened a resource- and rent-driven model of accumulation, centred on the extraction of minerals and natural resources that makes an inconsistent impact on poverty, little effect on employment and an unsustainable path that can be reversed if there is a change of trends in commodity markets. This can give rise to a 'dualistic' character of the Mozambican economy and society reflected in a contrast between the fast-changing composition of output and exports, on the one hand, and the negligible changes in employment composition, where agriculture and informal services continue to dominate and industry employs a tiny segment of the labour force, on the other hand. Moreover, in agriculture some sub-sectors thrive (e.g. tobacco production) but food production remains sluggish (Cunguara et al 2012). Urbanization has also been very uneven and despite fast GDP growth rates and the rise of new activities, much of the Mozambican population remains rural and living very far from a near town.

Of particular concern are the weak production and service linkages between the fast expanding extractive industries and the rest of the economy. This leaves the government with the fundamental task of distributing the rents generated from mega-projects and extractive sectors into other more labour-intensive sectors and into the strengthening of social infrastructure. However, the record on existing mega-projects is so far not encouraging given how limited the extraction of fiscal revenues has been so far (Castel-Branco 2013; Kuegler

2009; Fjelstad and Heggstad 2011). Despite these weak linkages, growth projections for the non-resource sector, as extracted from different IMF reports, remain strong. It is plausible that as the Mozambican economy grows, there will be some shared growth across sectors, including agriculture and services but not at the rates experienced by the mineral extractive sectors, which are likely to greatly exceed the growth rates considered in this report. GDP growth rates in the range of 7-8% for the non-resource sector will obviously require a consistent performance in the agricultural sector as well as continuous growth in key service sectors (trade, tourism, finance and telecommunications). While the former assumption is uncertain, given the uncertainty surrounding smallholder agriculture production it is reasonable to expect a consistent performance from service sectors during the period under consideration.

Overall, the contrast between the above-mentioned narratives can be organised around some key themes. One is investment patterns and capital accumulation. For a poor country like Mozambique coming out of a protracted conflict after substantial devastation of its economic base, high investment rates would be expected, especially in the initial stages. What are high investment rates? Generally anything between 20 and 30% of GDP would be necessary for rapid capital accumulation from a low base but there are countries like China which clearly exceed this benchmark. Anything below 20% would be alarming in a country with the investment needs like Mozambique. However, given the paucity of private investment until recently, much is left for public investment to cover, while the IMF warns against excessive increases in public investment beyond 10% of GDP (Melina and Xiong 2013; IMF 2013b).

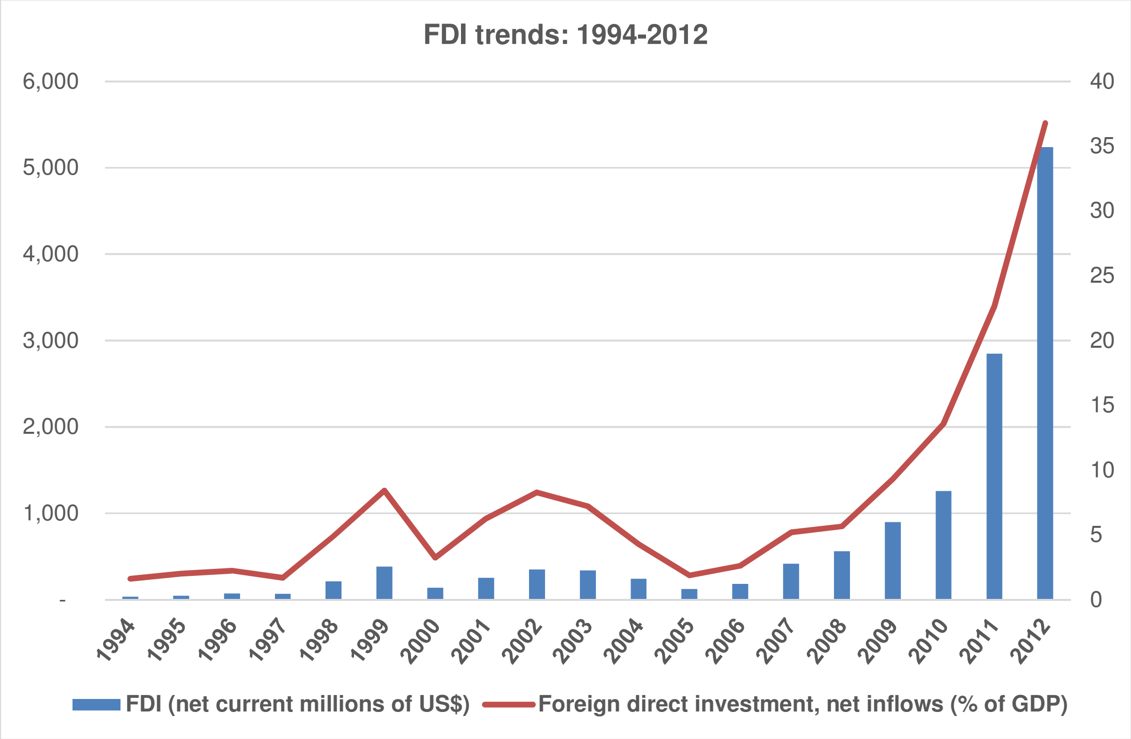
Figure 1. GDP growth record in Mozambique: 1994-2012



Source: Own elaboration from WDI data.

The huge surge in FDI in 2011 and 2012 reflects the impact of new investments in resource extraction, particularly exploration activity in the Rovuma Basin in Cabo Delgado province which gained momentum since 2010, with international energy firms importing specialised equipment and expert services. Therefore, at least in accounting terms, the surge in FDI was equivalent to a huge surge in imports and a widening of the current account deficit, largely financed by FDI. Overall investment figures in recent years are thus completely biased by the magnitude of few major investments in the exploration and extraction of mineral resources.

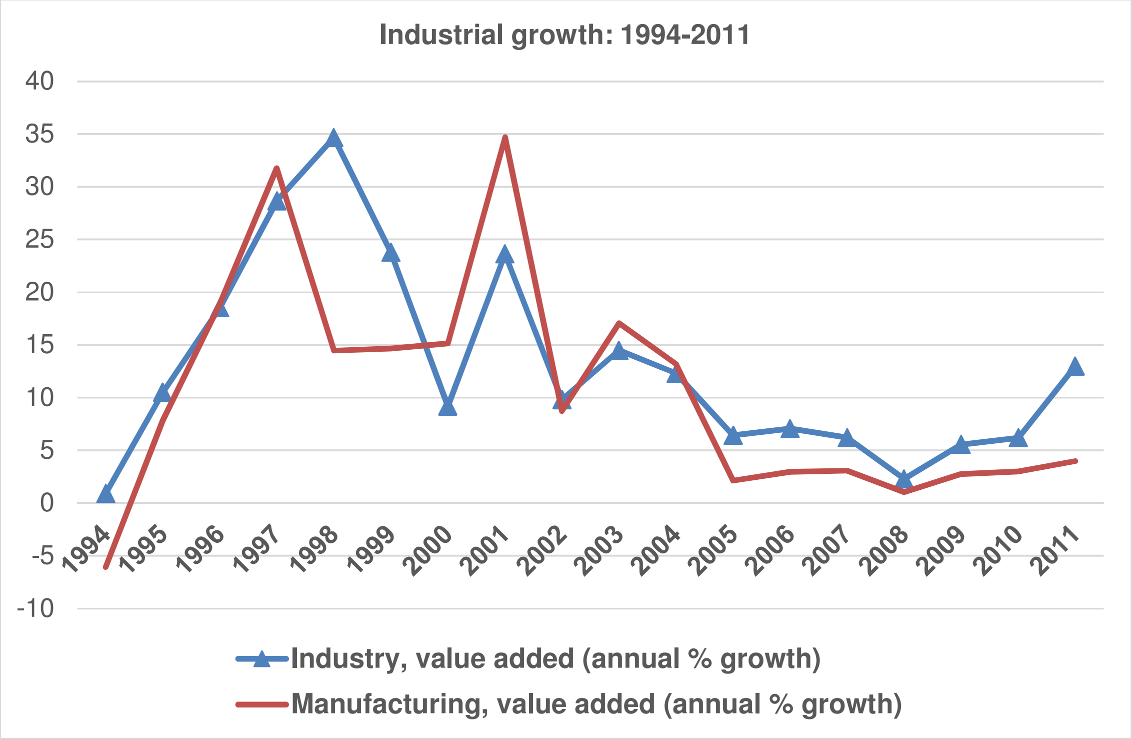
Figure 2. Foreign Direct Investment trends



Source: Own elaboration from WDI data.

Another issue is *structural change*, economic diversification and industrialization. Although these have not been explicit primary objectives of the government in a series of medium-term plans, like the PRSPs (PARPA and PARP between 2001 and 2009), aggregate evidence suggests that there has been substantial growth in industrial activities. Figure 2 below shows that industrial and manufacturing growth generally go together. There is however a problem with the statistical conventions with regards to industrial classifications. In reality much of the growth recorded in official statistics derives from very few entreprises and notably driven by one of the leading mega-projects in the country, i.e. Mozal, which dominates the 'manufacturing' sub-sector, as aluminium smelting is classified as a manufacturing activity. However, we know this is not a labour intensive manufacturing sector, and not one with significant linkages with the rest of the economy, in other words, more akin to extractive industry standards (low employment and weak linkages). After the initial surge in the late 1990s and early 2000s, industrial growth led by mega-projects like Mozal has in fact petered out.

Figure 3. Structural change and industrialization



Source: Own elaboration from WDI data.

Castel-Branco (2013), in one of his recent contributions on the state of the Mozambican economy and the main drivers of its pattern of accumulation, highlights four main characteristics:

1. **The economy is outward oriented** in the sense that external dynamics (regionally and globally) exert substantial influence on the pace and composition of growth via FDI and commodity markets, affecting not only mineral extraction sectors but also partly agriculture, tourism and fisheries, and also manifested in the nature of infrastructure investments accorded priority (transport corridors to facilitate natural resource extraction at lower costs), and the incentives for the financial sector and domestic firms to accommodate the needs and priorities of the extractive sectors and mega-projects.
2. **Primary commodity dependence**, increasingly dominated by mineral extraction, with very limited scope for beneficiation and economic diversification, partly due to the weak linkages with the rest of the economy and the meagre job creation.
3. **The extractive pattern of accumulation also comes together with excessive 'porosity' in the sense that capital leakages abound** through profit repatriation, weak re-investment, privatization of rents, limited taxation (more below), capital flight, with the implication that a significant part of the rents and benefits derived from natural resources simply leaves the Mozambican economy through different mechanisms.
4. **Latent macroeconomic instability**, as primary commodity dependence, especially in minerals facing future market uncertainties in a context of substantial commodity price volatility, exacerbates the economy's vulnerability vis-à-vis external shocks and also

reinforces import dependence in several sectors. This vulnerability can also be translated into public finance instability as fiscal deficits may worsen with a rise in expenditures associated with the needs to provide much needed infrastructure for mega-projects and associated business at the same time as revenues do not increase sufficiently fast. This potential instability and the possible effects on inflation, especially for basic staples, together with weak job creation in a model lacking economic diversification, can potentially result in greater risk of social unrest.

These potentially damaging features are important to bear in mind in a discussion of future fiscal space creation, since the patterns and trends briefly presented above have implications for (a) the potential *magnitude* of future fiscal space, especially in terms of possible factors constraining fiscal expansions (growing fiscal deficit, slower than expected fiscal revenue growth, slower than expected non-resource GDP growth); and (b) the most likely use of any new fiscal space created, and whether its use will be in the direction of attenuating or exacerbating the problems highlighted above.

4 Fiscal space estimates and drivers/determinants

4.1 Main uncertainties

This section discusses the various calculations for fiscal space projections, given the assumptions and methods used, as described in sections 2.2 and 2.3. The section also provides a general qualitative overview of the four main determinants of fiscal space, one by one, and links them to existing macroeconomic and fiscal space projections in terms of their realism and implications.

Any estimation of fiscal space over the next 10 years can only be presented as a discussion of uncertainties and potential scenarios. **The unknowns particularly affect the two key components of the resource envelope for the Mozambican government: natural resource revenues and foreign aid.** This section will discuss the existing projections under different scenarios and will present the main sources of uncertainties.

On the resource revenue side, and especially LNG projections, there are four different sources of uncertainty:

1. The volume of LNG that will be effectively produced;
2. The prices of LNG in export markets;
3. The costs of the required investments realize the LNG production potential;
4. The fiscal regime for LNG production and therefore the government take from LNG extraction.

The IMF (2013b) notes that under the baseline scenario and on the basis of information that remains fluid, considering the various revisions in projections since 2012, 'resource revenues could average 11 percent of GDP over the next two decades and then gradually decline. Should the revenues become very large as a share of total revenues and sustained over a long period of time (more than 35 years), fiscal space could increase markedly and managing volatility and avoiding absorptive capacity constraints would become the main challenge.' (p. 15).

There may also be uncertainties over the effects of resource-driven growth on other sectors of the economy. If public investment does not promote economic diversification, the scope for further expansion in non-resource taxation will be limited and opportunities to further expand fiscal space may be missed. Therefore, both the level and the composition of public investment will be essential to determine the course of the Mozambican economy and the linkages (or not) between the extractive industries and the non-resource sectors. However, as noted in section 2.2, these considerations could not be quantified.

On the ODA (overseas development assistance) front, there are uncertainties particularly around the volume of grants channelled through general budget support but also the potential amount of concessional finance to be made available from both OECD and 'emerging' donors (notably China and Brazil). The expectation, according to the latest IMF projections (IMF 2014) is that these funds, especially in grants, will substantially decline. However, it had also been expected that the global recession would bring about noticeable declines in net aid per years from 2009 onwards and instead Mozambique has experienced a slight increase of net ODA in real terms between 2009 and 2011 (see figure 6). There may be forces pulling in that direction but also forces pulling in the opposite direction, as will be discussed in the section on ODA.

Patterns of expenditure allocation in a context of expanding resource envelope in absolute terms may also be hard to predict, partly because the size of the mineral rent is still unknown, and also because of projected declines in foreign aid, all factors that can affect political priorities in an eventual context of substantially reduced aid dependence.

4.2 Domestic resources mobilization

The key mechanism for the expansion of fiscal space in the next 10 years will most probably be domestic resource mobilisation, especially tax revenues, from mineral resources, in light of expected declines in other sources of funding, especially external grants. In particular, if the basic plans for LNG production are realized, LNG-based revenues will become one of the primary sources of revenues for the Mozambican state by the mid-2020s, perhaps reaching 40% of total revenues by the late 2020s (Melina and Xiong 2013). In any case, given the period of consideration in this report, these potential gains will arrive too late to make a substantial impact on public finance before 2024, as the various projections discussed in section 4.7 will show. This section will particularly focus on LNG revenue projections, the fiscal regime for LNG production, and implications for fiscal space, since this is projected to be the major source of additional fiscal space from 2020 onwards.

The extent to which new extractive industries contribute to public finances is a major issue for many African economies, especially in the post-2000 context of rising commodity prices. Mozambique is not very different from many African countries in terms of the low capacity to tax resources in general. Several African governments have been unable to optimise revenues from mining investments, particularly during the commodity boom in the 2000s (Di John 2010). Despite this, on average, resource taxes have significantly increased as a proportion of total revenues, reaching around 15% in 2006 when commodity prices were on a supercycle

(Fjelstad and Heggstad 2011). In this sense, **if taxation of mineral resources had been *greater*, the relative dependence of tax systems on these resources would have become considerable in a relatively short period of time**. Generally, there are two main sources of 'loss' of potential revenues from mineral resources:

- Excessively liberal tax regimes with too many concessions and exemptions;
- Incidence of complex tax avoidance schemes, including transfer pricing through subsidiaries, which significantly reduce the amount of corporate tax governments tend to collect.

Mozambique has been so far not very different in that respect, and perhaps stands as one of the countries where extractive industries and other mega-projects (notably aluminium smelter Mozal) pay relatively very little in terms of taxes. But, as argued by Jones (2009), at least in comparison to other low-income African countries, it is not an outlier. **Various contributions to the literature on taxation in Mozambique have emphasised how little the government has taxed its mega-projects** (Castel-Branco 2011 and 2013; Di John 2010; Kuegler 2009; Fjelstad and Heggstad 2011; CIP 2013c). There are notorious examples like Mozal (aluminium) and Sasol (gas) which show the extent to which these companies have benefited from huge fiscal incentives and also managed to minimise their corporate tax contributions. For the period 2001-05, before the 2007 fiscal code was formulated, Kuegler (2009) estimates that foregone revenues due to tax incentives amounted to between 32 and 52% of total corporate tax collected during the period. Some of the well-known mega-projects (Mozal, Sasol, Kenmare) were negotiated before the changes in the Code of Fiscal Benefits in 2002 and before the new Fiscal Law on Petroleum Products in 2007 (CIP 2013c; Castel-Branco 2013). Therefore, they benefited from the biggest concessions and tax incentives that no other company has achieved more recently. Kuegler (2009) estimates that foregone revenues due to massive fiscal incentives to Mozal (no corporate income tax, only a 1% 'taxa liberatoria'), foregone revenues amounted to almost 12% of total corporate income tax in the country in 2006. These experiences obviously strengthen the bargaining position of other mining giants when negotiating similar fiscal incentives in subsequent periods as was the case with Vale do Rio Doce. According to Castel-Branco (2013, p. 95) in 2008 and 2009, four companies (Mozal, Sasol, Kenmare and HCB) contributed to 20% of GDP and only 2% of fiscal revenues. Their overall fiscal contribution did not exceed 3% of their export revenues, and much of their tax contribution comes from their small pool of workers and not from their returns to capital. In the case of Sasol, lost tax revenues have resulted from a combination of 'low tax rates, higher than expected capital costs, and a very low gas sale price', but the key mechanism to minimise corporate income tax has been transfer pricing (CIP 2013c). In 2012 the sale price to the matrix company in South Africa (Sasol Petroleum South Africa), was almost five to six times lower than the EU benchmark for most of the period 2008-2012. IMF projections of fiscal revenues from Sasol back in 2004 were very optimistic and would have made a massive difference to fiscal space, but actual revenues were in the end a tiny fraction of those early projections, a lesson that is worth bearing in mind when assessing IMF fiscal projections for LNG (CIP 2013c). Castel-Branco (2013, p. 96) further estimates that, between 2003 and 2011, the state 'lost' an *annual average* of US$170 million in foregone revenues (of which US$80 million per year only from Mozal), an amount that would have been even larger if the prices of commodities like aluminium had not declined between 2008 and 2010.

All this evidence suggests that fiscal space could have been substantially expanded during the period 2000-2012, beyond what has already been achieved with less radical tax reforms, and that this missed opportunity may have had serious long-term consequences. **The paradox, however, is that the Mozambican state managed to significantly and rapidly expand tax revenues as a share of GDP since 2008** (Figure 4), thereby creating much needed fiscal space, which has led to a substantial increase in relative fiscal expenditure effort, jumping from an overall 29% of GDP in 2008 to 40% in 2014 (Figure 5). Ironically, this has been through a significant rise in corporate tax effort, but mega-projects have not been significant contributors. DNO data confirm that corporate income tax has steadily expanded between 2008 and 2012, moving from 14.6% inn 2008 to 26.1%, indeed a very dramatic increase, mainly thanks to improvements, expansion and reforms in tax administration and an expansion of the tax base in small-medium entreprises (ILO 2013). Given the impressive record in terms of aggregate GDP growth, these increases have translated in substantial expansion in taxation in absolute terms. This has happened without a concomitant increase in the contribution of mega-projects to fiscal revenues. According to the latest IMF report in 2013 there was also a further surge in revenues thanks to unanticipated capital gains, accounting for 4.2% of GDP jumping from 1.2% in 2012. This windfall gain derived from the 2012 sale of a stake by Anadarko. This may mark a new form of fiscal space gain through new rules on capital gains taxes.[4] However, this potential new revenue source has not been incorporated in the projections discussed before because capital gains depend on asset sales between international companies and are difficult to predict, so in one year associated tax revenues could be large and another year zero. However, the fact that capital gains taxed are not included implies a possible underestimation of further expansion in tax revenues.

Overall, the discussion above suggests that **Mozambique has certainly improved its tax effort, through the expansion of the tax base and improvements in tax collection in recent years, but a much bigger amount of fiscal space could have been gained since 2000 if mega-projects had been taxed sufficiently**. This raises questions about what future mega-projects like LNG in Rovuma will finally contribute, which will be analysed in more detail in the section below.

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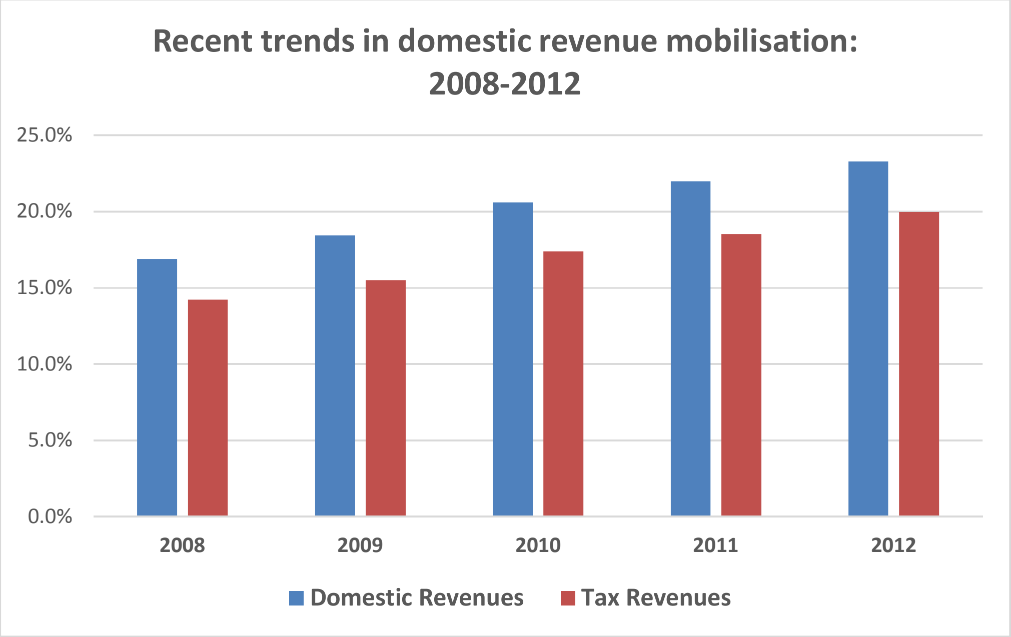
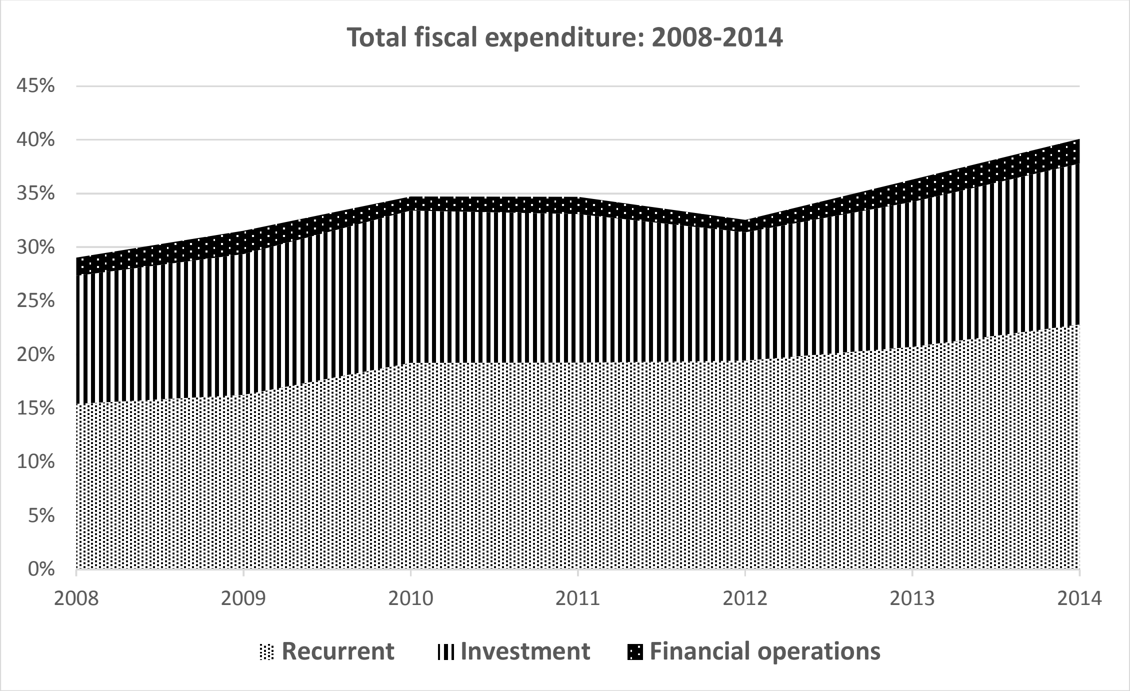
[4] See, for example, http://www.oilcouncil.com/expert_insight_articles/capital-gains-tax-new-resource-nationalism?language=en; and http://www.bloomberg.com/news/2013-04-02/eni-seen-paying-mozambique-538-million-or-more-on-capital-gains.html

Figure 4. Recent domestic resource mobilization



Source. Own calculation from DNO data.

Figure 5. Fiscal expansion 2008-2014



Source. Own calculation from IMF and DNO data

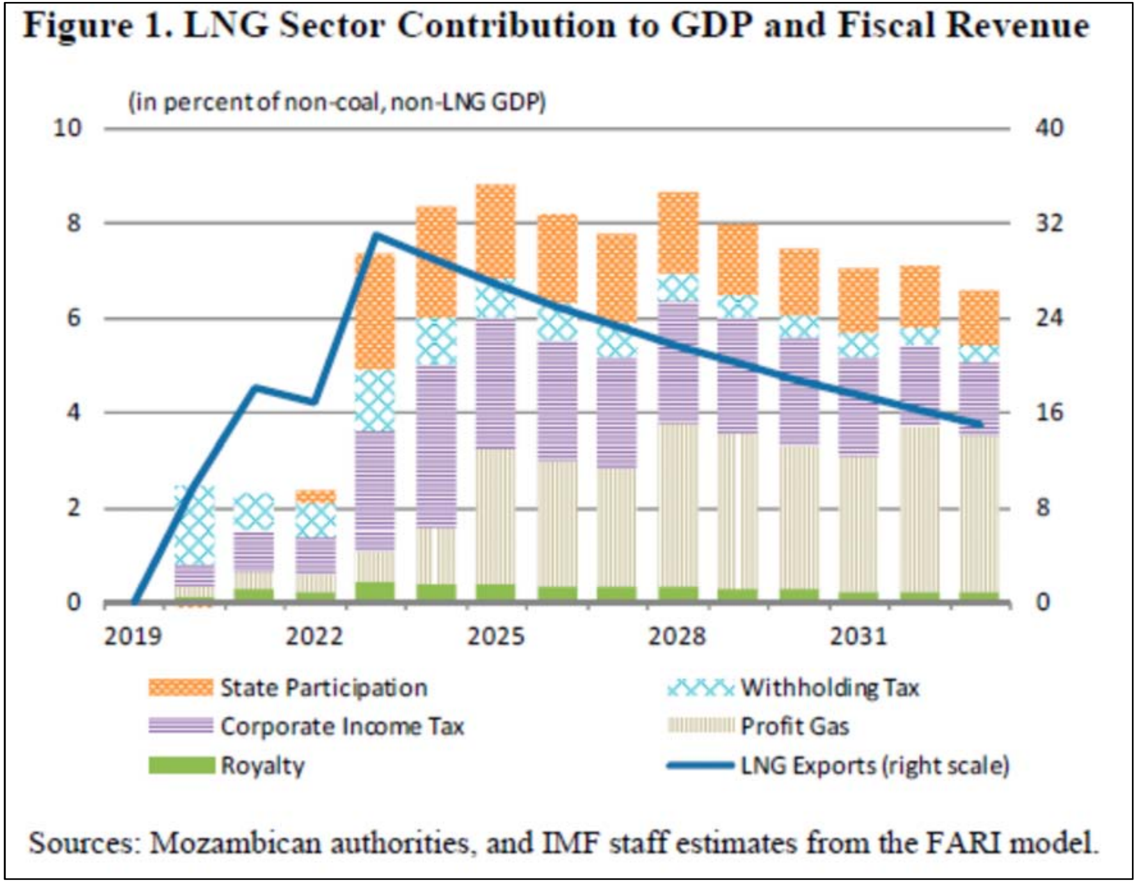
4.2.1 LNG revenues and fiscal regimes

The discovery of massive natural gas deposits in the Rovuma basin has been considered by many analysts a 'game changer' (Hubert 2013). The website that publicises the LNG project in Mozambique (incorporating a number of Multinational corporations and the Mozambican government), considers that Mozambique LNG provides the potential to elevate Mozambique to the world's third-largest exporter of LNG behind Australia and Qatar. If that promise is fulfilled the implications in terms of future resource revenues can be far-reaching. In this section we assess the uncertainties surrounding this project and whether the government is likely maximise its 'take' or not. This analysis is essentially based on the most relevant secondary sources and some of the interviews conducted in Maputo, so no new information is provided that is not generally available elsewhere.

First, **IMF projections of LNG revenues have changed in the space of ten months and become more conservative** according to the latest report (Melina and Xiong 2013) and compared to IMF (2013b). This report expects revenues to kick in only in 2020 and relatively modestly, starting from 2.5% for three years and then jumping to over 7% in 2023. Melina and Xiong (2013) estimate a share of LNG revenue in GDP of 2.4% by 2022 (Figure 6 below), as opposed to nearly 8% in previous projections in IMF (2013b). The latest report also does not provide information on possible negative revenues in the period of exploration and drilling, in which the government may need to spend as part of the share agreement. But this is now unclear and the most recent report only shows positive values from 2020 onwards. These changes reflect the uncertainties, particularly in terms of actual production and whether the plans to build 4 or more LNG trains are materialized or not. Melina and Xiong (2013) projections (which we have used as one base scenario) work under the following assumptions:

1. A maximum of 4 trains for a maximum capacity of 20 million tons per year in 2023.
1. First train to start producing in 2020, up-to 5 million tons, or a quarter of the full capacity, because only one of the four trains is expected to be operational in the first year.
2. Exports peak at 30 percent of non-oil GDP, and the sum of taxes and other fiscal revenue from natural gas, at its peak, reach 9 percent of non-oil GDP, or roughly one third of total fiscal revenue.
3. LNG prices will follow oil price movements over the medium term. We obtained oil price projections from the IMF April 2013 World Economic Outlook. A slope coefficient of 0.14 is applied to obtain medium term natural gas price projections. The LNG price is assumed to be constant in real terms over the long run from 2018 onwards.

Figure 6: Contribution of LNG revenues to fiscal revenues



Source: Melina and Xiong (2013), figure 1, p. 8.

We considered much more pessimistic scenarios in terms of production (50% and 0% of Melina and Xiong's base scenario) because some analysts may see these projections as relatively optimistic given ongoing developments and growing uncertainties. Various analyses such as CIP (2013a and 2013b) and Hubert (2013) have cast **some doubt over the production plans and timeframe presented in the Gas Master Plan and other official documents**. If the r-ratio rule, as explained in CIP (2013a and 2013b), materializes thereby reducing the share of government profits of the LNG sector to around 10% for the initial period of production, then LNG revenues will only expand substantially later, probably in the late 2020s. CIP (2013a) suggests that a more modest assumption of only 2 plants for the initial period should be considered given financing constraints and supply bottlenecks. This would substantially reduce the expected revenues in the period 2020-2023.

More pessimistic production scenarios would also be consistent with some important uncertainties for the LNG global export market. Recently a report in FT suggested that future prospects for LNG expansion worldwide had been hit by the North American shale gas boom, which promises a cheaper alternative to existing supplies (FT 24 November 2013). Buyers are increasingly reluctant to sign long-term LNG contracts and may wait and see what happens to prices, at least expect a decline in LNG prices in light of developments in shale gas. This has implications for projects in Mozambique. As the FT report notes 'because LNG projects are so costly, they normally only proceed to final investment decision once the developers have sold most of their supply in long-term contracts indexed to the price of crude oil – so the buyers' reluctance to sign up is creating a snarl-up throughout the industry'. Therefore it would not be necessarily too pessimistic to consider substantial delays in LNG train construction and even possible low-price scenarios. In other words, IMF projections contained in IMF (2013), and certainly those of the *Plan Director* may well be very optimistic in relation to these recent developments. The FT report makes specific reference to Mozambique's predicament: 'one casualty is Mozambique, where vast amounts of natural gas have been discovered in recent years and which was expected to become a major LNG exporter this decade. "It wasn't long ago that people were talking about a proposed 2018 start-up for east African LNG," says Mr Thompson [head of Asia-Pacific gas research at consultancy Wood Mackenzie]. "But that timing is slipping."

Another source of uncertainty is prices. The uncertainties surrounding supply and demand in global gas markets and the interactions between shale gas and the rise of new LNG suppliers make it difficult to conclude with a robust prediction. As noted by CIP (2013b), discrepancies between different LNG price projections are stark (e.g. between IEA and the WB) with rising and declining trends being projected for the same period. If the excess of LNG supply materializes in the 2020s, then a scenario of price declines is probably reasonable. Milena and Xiong (2013) consider such a scenario, which would bring down the expected LNG resource revenues in the initial period quite substantially.

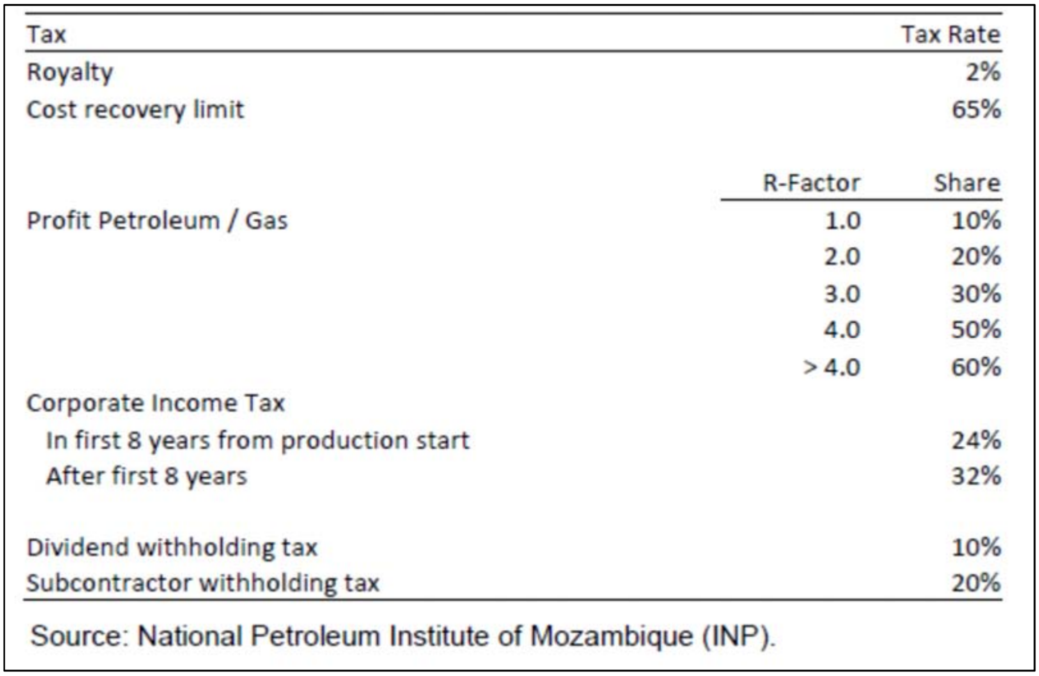
Finally, **the fiscal regime remains subject to uncertainties despite progress in the development of new legislation**. At the moment it is not clear whether there will be renegotiation of contracts or not and whether any new legislation will not apply retrospectively. The Exploration and Production Concession Contracts (EPCCs) for Anadarko and ENI's explorations were both signed in 2006. Different studies have provided summaries of the fiscal regime implied by these EPCCs and information presented in the Gas Master Plan. See below an illustration from a recent IMF report (Melina and Xiong 2013). Evidence of excessive tax incentives is already obvious in the very low royalty of 2%, considering that the current legislation establishes a general royalty for gas of 6% (Hubert 2013. The corporate income tax (normally at 32%) will probably benefit from a 25% discount for the first 8 years as with most mega-projects with contracts negotiated prior to 2007. Finally, in the mature phases of the project, the bulk of the revenue should originate from the share of 'profit gas' as in most Production Sharing Agreement systems. And here comes another important source of uncertainty especially considering the experience with Sasol. The share of profit gas is determined by a r-ratio rule which Hubert (2013, p. 15) describes as follows:

> The gas exceeding allowable expenses is shared between the company and the government based on a sliding scale determined by an "R-factor." The R-factor is the ratio between revenues and costs. In Mozambique's case, it is calculated by dividing cumulative income by cumulative expenses. When this calculation yields 1, the company has broadly achieved payout on their overall investment. An "illustrative" set of terms are given in the Gas Master Plan with R<1 providing 10% to the company through until R>4 providing 40% to each…

This could potentially produce incentives to keep the ratio at <1 for as long as possible, meaning creative ways to keep the count of cumulative revenues as low as possible and perhaps inflating recoverable costs, something that CIP (2013c) has reported about another gas venture in Mozambique, i.e. Sasol. Thus creative accounting has abounded in previous mega-projects and there is no reason to think that LNG Rovuma would be an exception. Therefore, especially for the initial period, the government is expected to take a very small amount of ‘profit gas’ because this will be constrained by the amount of recoverable fixed investments in the initial years of production and because the government share of profit may be kept at 10% for an extended period of time if cumulative revenues do not expand rapidly enough.

Hubert (2013) estimates that, at the beginning, the government would only ‘take’ 4% of total production value, worth about US$70 million only. Hubert (2013) and CIP (2013a and 2013b) therefore provide much more pessimistic estimates of potential ‘government take’ in the case of LNG Rovuma, well below the global sector average and even the normal Mozambican fiscal regime. If that is the case, then LNG Rovuma would somewhat replicate the past experiences of other mega-projects before more ‘taxing’ laws had been promulgated since 2007. This is also an assessment that is shared by IESE researchers (Castel-Branco 2013) and media commentators. The question is also whether the Final Investment Decision will be taken in 2014 and whether the private operators will have imposed further conditions on the terms of extraction and share of profits. There is also a potential risk for the companies involved, which entails opposite scenarios less favourable for the companies, and entailing potential increases in royalties, windfall taxes on revenues over a threshold, or tax exemptions among other measures. If there is contract renegotiation for political reasons, because of new leadership within FRELIMO or pressures from the public and donors, this could have very positive outcomes on prospects for domestic resource mobilization above the base scenario provided by Melina and Xiong (2013).

Table 1. Basic aspects of the expected fiscal regime for LNG Rovuma

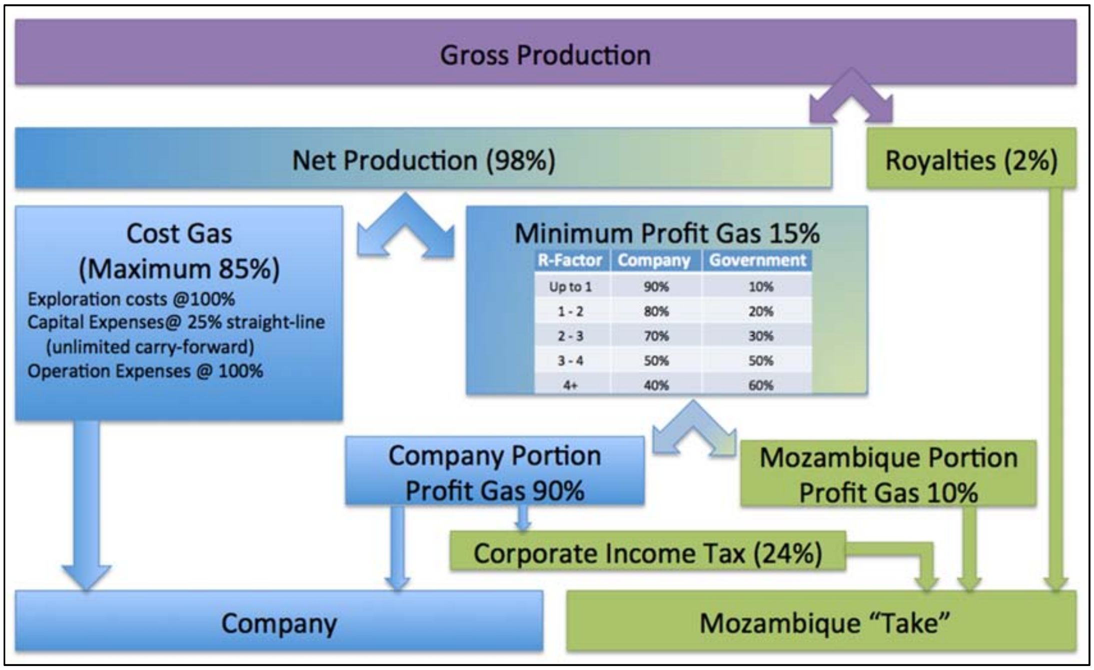


Tax		Tax Rate
Royalty		2%
Cost recovery limit		65%
	R-Factor	Share
Profit Petroleum / Gas	1.0	10%
	2.0	20%
	3.0	30%
	4.0	50%
	> 4.0	60%
Corporate Income Tax		
In first 8 years from production start		24%
After first 8 years		32%
Dividend withholding tax		10%
Subcontractor withholding tax		20%

Source: National Petroleum Institute of Mozambique (INP).

Source: Melina and Xiong (2013), Table 2, p. 7.

Figure 7. Summary of outcomes of the fiscal regime for LNG Rovuma


Gross Production
Net Production (98%)
Royalties (2%)
Cost Gas
(Maximum 85%)
Exploration costs @100%
Capital Expenses@ 25% straight-line
(unlimited carry-forward)
Operation Expenses @ 100%
Minimum Profit Gas 15%
Company Portion
Profit Gas 90%
Mozambique Portion
Profit Gas 10%
Corporate Income Tax (24%)
Company
Mozambique "Take"

R-Factor	Company	Government
Up to 1	90%	10%
1 - 2	80%	20%
2 - 3	70%	30%
3 - 4	50%	50%
4+	40%	60%

Source: Hubert (2013, figure 8, p. 14)

4.3 ODA

This section considers the future of ODA and two main scenarios, possible trends:

- A decline in terms of % of GDP as a result of economic growth and the growing importance of domestic taxation;
- A stagnation or even decline in real absolute terms;
- A move away from GBS towards project aid.

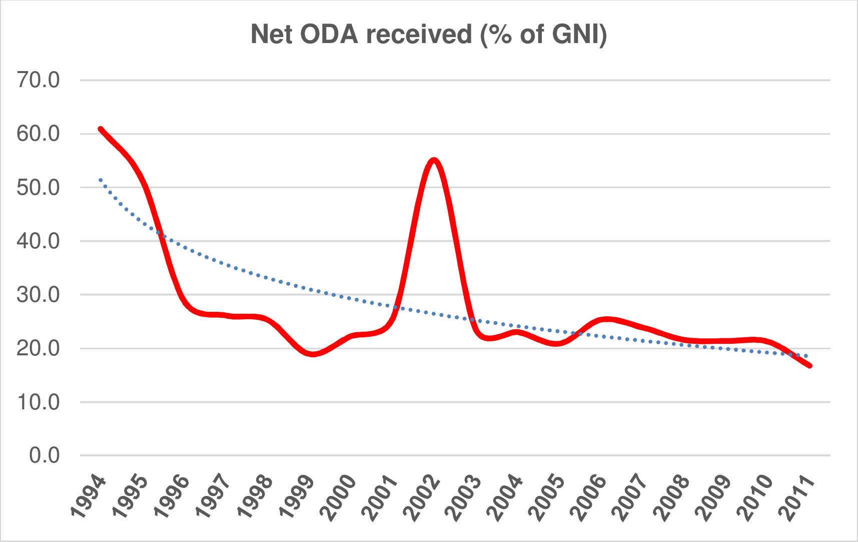
Mozambique has been largely aid-dependent for a significant period of time but especially until the early 2000s. Since then, the ratio of net ODA to GDP has stabilised somewhere near 20% (Figure 8), suggesting that other sources of revenue have replaced aid flows to a significant extent (essentially domestic revenues). This is good news for the country as it should mark a period of greater fiscal sustainability. The reduction in the relative share of ODA since 1994 is primarily due to economic growth, as the initial surge in the 1990s was then followed by a steady but more modest growth in annual flows of ODA.

The literature on the relationship between aid flows and domestic revenue mobilization is inconclusive. The hypothesis that aid will adjust to increasing tax revenues would imply that the ratio of government expenditure to GDP remains fairly constant and that donors consider domestic taxation in their calculations. There is however not much support to this hypothesis in the cross-country regression literature (McGillivray, 2006; Alesina and Dollar, 2000; rfs). Kanbur (2005) and much of the literature on determinants of aid allocation tends to suggest a pro-cyclical pattern in aid volatility whereby aid flows tend to increase as national income and domestic tax mobilization also expand. Jones and Arndt (2007) also question the assumption that the Mozambican government would adhere to a strict expenditure target and therefore adjust aid and tax revenues accordingly. **The most plausible hypothesis is that the Mozambican government follows an incremental approach to expenditures and sources of revenues in which more is better than less, both aid and taxes. The question is what is easier to mobilise in the short term**. In light of these considerations there is no reason to believe that aid flows will automatically decline in relation to an expansion in mineral-related revenues. Other considerations may lead to a decline in aid flows, particularly in the form of budget support, which we consider below in light of IMF projections and discussions held in our qualitative interviews.

The experience of the recent period 2008-2012 would not suggest that there has been a decline in total aid flows in real terms (Figures 8 and 9), rather a stagnant path contemporaneous to significant expansion of tax revenues, as well as reallocation from grants to concessional loans. Overall, especially for the period 2014-2020, given delays in the generation of very large mineral resource revenues, it would be possible to consider that aid will not decline as much as implied in the core IMF projections (IMF 2014). The decline may happen to an extent as in proportion of GDP, assuming a context of fast GDP growth, but not so much in absolute terms.

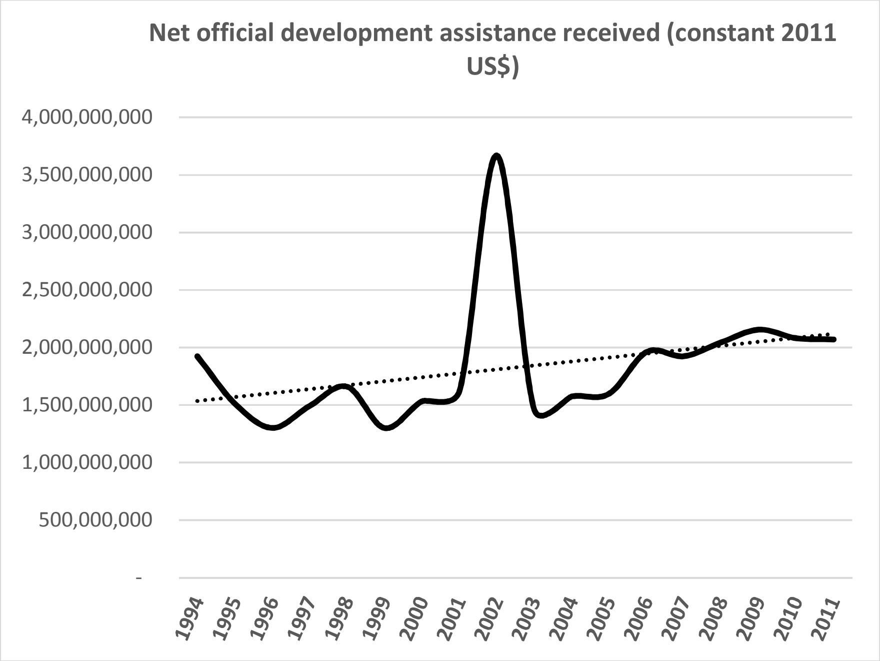
The key change, however, may well be a shift in the composition of aid flows, which can have implications in terms of fiscal space. Mozambique has been characterised over the years by a steady increase in the commitment of donors to common funds and budget support even though project aid was never abandoned. The evidence from the recent period 2008-2012 however shows that the proportion of external grants for GBS, common funds or projects is declining rapidly (Figure 10), being gradually replaced by concessional loans. This shift would mean less policy and fiscal space for the government, which especially derives from contributions to budget support and to common funds. Indeed all the projections by the IMF show a substantial decline in grants and budget support between 2014 and 2023, from 6% of GDP in 2012 to a very limited 0.8%, all mainly offset by increasing domestic revenues and external borrowing on concessional terms.

Figure 8. Trends in the share of ODA in GNI: 1994-2011



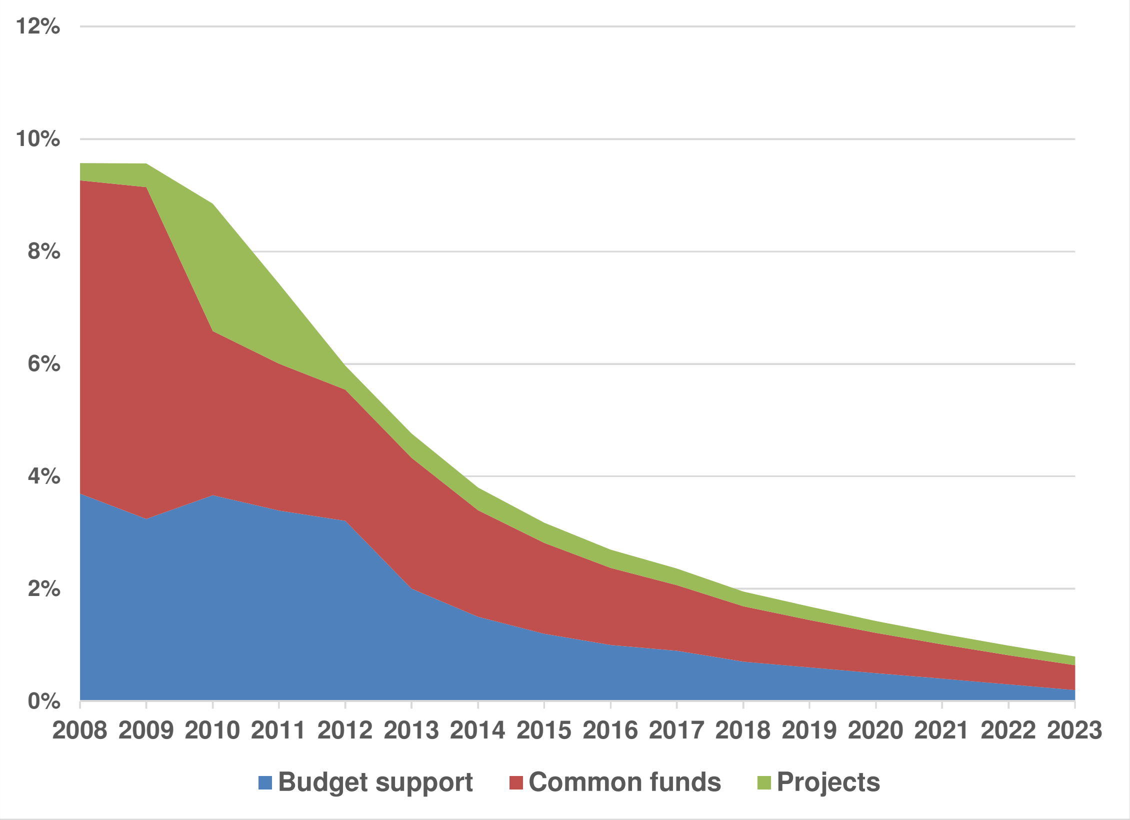
Source. Own calculation from World Bank and OECD data

Figure 9. Trends in net ODA in real terms: 1994-2011



Source. Own calculation from World Bank and OECD data

Figure 10. Recent trends in and projections for external grants 2008-23



Source. Own calculation from IMF and DNO data

The reasons for this substantial projected decline are not entirely clear. While the hypothesis that Mozambique is 'maturing' and being more dependent on domestic revenues may play a role in terms of reducing the incentives for aid agencies to operate in the country, the evidence of improved fiscal effort without concomitant declines in overall aid flows, casting doubts over generalisations on the linkages between aid commitments and domestic resource mobilisation. Ideally for the purposes of fiscal space expansions, both vehicles (aid and improved taxation of mega-projects) would work and reinforce one another.

Information gathered from the various interviews with government officials are not totally conclusive. First, **there is some consensus that ODA is likely to fall as a proportion of GDP but the magnitude of the decline is not clear and it may not mean a decline in real terms, since GDP growth is projected at high rates.** Second, the link between ODA's decline in proportional terms and the increasing share of tax revenues and resource revenues in total revenues is unclear. Predictions about a reduction in the proportion of ODA flows in GDP point to other factors and consider that the trend is already under way regardless of expected resource bonanza. The impression is that aid negotiations are not tackling the impact of mineral revenues as a factor in aid allocation decisions. In different interviews, government officials indicated that they expected a significant drop in general budget support, which is corroborated by most fiscal projections estimated by the IMF.

Meanwhile, and in the short to medium-run, interviewees from aid agencies did not expect a substantial fall in aid flows, especially in terms of volumes. However, a decline in terms of proportion of GDP is expected though not until 2016, according to some sources. The main change they expect is a shift from GBS towards project and sectoral programme support. In this respect, all responses were quite consistent. One implication of a revival of project and ‘SWAP’ aid could be an increase in transaction costs and a decline in the efficiency of aid flows, thereby potentially undermining fiscal space although to a limited extent.

Part of the reason for these changes in composition and the gradual demise of GBS may be structural and have to do with changes in donor priorities in a context of global recession, budget cuts and many right-wing governments in power in the OECD meaning that a diversion of aid flows away from direct support to African governments is a likely scenario. Moreover, reluctance to increase GBS has always been a feature of many aid agencies, even in showcases like Mozambique, which was taken as a success story of attracting more GBS than other countries. This reluctance stems from a situation of recession which is forcing aid agencies to cut budgets significantly and also from increasing focus on ‘value-for-money’ and direct interventions that are easier to monitor than GBS.

There are also important political questions and a growing tension between aid agencies and the Mozambican government, which have been simmering throughout the Guebuza regime, and culminated in a few episodes of heated exchanges between the government and some donor agencies (see Africa Confidential 2014) . Some recent developments have exacerbated some latent tensions, and further raised concerns about the future of ODA in the country. As reported by African Confidential on 7th February 2014, ‘Mozambique risks the suspension of up to one third of the US$400 million it is due to receive in budget support funds from major donors this year, according to European official sources’. Two issues have pushed some major donors to toughen their stance vis-à-vis the Mozambican government. First, the September $850 mn. Eurobond issue and what it is being spent on, in particular the reality behind the investment in a new tuna fleet and patrol boats in what appeared as an overnight decision. The bond was issued by the newly established tuna-fishing company Ematum, which is 34% owned by the Mozambican Institute for the Management of State Holdings (IGEPE); 33% by state fishing company Emopesca and 33% by the GIPS, a social security fund majority-owned by the Serviço de Informação e Segurança do Estado (Mozambique’s intelligence service). Aid agencies have demanded explanations but so far the response has been unclear. The second reason for a donor ‘revolt’ is the perceived electoral fraud and alleged abuses committed by Frelimo officials in some places during the last municipal elections. Although fraudulent instances would not have had a major impact on overall electoral results these slippages were received with preoccupation among international agencies in Maputo. Some aid agencies are also unimpressed by limited progress made in poverty reduction despite continuous fast rates of economic growth, and by the limited positive linkages between existing mega-projects and extractive industries and the rest of the economy. Furthermore, the current low-intensity conflict with RENAMO commandos and the fear that this is causing in the population and expat communities is making things worse. The perception that Guebuza’s government is not prepare to negotiate and be more pragmatic about the situation is not helping either, according to many donor officials. There is no consensus among donors around the possibility of freezing disbursement of budget support payments in 2014 and this may cause some tensions within the donor community, according to African Confidential.

Therefore, overall the above-mentioned concerns are likely to impact aid disbursements in 2014 and perhaps into the medium-term, particularly if national elections and developments within Frelimo in forthcoming years do not appease donors. In anticipation of future expansion of domestic resource mobilization in light of coal and natural gas revenues, the Mozambican government may not be too keen to bow to donors' demands and instead maintain a tough stance that might complicate relations and exacerbate the trends towards decline in ODA flows, or at least a reallocation of funding away from budget support and into projects.

In sum, projected declines in aid flows are not unreasonable given the current political and economic climate but they should not be seen as a reaction to growing future resource revenues. Moreover, a key question, which is not directly tackled by most projections is to what extent external borrowing will replace loss in external grants and to what extent more will have to come from domestically generated revenues. This would mean higher deficits than the fiscal benchmark, which will have to be monitored to avoid potentially damaging effects on fiscal sustainability and the future ability of the government to raise money in international markets. The impact may be felt in the short to medium-term and perhaps reversed later on, but this is only speculation.

4.4 Gains in efficiency in public expenditures and reprioritization of expenditures

A potentially significant component in the expansion of fiscal space is savings obtained through reduction of wastage and superfluous expenditures. This will be particularly important in the context of big spenders like education and health where the scope for efficiency gains may be considerable. As reported in the ILO study (2013) the scope for savings through reprioritization is not negligible. The gradual phasing out of the fuel subsidy could add 1% to fiscal space after 2012. According to our projections, starting from 2014, most of the gain from the elimination of the fuel subsidy would have already been incorporated into the fiscal space of previous years.

The question is that, like the fuel subsidy, there may be other superfluous expenditures that could save up space for other priorities. Obvious candidates for cuts could be defence expenditure and perhaps even unusual investments like the recent acquisition of a tuna fleet and patrol boats (Africa Confidential 2014). Moreover, public expenditure reviews and an in-depth analysis of the composition of expenditures may highlight areas where reprioritization within big-spending sectors (education, health, agriculture) could also create additional fiscal space. For example, a reallocation of budget resources from central headquarters of ministries towards district-level investments could come with higher social returns. The challenge is to persuade the government to undertake the effort of establishing potentially superfluous or less effective public expenditure to free resources for priority sectors, including economic infrastructure.

A key challenge is also having enough reliable evidence on *absorptive capacity* constraints, bottlenecks and the social returns to public investments, to assess whether a more aggressive approach to public investment in anticipation of future resource revenues, with additional fiscal space created from borrowing, may or may not pay off in the long term.

Although the calculations of fiscal space presented in this report do not incorporate any assumptions about expenditure re-allocation and savings, this is encouraged as a key vehicle of further fiscal space expansion. Various IMF reports (2014, 2013b) indeed emphasise the importance of expenditure re-prioritization particularly during the period preceding the first streams of LNG revenues and when the fiscal position is expected to be more compromised due to recent expansion in fiscal expenditures. The scope for efficiency savings is significant, according to the IMF, but the scope for re-prioritization towards social expenditures is perhaps less clear, as argued in the section 5 below and also in light of comments provided on previous drafts of this report by Mozambican government officials.

4.5 Deficit financing / borrowing

The preferred ways of creating fiscal space are tax revenues and expenditure reprioritization. These two channels entail fewer risks in terms of debt sustainability and less dependence on volatile sources like ODA. However, **the reality of many fiscal expansions historically is that deficit financing can play a major role, especially if public investments pay off in terms of social and macroeconomic returns in the medium to long run**. It is quite clear from the fiscal data of the period 2013-14 that deficit financing can play a major role in boosting fiscal space, even if at potential cost in terms of future borrowing costs.

This component of fiscal space depends much on the country’s capacity to attract capital flows in the form of concessional or non-concessional credit. Expectations about future resource revenues may also impact on the capacity to attract debt flows. Therefore, with the strengthening of domestic resource mobilisation and especially the reputational impact of large reserves of mineral resource, Mozambique may be able to move to Stage 2 of financial development (see Taylor 2011), which may contribute to further expansion of fiscal space via non-concessional borrowing in domestic and international markets. The risk is that one of the main side-effects of LNG-type resource revenues and scaled up public investment may be unsustainable or volatile debt, especially problematic in case of decline of commodity prices (Melina and Xiong 2013; IMF 2013). This is a major concern for the IMF and is clearly articulated in the various reports and their sections on public investment scaling up.

There are other possible dangers with certain forms of borrowing like the recent bond issue for the acquisition of tuna fishing and patrol boats, which has been cause for concern given that debt financing can have future impact on fiscal space for other uses if the payment of interest crowds out other priority spending. The IMF (2014) has indeed recently argued that this ‘slippage’ is alarming because it can affect debt sustainability and affect investors’ perceptions of future macroeconomic stability. Besides it is also a cause of concern because it is not clear what political dynamics that operation is serving to. The opacity over the event and uncertainty over its reputational impact may result in mistrust of future recourse to domestic or external borrowing to add fiscal space.

In any case, **trends in the past five years, and particularly estimates for 2013 and 2014, suggest substantial scope for fiscal space creation through deficit borrowing**. The still significant contributions from foreign ODA as well as the potentially enhanced capacity to raise debt in global or regional financial markets may expand the space for additional spending without necessarily jeopardising fiscal stability. Table 2 also suggests that the period post-2014, especially before the start of gas revenues flowing, will be one with high fiscal deficit after grants, of about 7% of GDP. However, for the purposes of consistency we will also consider a demanding and conservative 'fiscal benchmark' of 2-4% of GDP in the projections discussed below, in addition to a more optimistic benchmark of 5.5% of GDP, which is closer to the actual deficits projected in Table 2

Table 2. Fiscal deficit scenarios for LNG revenue scenarios

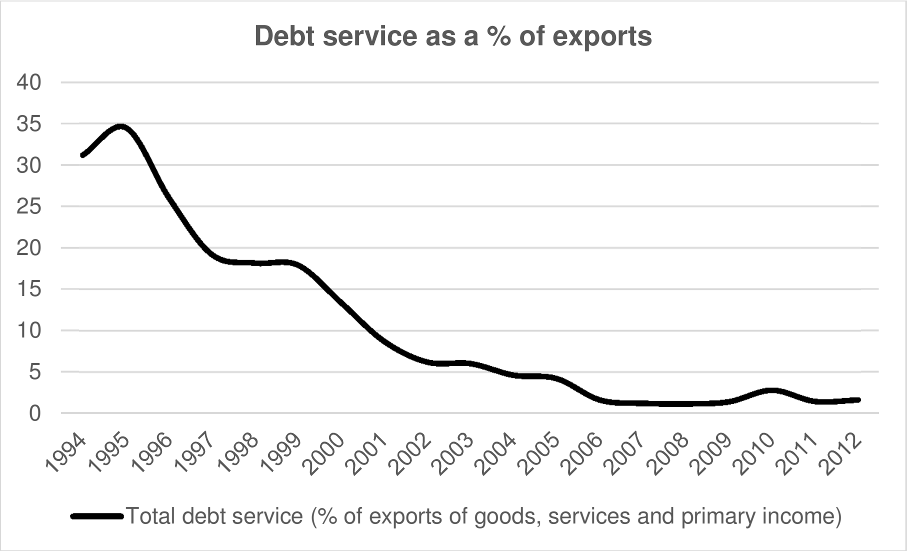
	2008-12	2013-14	2015-19	2020-23
LNG scenario 1	-4.4%	-8.6%	-7.0%	-2.8%
LNG scenario 2	-4.4%	-8.6%	-7.0%	-4.6%
LNG scenario 3	-4.4%	-8.6%	-7.0%	-6.4%

Source. Own calculation from IMF and DNO data

Arguably a prudent 'benchmark' such as 2-4% might not be justified if it means restrained expenditure in a context of high public investment needs In addition, concerns and fears of high risks, may also be exaggerated. In fact, debt indicators and particular the indicator of debt service as a ratio of exports suggests a comfortable debt position for Mozambique at the moment, as the proportion has stayed well below 5% since 2006 (Figure 11). Only when the debt service ratio exceeds 20% the situation can be considered alarming, suggesting that at the moment Mozambique has a sustainable level of external debt. . Hence we also consider an alternative benchmark of 5.5%. This may leave some scope for additional external borrowing should the prospects of future mineral revenues put Mozambique in a favourable position to raise money via capital markets. Having said, a more sensible course of action would be to maximise concessional borrowing from different sources, including non-DAC donors, which may have an interest in expanding aid portfolios as DAC donors gradually withdraw.

In other words, it is by no means excluded that the government will expand fiscal space through borrowing, especially before the gas revenues start to kick in in 2020. If this is the case, our very conservative estimates of future borrowing (and concomitant small fiscal deficits after grants) may be too conservative and fiscal space maybe larger than projected here, just by expanding external and domestic finance for government expenditures.

Figure 11. Debt position: debt service as % of exports



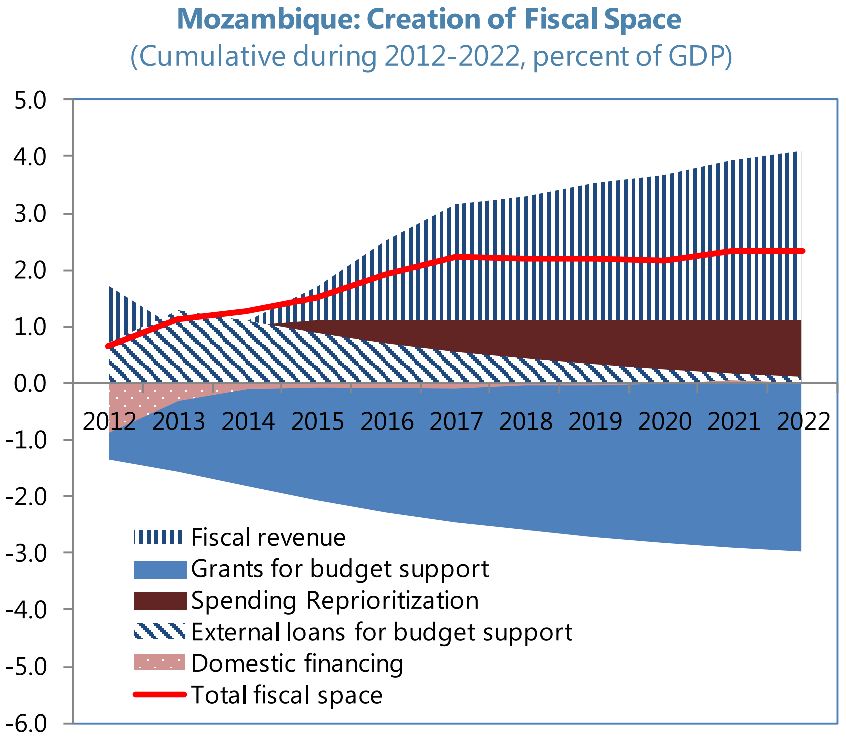
Source. Own calculation from IMF data

Another question is whether the state will contribute to the massive investments projected for the period 2014-2019 in the LNG sector, which could have serious implications for the fiscal deficit in this period. However, a report suggested that 'the financing of LNG production would likely be undertaken by the private sector and be debt-based, through a special purpose vehicle (SPV) raising syndicated loans and tapping international financial markets.' (IMF 2013, p. 47). In such scenario the government would not participate and therefore there should not expectation of additional fiscal expenditures for this matter.

4.6 Existing estimates and projections of fiscal space

The reality is that Mozambique has already been very successful in creating fiscal space in recent years. Before we move onto presenting some of the basic results from our calculations of fiscal space it is worth exploring some previous estimates from 2013 reports. The ILO study (2013) finds some fiscal space created mainly by fiscal revenues through far-reaching reforms in tax administration and a broadening of the tax base. During the period 2008-2011 tax revenues increased by 4.3 percentage points (14.2%- 18.5%), quite a remarkable increase. **The ILO projections, which did not consider the impact of LNG revenues, suggested a modest increase of fiscal space of 2.3% of GDP by 2022**, mainly driven by further expansion of non-resource fiscal revenues, spending reprioritization and external concessional loans for budget support, which more than offset the negative impact of substantially declining grants for budget support. These estimates only consider external grants and loans that are not specifically earmarked for investment projects, so they only provide a slightly partial picture and not a full resource envelope.

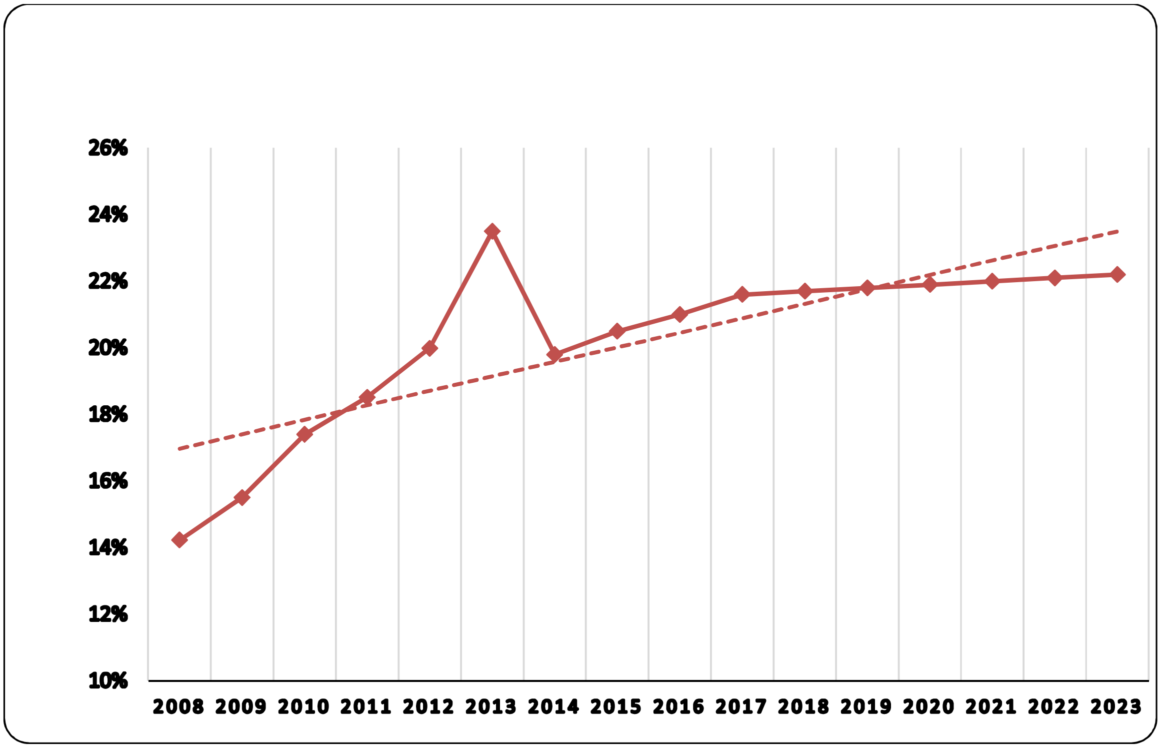
Figure 12. Fiscal space creation: ILO estimates



Source: ILO (2013, p. 39) based on IMF estimations from IMF Country Report No. 13/1

According to our own calculations, however, tax revenues excluding LNG revenues will only increase gradually at least from 2014 onwards (Figure 13). The question is whether these projections of declines in external grants are reasonable or not. Donor support could be galvanised with the right choice of programmes and through redressing some of the slippages committed in recent years (more below). Should external grants not decline as predicted by the IMF, then the fiscal constraints of the period 2014-2019 would be significantly eased.

Figure 13. Tax revenue trends and fiscal space creation: 2008-2023



Source: Own calculations from IMF and DNO data. Note: Tax revenues in this figure exclude LNG revenues

The projections prepared by the IMF (2013b) provide different types of estimates depending on some critical assumptions. The IMF's stance is that the potential of recent gas discoveries for public finances is very substantial, should the investment plans go ahead, which, in itself, is a key assumption, as discussed in section 4.2. The main points emerging from the IMF's analysis of fiscal issues around the new resource-rich environment can be summarised as follows:

1. If all goes as planned, future **LNG and resource revenues may be very large, reaching somewhere in between 9% (Melina and Xiong 2013) and 15% of GDP (IMF 2013 Jan) by 2025 or the end of the next decade; and between one third (IMF 2013b) and 40% of total government revenues around the period 2025-2029**.
2. Despite this substantial potential and considering previous fiscal expansions leading to increasing fiscal deficits, **fiscal management of forthcoming resource revenues is likely to be challenging**. The IMF is primarily concerned with macroeconomic stability and fiscal prudence.
3. One of the main challenges is timing and the fact that LNG revenues may be substantial but are still far away. Note that the expected time of production and beginning of resource revenue streams has been successively revised from 2018 to 2020 (in Melina and Xiong 2013). This means, according to the IMF, that **the biggest challenge will be to manage public finance in the interim period before revenues kick in** and while large outlays will be required to establish basic infrastructure and the building of LNG plants. This could mean negative net revenues in the 2012-18 period, but the most recent report (Melina and Xiong 2013) does not corroborate evidence of

negative revenues before 2019 as gas projections only start in 2019. These recommendations reflects the medium-term focus of the IMF and its underlying mistrust of expansionary policies in anticipation of future windfall gains.

4. In order to successfully manage these challenges and uncertainties, **fiscal policy should be driven by debt sustainability analysis** and by appropriate indicators of fiscal stance, such as the 'non-resource primary balance', which will provide a measure of 'underlying' fiscal balance net of resource revenue and scaled to non-resource GDP. This is important in order to manage potential volatility of mineral/gas revenues.
5. Partly the question of fiscal management of future windfall gains from gas production lies in the decision over the setting up of a **Sovereign Fund**, to absorb extra revenues and obtain an additional revenue stream from capital investments of this fund, like in most other resource-rich countries unable to absorb all the additional revenues accruing from mineral/oil resources. The possibility of a Sovereign Trust Fund is also highly recommended by the Capstone report (Columbia SIPA 2013), which proposes a sovereign fund divided into four separate accounts with different management criteria: budget, stabilization, development and saving account.
6. Apart from decisions over a potential fund, a priority for the government in this interim period will be the **final negotiation of concession contracts and the establishment of an adequate fiscal regime** that maximises government's take from extractive sectors without jeopardising the promised investments. This will require investment in negotiating capabilities as well as accumulation of sector- and industry-specific knowledge.
7. Finally, and in light of need for fiscal prudence, a key issue will be the management of public investment in the interim period. The IMF presents different options of scaling up of public investment and unsurprisingly **strongly recommends a gradual approach to the scaling up of public investment to make sure that debt sustainability is not jeopardised**. However, the analysis of public investment incorporates rather conservative assumptions about the expected efficiency and social returns to investment. This is, of course, an empirical question, hard to answer at this stage since clear plans for future public investment have not been laid out. As will be argued in the section on the use of fiscal space, it is quite likely that much public investment will be devoted to the consolidation of the emerging extractive sectors more than towards economic diversification or further improvements in social infrastructure.

The estimates of additional fiscal space presented in the IMF report (2013b) present a variety of scenarios dominated by the principle of fiscal prudence. The main scenarios suggest the following:

(a) **Bird-and-hand rule ('Norway model'**, in which all incoming resources are saved in a fund and only the returns to the fund flow into the Treasury for fiscal expansions. **In this scenario additional fiscal space is only created from 2026 and slowly increases to reach a maximum of 7% in 2050**. This is not considered appropriate for a low-income country like Mozambique with urgent public investment needs.

(b) **PIH (permanent income hypothesis) framework, whereby a fixed fiscal deficit target is established in relation to future financial wealth (net present value of all future resource revenue), estimated at 2.8% of GDP per year for the whole period 2012-2050**.

(c) **Modified PIH**, acknowledging the imperative of anticipating much needed investments in the initial period despite lack of enough revenues. **This scenario would entail a PIH rule of 2.8% of GDP (as fiscal space) until 2018, followed by a gradual expansion of fiscal space up-to 8% of GDP in 2028**. Then a few years of negative fiscal space followed by a final moderate increase up-to to 2.8% again in 2050. fiscal space.

(d) Fiscal Sustainability Framework (FSF), similar to the modified PIH but with positive additional fiscal space throughout the period (avoiding the few years of negative fiscal space) and a slightly lower level in the final period 2030-2050 (at 1.5% of GDP).

The scenarios discussed above and published in IMF (2013b) are now somewhat out of date insofar as the starting date of gas production has been revised and delayed by 1-2 years in the most recent projections (Melina and Xiong 2013). Thus, while the scenarios may not change in terms of the magnitudes of fiscal space, the delay of 1-2 years means that the added fiscal space per year may have to be revised down from these estimates.

Overall, IMF projections of fiscal space based on future LNG revenues suggest that the potential for substantial creation of fiscal space appears quite late, well into the 2020s. From then, a very substantial fiscal expansion could be envisaged even if quite far in time. The main challenge will be to manage potential fiscal gaps, as opposed to fiscal space, in the medium term before gas revenues start to flow. The fiscal position is estimated as being precarious in 2014 and then challenging until 2020 if expenditures are not kept under control.

4.7 Alternative scenarios for fiscal space expansion: a simple projection exercise

As discussed in section 2.2, this study did not attempt to build a complex model of fiscal projections as the one developed by the IMF through the DIGNAR and FARI models.[5] Instead, we have used and combined existing resources (IMF projections, ILO analysis, DNO *Mapa Fiscal* data) to present estimates of fiscal space from two different angles as explained in section 2.3. Given the different uncertainties it would probably be advisable to consider alternative scenarios for the different components of fiscal space. This would mean 2-3 scenarios for external grants and loans, as well as different scenarios for non-LNG domestic revenues. We stick to the core IMF projections and we hypothesise three alternative scenarios for LNG revenues to provide a general assessment about the prospects for expanding fiscal space in the last part of the period under analysis. Information will be presented in terms of % of non-resource GDP as well as in constant 2012 Meticais.

Generally the results in terms of fiscal space as ‘budgetary room’ or ‘cushion’ are not as promising as previously expected even when considering IMF’s base fairly optimistic scenario (Table 3). This is because predicted fiscal deficits remain relatively high until the late 2010s and then LNG revenues are not huge in the first few years. In fact, by the definition of fiscal space as ‘budgetary room’ or ‘cushion’ there will be fiscal gaps if the deficit benchmark of 2-4% is realistic. That is the critical question. If that benchmark is relaxed and set at 5.5% of GDP and the predicted fiscal deficits are accepted then the fiscal space available would be equivalent to 6.2% of GDP in 2023 as opposed to 3.7% if the more conservative fiscal benchmark is used. Table 3 suggests that there will be positive fiscal space as 'cushion' only in 2023 for LNG scenario 1 if a 2-4% fiscal deficit is considered and generally from 2020 for LNG scenarios 1 and 2 if the fiscal deficit benchmark is set at 5.5%. Without LNG revenues (scenario 3) the projections would suggest a sustained fiscal deficit after grants of between 8.3% and 6.6% and virtually not fiscal space as 'cushion' regardless of the fiscal benchmark selected (Table 3 and Table 6a). Given the record of aid-financed fiscal deficits in the period 2008-2014 (see Table 2), these figures are not totally unreasonable, especially if future mineral revenues were expected to pay for part of the debt service from the mid-2020s onwards. However, what these figures show is that the additional revenues from LNG, coming too late, combined with substantial declines in external grant mean that there would not be fiscal space as 'cushion' until 2023 (in the case of a 2-4% fiscal deficit benchmark) or 2020 (in the case of a 5% benchmark), when larger flows of LNG revenues are predicted to arrive. One of the key implications is that, in order to sustain projected fiscal expenditures or even further increases in total expenditure before 2023, deficit financing would be the main channel for the creation of fiscal space. This could happen through aid in the form of concessional finance, which is plausible even ten years from now, or with a greater contribution from domestic borrowing or external borrowing on non-concessional terms, which is also possible given the potentially higher credit rating emerging from the anticipated mineral resource boom. In any case, a catastrophic scenario with no LNG revenues during the period under consideration would indeed mean that either larger than manageable fiscal deficits will be systematically incurred or total expenditures will have to decline compared to the situation in 2014 (which, in itself, has been a special situation with larger than anticipated fiscal expenditure increases). Everything obviously depends on the assumptions on external grants, reasonable fiscal deficits and LNG revenues.

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[5] DIGNAR is a dynamic stochastic general equilibrium model that is very data-intensive like most CGE models. FARI is the Fiscal Analysis of Resource Industries (FARI) model developed by the IMF Fiscal Affairs Department (FAD).

Table 3. Fiscal space estimates - fiscal space as annual 'room' or 'cushion'

Potential added fiscal space	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*
With 2-4% fiscal deficit benchmark (for 2008-2023; and 3-4% for 2014-23)										
LNG scenario 1	**-8.6%**	**-4.3%**	**-4.0%**	**-2.6%**	**-1.9%**	**-2.1%**	**-0.8%**	**-1.0%**	**-1.1%**	**3.7%**
LNG scenario 2	**-8.6%**	**-4.3%**	**-4.0%**	**-2.6%**	**-1.9%**	**-2.1%**	**-2.0%**	**-2.2%**	**-2.3%**	**0.0%**
LNG scenario 3	**-8.6%**	**-4.3%**	**-4.0%**	**-2.6%**	**-1.9%**	**-2.1%**	**-3.3%**	**-3.4%**	**-3.5%**	**-3.6%**
With 5.5% % fiscal deficit benchmark										
LNG scenario 1	**-7.1%**	**-2.8%**	**-2.5%**	**-1.1%**	**-0.4%**	**-0.6%**	**1.7%**	**1.5%**	**1.4%**	**6.2%**
LNG scenario 2	**-7.1%**	**-2.8%**	**-2.5%**	**-1.1%**	**-0.4%**	**-0.6%**	**0.5%**	**0.3%**	**0.2%**	**2.5%**
LNG scenario 3	**-7.1%**	**-2.8%**	**-2.5%**	**-1.1%**	**-0.4%**	**-0.6%**	**-0.8%**	**-0.9%**	**-1.0%**	**-1.1%**

Source: Own calculations from IMF and DNO data.

Another way of presenting results of fiscal space estimates is by considering a potential resource envelope consistent with a fiscally sustainable deficit (whether 2-4%

or 5.5%) as explained in section 2.2. A plausible 'fiscal anchor', in the form of reasonable and prudent fiscal deficit, to be financed via sovereign debt, can be revised according to updated debt sustainability analysis, and is thus added to the main components of fiscal space: domestic revenues and external grants. Note that we are not considering expenditure reprioritization or efficiency savings due to lack of consistent information, as explained in previous sections. The results of the calculations are shown in Tables 4-6. We use 2012 as a base year for more relevant comparisons given the unusual numbers in 2013 and 2014, partly driven by the tuna fishing boat debt emission and the large one-off increase in capital gains tax.

With this presentation, **scenario 1 shows a substantial increase in the resource envelope and therefore space for fiscal expansion from 31.3% of GDP in 2012 to 37.2% of GDP in 2023**. A scenario based on a 5.5% fiscal deficit benchmark for the whole period (and no change in fiscal deficit) would imply an overall higher resource envelope moving from 34.8% to 39.7% of GDP, which is quite a substantial envelope for a low-income country like Mozambique. This is mostly driven by the large increase in LNG revenues in 2023. If we compare 2012 with 2022 the potential fiscal expansion is smaller, in the order of 1.1%. The other two scenarios obviously imply a less optimistic outlook for the expansion of the basic resource envelope and underscore the need for less conservative 'fiscal anchor' in the form of larger fiscal deficits. For example, **in scenario 2, with 50% of initially expected LNG revenues, the basic resource envelope is practically equal to the one in 2012 as a % of GDP**. This is considering a more generous fiscal deficit benchmark of 3% instead of 2%, based on the assumption of greater capacity to face debt service at that time (2020s), when larger LNG revenues are expected to help pay growing debt. When a 5.5% fiscal deficit benchmark is included the resource envelope in 2023 is equivalent to 36% of non-resource GDP, which would mean a significant expansion in absolute terms, due to GDP growth in the intervening period, even if the change relative to GDP is not so substantial. In the event of no LNG revenues at all, then the fiscal situation of 2012-2014 would only be possible with substantial fiscal deficits over 6% and lower expenditures, especially in public investment. Even, in this case, however, and considering a much larger GDP in 2023 due to accumulated growth, the overall fiscal envelope in absolute terms would have expanded significantly and therefore total per capita expenditure would also increase. In *relative* terms, however, this is a negative scenario for the objective of large-scale expansion in priority spending in line with GDP increases.

As argued in section 2, however, all these estimates are based on numbers *relative* to (as a proportion of) non-resource GDP. A much more optimistic account is possible with a look at the implications in terms of *absolute* figures in real terms. Figures 14a and 14b present a large-scale increase in potential resource envelope (both with a conservative fiscal deficit benchmark of 2-4% and a more realistic one of 5.5%). In comparison with 2014 the potential resource envelope (and therefore total potential spending) would more than double by 2023 in scenario 1 and would increase by 2/3 in the most pessimistic scenario by 2023. These increases are slightly larger when we consider a 5.5% fiscal deficit benchmark for the same period.[6] By 2023, following a 5.5% fiscal deficit rule, the government would be able to spend almost MZM 325 billion in 2012 prices, compared to less than MZM 150 billion in 2012, if LNG scenario 1 is considered and still MZM 265 billion if no LNG revenues accrue during the period.

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[6] The difference between scenarios with smaller or larger fiscal deficit benchmarks is not so important because the change affects both the base and final years of comparison.

In other words, whatever happens to LNG revenues, the total fiscal resource envelope is set to increase in absolute terms if GDP growth projections are maintained. These figures need to be compared with the costing exercise of component 2 of the SitAn.

In sum, the basic calculations based on a combination of IMF projections and hypothetical sustainable fiscal deficits suggest that the increase in the potential resource envelope and therefore potential additional fiscal space in terms relative to non-resource GDP is likely to be limited until 2022 and then increase more significantly with a larger volume of LNG revenues in 2023. LNG revenues are then expected to increase further in which case the additional fiscal space will be very important. The outlook is not very promising if the assumptions in the IMF projections are correct, particularly in relation to external grants. As discussed in section 4.3, these projections may be on the pessimistic side and it may be possible that ODA does not decline to the extent predicted. This would be important for the maintenance of the fiscal space gained over the period 2008-2014 as a result of a substantial expansion in non-resource domestic revenues. If aid, in the form of concessional finance and grants, continues to flow, even with a gradual decline, the government of Mozambique may be able to sustain much needed capital expenditure without incurring in large fiscal deficits that may compromise the medium-term fiscal position and may not be sanctioned by the IMF Policy Support Instruments. The literature and interviews suggest that potential mineral resource revenues are likely to be very large but the uncertainties remain substantial and, even in slightly optimistic scenarios, these revenues are likely to arrive later than previously expected. Over a long period between 2014 and 2019 Mozambique may face a challenging transition with a possible fiscal gap of considerable proportions.

Table 4a. Fiscal space as resource envelope: 2012-2023 – LNG scenario 1 – Fiscal deficit benchmark 1 (2-4%)

LNG scenario 1 - base	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Difference 2023/2012**
A. Revenues and grants	29.3%	32.2%	27.5%	27.6%	27.6%	27.9%	27.6%	27.4%	29.7%	29.5%	29.4%	34.2%	4.9%
Domestic revenues	*23.3%*	*27.4%*	*23.7%*	*24.4%*	*24.9%*	*25.5%*	*25.6%*	*25.7%*	*28.3%*	*28.3%*	*28.4%*	*33.4%*	*10.1%*
LNG revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	2.4%	2.4%	7.3%	*7.3%*
External grants	*6.0%*	*4.8%*	*3.8%*	*3.2%*	*2.7%*	*2.4%*	*2.0%*	*1.7%*	*1.4%*	*1.2%*	*1.0%*	*0.8%*	*-5.2%*
B. Total expenditure (projected)	32.6%	36.3%	40.1%	35.9%	35.6%	34.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	0.9%
C. Fiscal deficit after grants (estimated)	-3.8%	-4.6%	-12.6%	-8.3%	-8.0%	-6.6%	-5.9%	-6.1%	-3.8%	-4.0%	-4.1%	0.7%	-4.5%
D. Fiscal deficit benchmark	-2.0%	-2.0%	-4.0%	-4.0%	-4.0%	-4.0%	-4.0%	-4.0%	-3.0%	-3.0%	-3.0%	-3.0%	1.0%
E. Potential resource envelope (A+D)	**31.3%**	**34.2%**	**31.5%**	**31.6%**	**31.6%**	**31.9%**	**31.6%**	**31.4%**	**32.7%**	**32.5%**	**32.4%**	**37.2%**	**5.9%**
F. Additional fiscal space per year	-0.1%	2.9%	-2.7%	0.1%	0.0%	0.3%	-0.3%	-0.2%	1.3%	-0.2%	-0.1%	4.8%	

Source: Own calculations from IMF and DNO data.

Table 5b. Fiscal space as resource envelope: 2012-2023 – LNG scenario 1 – Fiscal deficit benchmark 2 (5.5%)

LNG scenario 1 - base	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Difference 2023/2012**
A. Revenues and grants	29.3%	32.2%	27.5%	27.6%	27.6%	27.9%	27.6%	27.4%	29.7%	29.5%	29.4%	34.2%	4.9%
Domestic revenues	*23.3%*	*27.4%*	*23.7%*	*24.4%*	*24.9%*	*25.5%*	*25.6%*	*25.7%*	*28.3%*	*28.3%*	*28.4%*	*33.4%*	*10.1%*
LNG revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	2.4%	2.4%	7.3%	*7.3%*
External grants	*6.0%*	*4.8%*	*3.8%*	*3.2%*	*2.7%*	*2.4%*	*2.0%*	*1.7%*	*1.4%*	*1.2%*	*1.0%*	*0.8%*	*-5.2%*
B. Total expenditure (projected)	32.6%	36.3%	40.1%	35.9%	35.6%	34.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	0.9%
C. Fiscal deficit after grants (estimated)	-3.8%	-4.6%	-12.6%	-8.3%	-8.0%	-6.6%	-5.9%	-6.1%	-3.8%	-4.0%	-4.1%	0.7%	-4.5%
D. Fiscal deficit benchmark	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	0.0%
E. Potential resource envelope (A+D)	**34.8%**	**37.7%**	**33.0%**	**33.1%**	**33.1%**	**33.4%**	**33.1%**	**32.9%**	**35.2%**	**35.0%**	**34.9%**	**39.7%**	**4.9%**
F. Additional fiscal space per year	-0.1%	2.9%	-4.7%	0.1%	0.0%	0.3%	-0.3%	-0.2%	2.3%	-0.2%	-0.1%	4.8%	

Source: Own calculations from IMF and DNO data.

Table 6a. Fiscal space as resource envelope: 2012-2023 – LNG scenario 2 - Fiscal deficit benchmark 1 (2-4%)

LNG scenario 2 - conservative	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Difference 2023/2012**
A. Revenues and grants	29.3%	32.2%	27.5%	27.6%	27.6%	27.9%	27.6%	27.4%	28.5%	28.3%	28.2%	30.5%	1.3%
Domestic revenues	*23.3%*	*27.4%*	*23.7%*	*24.4%*	*24.9%*	*25.5%*	*25.6%*	*25.7%*	*27.1%*	*27.1%*	*27.2%*	*29.8%*	*6.5%*
LNG revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	1.2%	1.2%	3.7%	*3.7%*
External grants	*6.0%*	*4.8%*	*3.8%*	*3.2%*	*2.7%*	*2.4%*	*2.0%*	*1.7%*	*1.4%*	*1.2%*	*1.0%*	*0.8%*	*-5.2%*
B. Total expenditure (projected)	32.6%	36.3%	40.1%	35.9%	35.6%	34.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	0.9%
C. Fiscal deficit after grants (estimated)	-3.8%	-4.6%	-12.6%	-8.3%	-8.0%	-6.6%	-5.9%	-6.1%	-5.0%	-5.2%	-5.3%	-3.0%	-0.8%
D. Fiscal deficit benchmark	-2.0%	-2.0%	-4.0%	-4.0%	-4.0%	-4.0%	-4.0%	-4.0%	-3.0%	-3.0%	-3.0%	-3.0%	1.0%
E. Potential resource envelope (A+D)	**31.3%**	**34.2%**	**31.5%**	**31.6%**	**31.6%**	**31.9%**	**31.6%**	**31.4%**	**31.5%**	**31.3%**	**31.2%**	**33.5%**	**2.3%**
F. Additional fiscal space per year	-0.1%	2.9%	-2.7%	0.1%	0.0%	0.3%	-0.3%	-0.2%	0.1%	-0.2%	-0.1%	2.4%	

Source: Own calculations from IMF and DNO data

Table 7b. Fiscal space as resource envelope: 2012-2023 – LNG scenario 2 - Fiscal deficit benchmark 2 (5.5%)

LNG scenario 2 - conservative	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Difference 2023/2012**
A. Revenues and grants	29.3%	32.2%	27.5%	27.6%	27.6%	27.9%	27.6%	27.4%	28.5%	28.3%	28.2%	30.5%	1.3%
Domestic revenues	*23.3%*	*27.4%*	*23.7%*	*24.4%*	*24.9%*	*25.5%*	*25.6%*	*25.7%*	*27.1%*	*27.1%*	*27.2%*	*29.8%*	*6.5%*
LNG revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	1.2%	1.2%	3.7%	*3.7%*
External grants	*6.0%*	*4.8%*	*3.8%*	*3.2%*	*2.7%*	*2.4%*	*2.0%*	*1.7%*	*1.4%*	*1.2%*	*1.0%*	*0.8%*	*-5.2%*
B. Total expenditure (projected)	32.6%	36.3%	40.1%	35.9%	35.6%	34.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	0.9%
C. Fiscal deficit after grants (estimated)	-3.8%	-4.6%	-12.6%	-8.3%	-8.0%	-6.6%	-5.9%	-6.1%	-5.0%	-5.2%	-5.3%	-3.0%	-0.8%
D. Fiscal deficit benchmark	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	0.0%
E. Potential resource envelope (A+D)	**34.8%**	**37.7%**	**33.0%**	**33.1%**	**33.1%**	**33.4%**	**33.1%**	**32.9%**	**34.0%**	**33.8%**	**33.7%**	**36.0%**	**1.3%**
F. Additional fiscal space per year	-0.1%	2.9%	-4.7%	0.1%	0.0%	0.3%	-0.3%	-0.2%	1.1%	-0.2%	-0.1%	2.4%	

Source: Own calculations from IMF and DNO data

Table 8a. Fiscal space as resource envelope: 2012-2023 – LNG scenario 3 - Fiscal deficit benchmark 1 (2-4%)

LNG scenario 1 - base - very pessimistic	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Difference 2023/2012**
A. Revenues and grants	29.3%	32.2%	27.5%	27.6%	27.6%	27.9%	27.6%	27.4%	27.2%	27.1%	27.0%	26.9%	-2.4%
Domestic revenues	*23.3%*	*27.4%*	*23.7%*	*24.4%*	*24.9%*	*25.5%*	*25.6%*	*25.7%*	*25.8%*	*25.9%*	*26.0%*	*26.1%*	*2.8%*
LNG revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	*0.0%*
External grants	*6.0%*	*4.8%*	*3.8%*	*3.2%*	*2.7%*	*2.4%*	*2.0%*	*1.7%*	*1.4%*	*1.2%*	*1.0%*	*0.8%*	*-5.2%*
B. Total expenditure (projected)	32.6%	36.3%	40.1%	35.9%	35.6%	34.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	0.9%
C. Fiscal deficit after grants (estimated)	-3.8%	-4.6%	-12.6%	-8.3%	-8.0%	-6.6%	-5.9%	-6.1%	-6.3%	-6.4%	-6.5%	-6.6%	2.8%
D. Fiscal deficit benchmark	-2.0%	-2.0%	-4.0%	-4.0%	-4.0%	-4.0%	-4.0%	-4.0%	-3.0%	-3.0%	-3.0%	-3.0%	1.0%
E. Potential resource envelope (A+D)	**31.3%**	**34.2%**	**31.5%**	**31.6%**	**31.6%**	**31.9%**	**31.6%**	**31.4%**	**30.2%**	**30.1%**	**30.0%**	**29.9%**	**-1.4%**
F. Additional fiscal space per year	-0.1%	2.9%	-2.7%	0.1%	0.0%	0.3%	-0.3%	-0.2%	-1.2%	-0.1%	-0.1%	-0.1%	

Source: Own calculations from IMF and DNO data

Table 9b. Fiscal space as resource envelope: 2012-2023 – LNG scenario 3 - Fiscal deficit benchmark 2 (5.5%)

LNG scenario 1 - base - very pessimistic	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Difference 2023/2012**
A. Revenues and grants	29.3%	32.2%	27.5%	27.6%	27.6%	27.9%	27.6%	27.4%	27.2%	27.1%	27.0%	26.9%	-2.4%
Domestic revenues	23.3%	27.4%	23.7%	24.4%	24.9%	25.5%	25.6%	25.7%	25.8%	25.9%	26.0%	26.1%	2.8%
LNG revenues	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
External grants	*6.0%*	*4.8%*	*3.8%*	*3.2%*	*2.7%*	*2.4%*	*2.0%*	*1.7%*	*1.4%*	*1.2%*	*1.0%*	*0.8%*	*-5.2%*
B. Total expenditure (projected)	32.6%	36.3%	40.1%	35.9%	35.6%	34.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	0.9%
C. Fiscal deficit after grants (estimated)	-3.8%	-4.6%	-12.6%	-8.3%	-8.0%	-6.6%	-5.9%	-6.1%	-6.3%	-6.4%	-6.5%	-6.6%	2.8%
D. Fiscal deficit benchmark	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	-5.5%	0.0%
E. Potential resource envelope (A+D)	**34.8%**	**37.7%**	**33.0%**	**33.1%**	**33.1%**	**33.4%**	**33.1%**	**32.9%**	**32.7%**	**32.6%**	**32.5%**	**32.4%**	**-2.4%**
F. Additional fiscal space per year	-0.1%	2.9%	-4.7%	0.1%	0.0%	0.3%	-0.3%	-0.2%	-0.2%	-0.1%	-0.1%	-0.1%	

Source: Own calculations from IMF and DNO data

Figure 14a. Fiscal space estimate in absolute real terms: 2008-2023 (fiscal deficit benchmark 2% to 4%)

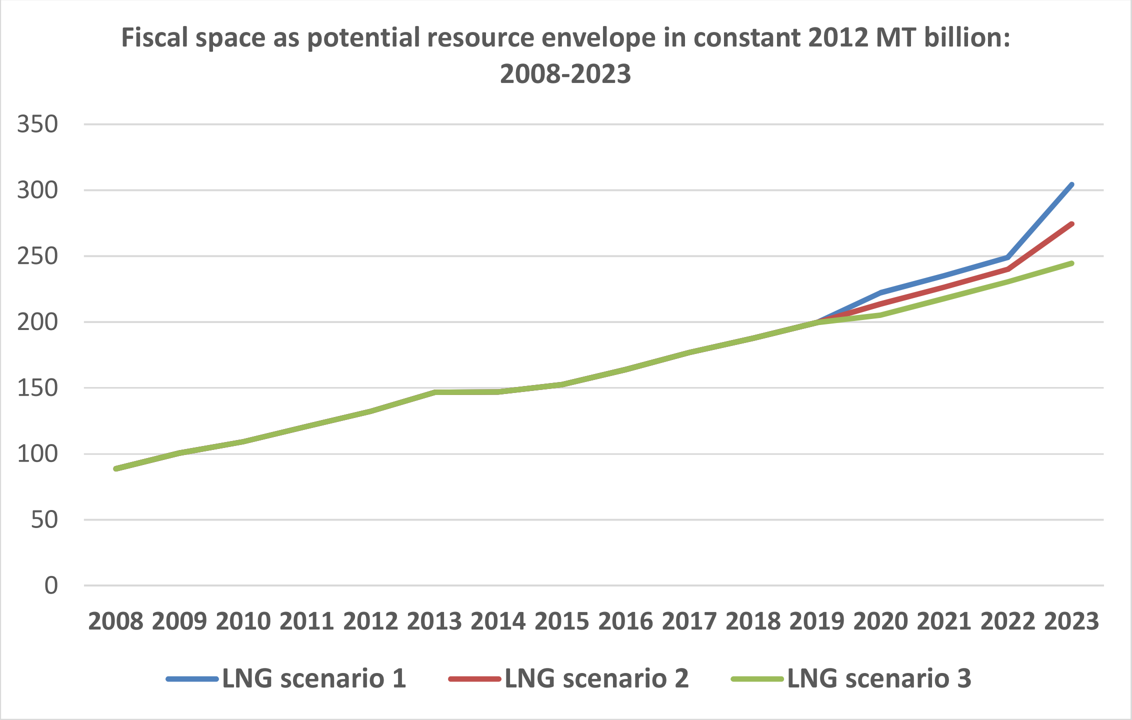
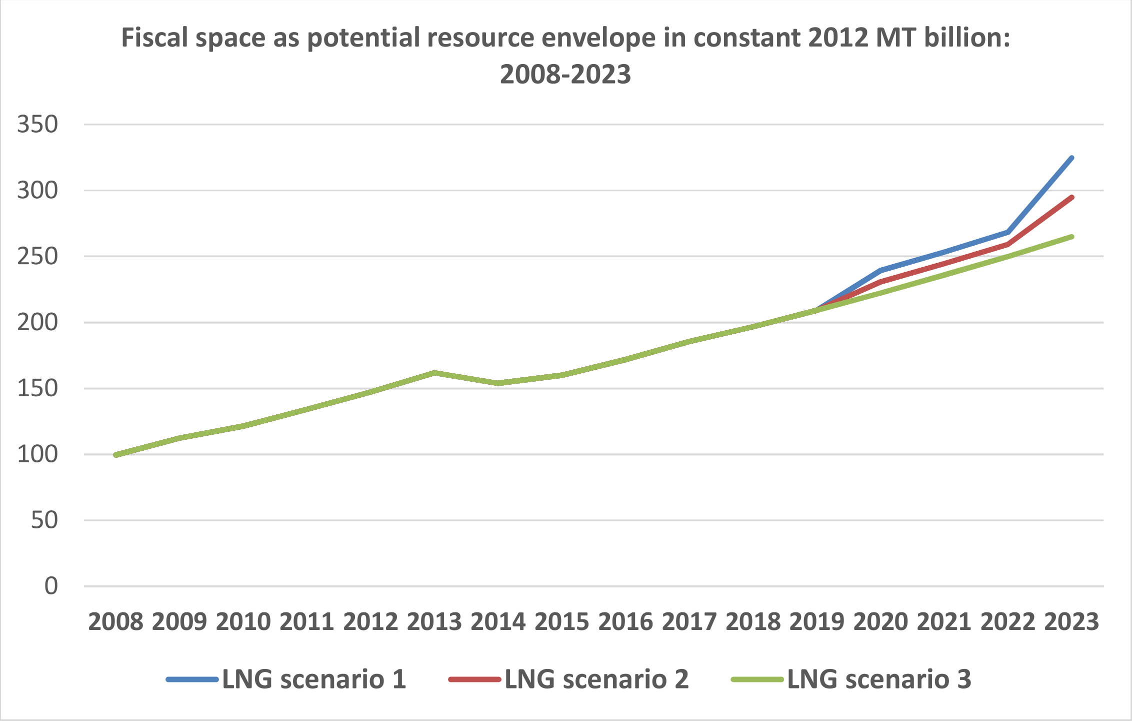


Figure 15b. Fiscal space estimate in absolute real terms: 2008-2023 – fiscal deficit benchmark (5.5%)



5 The political economy of fiscal space: some reflections

This section engages with some considerations on the political economy of an extractive system of accumulation and the implications for political developments and elite bargaining in relation to the question of fiscal space from resource revenues. The section draws on some of the literature on the political economy of growth in Mozambique and the interviews conducted with a number of key informants especially in academia and aid agencies.

The incentives to further deepen mineral resource dependence in a context of elite bargaining heavily dependent on mega-project rents may create political fragmentation that may jeopardise political stability gains in recent decades (Perez-Nino and Le Billon 2013). Some of the tensions and indications of instability discussed in the previous section suggest that a process of ‘spoils politics’ associated with big expectations from resource revenues cannot be discounted. With Guebuza’s succession pending and elections quite close, the key question is whether Frelimo will manage to forge a new consensus that will keep different factions focused on achieving stability and maximising the use of mineral rents for developmental purposes. That remains an open question and will have serious implications for the use of additional fiscal space.

The challenge for the period 2014-2022 is that expectations are high but additional fiscal space may be limited and only arrive late. In such a scenario factional tensions within Frelimo may exacerbate some of the simmering tensions with other stakeholders and precipitate a further decline in aid flows. Such a scenario may also affect the composition of expenditures and public investment in particular, which may be directed to serve the interests of those sectors that have a special interest in extractive activities. In other words, limited additions in fiscal space may come accompanied by different competing demands for additional resources and differences in terms of priorities. Given the focus of aid agencies on social infrastructure, it would not be surprising if the government decided to dedicate the bulk of the additional fiscal space to projects that would be unlikely to be financed by the core group of donors in the country. This might mean certain forms of economic infrastructure, especially the kind connected to the emerging extractive industries, thereby reducing the scope for economic diversification and social improvements (Castel Branco 2013).

The IMF’s position with regards to the potential of growing fiscal space is cautious particularly because of uncertainties over policy decisions about the use of additional fiscal space. The IMF is not particularly optimistic that a rapid rise of public investment as a result of increasing fiscal space is necessarily desirable. The current position is that public investment levels are considered high, at 15% of GDP, and not sufficiently effective. A key issue, therefore, is identification and promotion of critical infrastructure and social programs/social expenditure that promote human capital and thus Mozambique’s capacity to finance its policy objectives without compromising even more its debt stability.

There is some evidence already of possible complications and added sources of instability as the drift towards ‘spoils politics’ gains momentum, notably the renewed clashes with Renamo and the incidences of fraud and reaction in the past elections.

A key aspect is whether there will be political commitment to two things:

1. A protection and expansion of the fiscal envelope for social spending despite competing demands from other potential uses, notably in economic infrastructure.
2. A diversification and economic transformation agenda to reduce the dependence on mineral resources in the long term, i.e. a vision towards a productive transformation to create the basis of growth for the post 2040-2050 when mineral resource rents are expected to dwindle.

For the first commitment, three considerations are important. One, whether social spending is seen as necessary for political legitimacy in the current context. Two, whether social spending continues to receive priority attention for its expected positive effect on the viability of long-term growth and future economic transformations. Three, whether a gradual decline in aid flows may create further needs for the improvement of social infrastructure and education/health provision thereby creating a tension with competing demands for large-scale economic infrastructure.

The use of fiscal space may also be driven by contingent domestic political considerations that will hinge on levels of social and political stability. Depending on what happens to social and political instability, there may be very different outcomes in relation to the use of fiscal space however limited this may be. One needs to remember the impact that the ‘food riots’ had government policy and spending, and budget reprioritization. Much is at stake with the new windfall gains coming from mineral extraction and decisions over the use of fiscal space will be partly determined by the evolution of state-society relations in this period and by the eventual emergence of serious political contestants to power in the next 20 years. The rise of opposition politics reflected in the MDM results in recent elections, despite being still distant from replacing the regime in power, may signal changes in future decades, which will have an impact on the government’s take from mineral resources and on the use of fiscal space. There is no guarantee, however, that an eventual change in power will lead to significant shifts in the government’s stance in relation to the extractive industry and its stance in relation to spending priorities.

Greater social mobilization around competing demands for more resources to be spent on priority sectors may indeed have an impact on the use of fiscal space. There are recent signs of increasing bottom-up mobilization, as well as internal debates within the elite about the best course of action to ensure social stability, according to some of our interviewees.

The expectation that a large part of the additional fiscal space will go to economic infrastructure is plausible. This was echoed by several interviewees, who also see a parallel with other countries where fiscal space has been created, for example, through the rise of ‘emerging donors’ like China. The national development strategy (ENDE) which is in the process of elaboration suggests an aspiration to *developmental state* characteristics, with some of the following features:

1. A belief in structural change as necessary for long-term development
2. A stronger role for the state in driving this process in the long-term
3. An aspiration to middle-income status by 2035
4. An objective to substantially increase investment, both private and public investment
5. Industrialization through special economic zones (Chinese model)
6. Use of new energy resources to expand power generation and reduce energy costs for incipient industrial sector

There are a number of policy measures that are contemplated in the strategy. The most notable ones are:

1. For the creation of initial conditions for industrialization the following measures are considered:
    a. Creation of industrial parks/ SEZs to boost industrialization and linkages
    b. Creation of competitive integrated agricultural/fisheries areas with the aim of substantially increasing cultivated land and irrigated areas
    c. Human capital enhancement, especially through massive expansion in secondary education and technical/vocational training
    d. Creation of sovereign fund with 30% of annual revenues from mineral extraction. NB: sovereign fund resources may be used to finance government's acquisition of shares as well as the national development bank
    e. Creation of a national development bank to boost finance for government projects and for large Mozambican private companies.
    f. Creation of national 'champions' as companies (private, public or joint-ventures).
2. Once the above conditions are in place, two priorities will dominate the use of created resources and financing mechanisms:

    a. Infrastructures (economic infrastructure)
    b. Development of human capital

The substance of the emerging national development strategy, should it be translated into an effectively implemented set of policies, would mean a tendency towards a productivist approach centred on the structural transformation of the Mozambican economy. This would entail a very substantial use of additional fiscal space for economic infrastructure and human capital development in addition to enhanced support for emerging national companies. In other words, there will be significant competition for resources and social infrastructure may not receive as much attention as during the period 1996-2010.

6 Conclusions

This report set out to assess the prospects for expanding fiscal space to meet the consolidated financing needs budgeted in component 2, in a context where the development of extractive industries (gas, coal and other minerals) is widely expected to transform Mozambique's public finances in the coming years.

From the analytical/conceptual discussion the report emphasised the following points:

1. There is no one single definition of fiscal space, but generally a static rather cautious one dominates existing projections.
2. Different definitions of fiscal space have different implications in terms of conditions for fiscal space creation and generally for fiscal expansions.
3. The institutional and political economy environment are critical to examine fiscal space potential in future scenarios but political and institutional development are intrinsically hard to predict with any precision.

4. A fiscal diamond is a useful tool to decompose the different sources of fiscal space and therefore distinguish between different types of fiscal space creation, whether more or less fiscally sustainable.

We have then considered various scenarios, based on existing projections from studies conducted by the IMF (2013b), Milena and Xiong (2013) and ILO (2013). The study has then built on these scenarios and data offered by DNO to construct some basic projections considering alternative methods and assumptions. This exercise help us highlight some of the key uncertainties surrounding any calculations of fiscal space and the various concepts that can be considered to calculate overall fiscal space creation and its components.

In all cases, projections show five main things. First, substantial fiscal space has been already added and can still be added through improvements in domestic fiscal mobilisation before natural resource revenues start to stream. Second, fairly moderate (and realistic) expectations about LNG revenues, which should start flowing only in 2020, also show that these revenues will make a difference to fiscal space but only moderately in relative terms (% of GDP), given that during the period under consideration LNG revenues will be limited until productive capacity is expanded into the mid-2020s. Third, the outlook is not very promising if some of the assumptions in the IMF projections are correct, particularly in relation to external grants. As discussed in section 4.3, these projections may be on the pessimistic side and it may be possible that ODA does not decline to the extent predicted (see more below), which would mean a greater fiscal space in relative terms than projected here. Fourth, assuming the non-resource GDP growth projections are correct (and that is also subject to obvious uncertainties), all scenarios (more or less optimistic) imply a substantial increase in *absolute* terms for the overall fiscal resource envelope. Thus by 2023, following a 5.5% fiscal deficit rule for the whole period, the government would be able to spend almost MZM 325 billion in 2012 prices, compared to less than MZM 150 billion in 2012, if LNG scenario 1 is considered and still MZM 265 billion even if no LNG revenues accrue during the period. In other words, whatever happens to LNG revenues, the total fiscal resource envelope is set to significantly expand in absolute terms if GDP growth projections are maintained. Fifth, what happens to fiscal deficits and the possibilities for deficit financing can also have a substantial impact on fiscal space and may also result in potential imbalances that the IMF is trying to prevent by recommending a strategy of gradual scaling up of public investment. The challenge is that there is not one single golden rule for a fiscally sustainable deficit, unless we know more about the long-term pay-offs of public investments financed through sovereign debt. This report has considered relatively conservative 'fiscal benchmarks' for purposes of illustration but it may well be that larger fiscal deficits can be sustained for longer periods of time in anticipation of large resource revenues to flow from the 2020s onwards, especially if different sources of international borrowing become gradually available. Over a long period between 2014 and 2019 Mozambique may however face a challenging transition with a possible fiscal gap of considerable proportions as a proportion of GDP, even though expenditures in absolute and per capita terms will probably continue to increase.

The uncertainties over the size of fiscal space have been analysed in relation to its four components: domestic revenues, ODA flows, deficit financing and reprioritization of expenditures. This report has focused on the first two and suggested that there are strong forces potentially driving a decline in ODA flows, which underpin IMF projections, but this is also subject to uncertainty given past record of aid flows (and their resilience even during a global recession), and shifting donor agendas. What does seem to be plausible is a change in the composition of ODA flows, with a move away from budget support and common funds and back into project aid. An analysis of the political economy of domestic resource mobilisation and current revisions of estimates of fiscal revenues from natural gas should tame overly high expectations. Recent studies show that potential production may have been overestimated and that the fiscal regime may reproduce some of the problems observed in previous experiences of taxing mega-projects. The upshot of this is that the potential for fiscal space creation could be far bigger if the fiscal regime was renegotiated and aligned to the more recent legislation for the extractive sector. That is another source of uncertainty but a political economy analysis and the current trajectory of the Mozambican system of accumulation would suggest that substantial renegotiations of the fiscal regime are unlikely. In an ideal scenario of a more heavily taxed booming mineral extractive sector and solid non-resource GDP growth the expansion of the overall fiscal resource envelope in absolute (real) terms may well be unprecedented and may allow the government to distribute fiscal expenditures from an expanding pie over a wider range of social and economic priorities.

Finally, there is the question of how fiscal space will be used in both relative and absolute terms. This is largely a political question and will depend on important developments within Frelimo and in the country in the next few years. Our expectation from current developments, official discourse and some public documents, is that a large share of additional fiscal space will be directed to economic infrastructure, but, given substantial expansion of the resource envelope in real absolute terms, this should not necessarily mean a reduction in expenditures devoted to social infrastructure, particularly health and education. Nonetheless, some analysts fear that the kind of economic infrastructure to be prioritised will be designed to reinforce the extractive nature of the Mozambican economy rather than contribute to substantial economic diversification. This may affect the growth prospects of non-resource GDP and the sustainability of Mozambique's growth pattern, with resulting long-term implications for future fiscal space and economic policies once LNG revenues start to dwindle towards 2050. But this is very far and even harder to predict.

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APPENDIX 1 – Methodology for estimates of domestic revenues and expenditures

Methodology and assumptions

In order to forecast trends of government expenditures and resources (revenues, grants and credit) for the period 2014 – 2022 data from 2008 to 2012 is considered based on the reports on state accounts (2008-2011), the budget execution report 2012 and IMF projections until 2018. Overall, budget allocation figures are different from ‘actual government expenditures and revenues’ or ‘execution’. Therefore, the budget execution figures were considered as the starting points to determine average annual growth rates for both government resources and expenditures by type. Five-year averages and IMF projections were considered to forecast trends in government spending. Since the latter vary between sectors, the following assumptions for the parameters were used:

A. Government expenditures by sector and type

Expenditures by sector

The full discussion and details of the methodology for sector expenditures (modelling of future social spending) are explained in report on costs.

Expenditures by type (Excel sheet ‘Resources and Exp Nominal’)[7]

1. Recurrent: recurrent expenditures include mainly staff remunerations, goods and services to run state institutions. Estimates are based on IMF projections until 2018 and extrapolated for the rest of projection period. Recurrent spend is set to reduce from 22.8% of GDP in 2014 to 19.9% of GDP in 2018. For simplicity, it is assumed that they will remain unchanged at 19.9% of GDP until 2023.

2. Investment: total investment expenditure includes the internal and external components. Estimates are based on IMF projections until 2018 and extrapolated for the rest of projection period. The IMF projects a reduction of the GDP share of investment expenditure from an unusual 15% in 2014 to 10.7% in 2018. In light of the rising demand for socio-economic infrastructure total investment expenditures are assumed to remain at 10.7% of non-coal/non-LNG GDP from 2019 to 2023, but increasing in absolute terms in association with real GDP growth. This would allow a reasonable increase of public investment in real terms but may be below government plans in anticipation of windfall gains from mineral revenues.

3. Financial operations: total spend on financial operations (operations linked with the State shares in public and private enterprises on the one hand, and interest on public debt on the other hand) will be linked to IMF projections until 2018 and then constant in % of GDP until 2023.

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[7] Figures in nominal terms.

B. Government resources (Excel sheet 'Resources and Exp Nominal')

Three forms (sources) of government financial resources are taken into account: domestic revenues, external grants and credit (domestic and external).

1. Domestic revenues. These are composed of two broad (2) types, following the IMF's classification: tax revenues and non-tax revenues (which also include assigned and capital revenues). From 2008 to 2012, the share of total domestic revenues on GDP rose significantly from just above 16.9% to almost 23.3%. The individual projections for each of these revenues grew as follows:

   Tax revenues: these include all types of tax revenues in the economy including coal and on-shore gas but excluding LNG; IMF projections are used until 2018 followed by a 0.1 percentage point increase every year until 2023 to accommodate potential growth in revenue collection from growth in the non-resource sectors and gradually expanding tax base..

   Non-tax revenues: the IMF projects them to remain at 3.9% of GDP from 2014 until 2018. The same projection is extrapolated to 2023 as there is no reason to expect a decline from this level.

   Revenues from Liquefied Natural Gas (LNG): the assumptions are based on the IMF's Fiscal Analysis for Resource Industries (FARI) model used to predict the contribution of the LNG sector on GDP and fiscal revenues[8]. Moreover, the Mozambican fiscal regime for natural gas is such that there will be three main sources of government revenues: production tax (royalty), a production sharing agreement and a corporate income tax levied on the profits of gas firms. The FARI model results predict that the combination of these revenues for government will be very small in the first few years of exploration being possibly negative between 2014 and 2018 (though in latest updates there is no negative flow in the projections). The effects of LNG revenues will probably start to have a positive effect on the economy only in 2020 accounting for about 2.4% of total fiscal revenues and remaining at this level until 2022 to then jump to over 7% in 2023. Three different scenarios are considered:

   - *Scenario 1 (Optimistic LNG revenues)*: gas production and exports are expected to start in 2020 and consequently LNG fiscal revenues are set to rise from 0% of non-coal/non-LNG GDP in 2014 to a maximum of 7.3% of non LNG GDP by 2023
   - *Scenario 2 (Conservative LNG revenues)*: the assumptions under scenario 1 are reduced to a fraction of 50%
   - *Scenario 4 (Very Pessimistic LNG revenues):* No LNG revenues in the period under consideration because of failure of the project or delay beyond 2023.

These alternative more pessimistic scenarios on LNG revenues would simply reflect different combinations of events which could significantly reduce the expected LNG revenues, namely:

- Less positive trends in international gas prices
- Reduced demand for LNG

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[8] Melina and Xiong (2013).

- A fiscal regime with a reduced ‘government take’
- Infrastructure bottlenecks
- Reduced number of LNG trains operating
- Delays in the implementation of production

It is not possible to obtain accurate projected estimates for each of these uncertainties, hence the simple rule of thumb of fractions from a base scenario that may be considered as relatively optimistic given new information on prospects for the LNG sector (see below).

2. External grants. These have three components: general budget support, common funds and projects. Overall, from 2008 to 2012 they grew from MT 23 billion to 27.3 MT billion (modest average annual growth rate of 2.6%) but declined from 9.6% to 6% of GDP. Thus, for the period 2014-2022, the assumptions are as follows:

   General Budget Support (GBS): projections on GBS are based on IMF data i.e. declining from 2% of GDP in 2014 to 07% of GDP in 2018; in addition, annual declines are assumed by the factor **0.1 pp.** (the drop rate for 2017-2018) until the level of 0.2% of GDP in 2023;

   Support to Common Funds: IMF projections are followed until 2018 and from 2019 onwards we hypothesise a continuation of the gradual decline in previous years by 15% annually;

   Projects: Same logic as in common projects but a less rapid decline after 2018, i.e. by 10% annually.

3. Credit. Total credit has two components: internal credit and external credit. No projections are made for these components. The model presented here shows the magnitude of the budget deficit after grants and only assumes that it will be financed by both internal and external credit in accordance with the IMF estimates.