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The Resource Curse Debate after Mozambique's Emergence as an Energy Exporter[1]

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Introduction

Mozambique has long been considered one of the few resource-poor economies in sub-Saharan Africa. Strictly speaking, the exploitation of energy resources in the country is not new. We refer below to the traditional small scale coal mines in Tete Province, to the gas fields of Inhambane and Sofala Provinces, which have been operating since the 1960s, and to the generation of hydropower from the 1970s onwards. Now the country is, however, experiencing a resource boom, triggered by

[1] We would like to thank the participants of the panel on 'A New Scramble for Africa?: The Rush for Energy Resources Southwards of the Sahara', held at the 5th European Conference on African Studies, for their helpful comments that we tried to incorporate in our paper as best as possible. Our chapter has also benefitted from several reviews by Sören Scholvin.

massive discoveries of energy resources and related increases in foreign investment, primarily in the coal, gas and hydro industries.

Mozambique is expected to become soon one of the world's top 10 coal producers and one of the top 20 producers of gas. USD 2.7 billion have already been invested in the mining sector, and the prospects are vastly greater, including a USD 50 billion investment in a liquefied natural gas (LNG) plant in Cabo Delgado Province and a number of ambitious hydropower schemes such as the second unit for the Cahora Bassa Power Station and a new hydropower station further downstream on the Zambezi River (Chambal 2010; Selemane 2013). These investments may contribute considerably to higher economic growth rates and a rise in the country's per capita income. The main challenge lies in transforming them into human development goals, especially into poverty reduction.

In this chapter, we assess the recent and possible future impact of the emerging coal, gas and hydro industries on the Mozambican economy since these are the sectors where the largest investments are foreseen. Our concern is the effect of these emerging sectors on structural economic and social change, and on the living conditions of the vast majority of the Mozambican people. In the second section of this chapter, we describe outstanding features of the resource boom at the sectoral level. We show that the recent discovery of energy resources, along with the increasing capacity of the hydropower sector, is changing the size and shape of the Mozambican economy (not necessarily its structure though), as well as Mozambique's relations with traditional and new foreign partners.

We devote the third section to analysing the development of the coal, gas and hydro industries from the perspective of resource curse theory. We examine possible economic and political impacts through the massive inflow of foreign capital, which

influences the value of the national currency ('Dutch Disease'), rent-seeking by the political elite, historical trajectories of weak statehood and dependency on foreign aid, and the push for liberalisation by international organisations since the 1980s. Having already hinted at some remedies for the Dutch Disease in the third section, we shift the focus to Albert Hirschman's concept of 'linkages' in the fourth section in order to analyse how the exploitation of natural resources may cause changes in the structure of Mozambique's economy. Hirschman's thinking has recently received much attention from international organisations because it hints at paths to resource-induced sustainable development (OECD/AfDB/UNDP/ECA 2013; UNCTAD 2012). We distinguish four types of linkages that may be beneficial to Mozambique: backward (such as provision of transport services by locals for overseas companies), forward (mostly electricity generation through coal, gas and hydro), horizontal (Mozambicans using infrastructures built by/for overseas companies, for example) and fiscal (in other words, taxes and royalties paid by overseas companies).

An estimate of the potential for structural transformation of the Mozambican economy is crucial to our analysis. By this we mean a diversification of the economy that would strengthen sectors other than resource extraction, improve the quantity and quality of jobs created, and equalise the distribution of incomes derived from new economic activities. We consider this assessment essential because, from a political economy standpoint, not only is Mozambique now a resource abundant economy but, in the future, it may also be a resource dependent one.

Since the future economic growth of Mozambique will probably rely on the exploitation of energy resources, the degree of structural economic dependence on these activities will increase. Resource dependence has strong implications for the possibilities of structural economic change, and also for the political economy of

revenue management (Brunnschweiler and Bulte 2008). In comparison to mainstream literature, which tends to concentrate on corruption, 'bad governance' and other features ascribed to local actors, we argue that historical trajectories, non-local actors and the international political economy are critical for the impact of abundant resources on Mozambique.

Exploiting Energy Resources in Mozambique

In recent years, massive coal and gas reserves have been discovered throughout Mozambique, especially in the central and northern provinces. Hydropower capacity and transport infrastructure is to expand tremendously through a number of ambitious projects. The overseas mining companies Rio Tinto and Vale have massively invested, not only in the extraction of the coal reserves themselves, but also in railway lines that connect the ports of Beira and Nalaca to the coalfields in Tete Province. The hydropower station at the Cahora Bassa Dam will receive a second unit. A totally new hydroelectric dam is envisaged further downstream on the Zambezi River. In the following subsections, we present the specific developments in the coal, gas and hydro sectors. Map 1 shows Mozambique's major coal and gas reserves, its hydropower stations and related infrastructure:

Map 1: Energy reserves and related infrastructure in Mozambique

Source: Authors' own compilation

Coal

Mozambique has large coal resources in Tete Province, estimated at 23 billion tonnes (HRW 2013). Some of them were traditionally exploited in the form of small-scale mines for both domestic use and export. The small-scale mines became marginal during the civil war. In recent years, however, the extraction of the coal by overseas companies has expanded rapidly. Besides its quantity, the high quality of Mozambique's coal helps to explain this development. The coal in Tete Province is of better quality than the coal mined, for example, in South Africa. Around 70 per cent of the coal reserves found so far is made up of metallurgical coal. The remaining 30 per cent is thermal coal (OECD/AfDB/UNDP/ECA 2012). Metallurgical coal, also known as coking coal, is used in aluminium, iron and steel production, whilst thermal coal, also referred to as steaming coal, is burned to generate electricity. There appear to be potential coalfields in the provinces of Cabo Delgado, Manica and Niassa too. According to several optimist projections, Mozambique will produce 100 million tonnes of coal a year by 2015, when the mines in Tete reach full capacity (Selemane 2013).

In 2010, the British company Beacon Hill Resources purchased the local company Minas de Moatize, at that time Mozambique's only operational coal mine, located in Tete Province. The new owners increased production very quickly. The extraction of coal rose from initially 30,000 tonnes a year in May 2010 to 96,000 in November 2010 (USGS 2010, 2011). Six years before the acquisition of Minas de Moatize by Beacon Hill Resources, the Brazilian company Vale had won a bid to develop the Moatize coalfield, which is considered one of the world's largest untapped mining areas. Vale carried out a major investment of USD 1.7 billion there in an open cast mining project, which started production in 2011. A few months later, the first shipment of coal in 20 years was dispatched from the port of Beira. Vale's production

in Moatize is expected to increase from 2.6 million tonnes in 2012 to 3.5 million in 2013 (AllAfrica, 2013a).

Almost all metallurgical coal and around half of the thermal coal from Moatize are likely to be exported. The other half of the thermal coal will be used in a 600 megawatt coal-fired power station that Vale would like to build near the mining site (USGS 2010, 2011). Vale's main interest in coal extraction in Mozambique is, however, related to commercialisation abroad, particularly in China and India, whose demand for coal is projected to be amongst the largest in the world in the near future (IEA 2013). Such a marketing strategy is eased by the fact that Mozambique's harbours are well positioned to serve the growing Chinese and Indian markets because they are closer to them than other major coal producers and exporters, in particular Canada and the US.

Other major players in resource extraction in Mozambique are Riversdale Mining from Australia and its joint-venture partner Indian Tata Steel. They opened a new mine in Benga, close to Moatize, in 2011. Later that year, UK-based Rio Tinto bought Riversdale and took control of the Benga project (of which 65 per cent was owned by Rio Tinto and the remaining 35 per cent by Tata Steel) as well as of its 22 exploration licences in Tete Province (OECD/AfDB/UNDP/ECA 2012). Similar to Vale, Rio Tinto plans to build a coal-fired power station with an initial capacity of 500 MW, which may eventually increase to 2,000 MW (USGS 2010, 2011).

Other coal projects in Tete Province, carried out by the Eurasian Natural Resources Corporation, Jindal Steel & Power from India, UK-based Ncondezi Coal Mining, Nippon Steel from Japan, and the renowned South African mining company Anglo American, are all about to start production before 2016, serving Asian markets, principally China and India, but also Japan and South Korea (USGS 2010, 2011;

Mining Review 2012). As a consequence of the rapid expansion of mining in Tete, the overall coal output increased from nearly 1 million tonnes in 2011 to 5 million in 2012 (OECD/AfDB/UNDP/ECA 2012, 2013).

The main bottleneck to the expansion of coal production is transport infrastructure. Some of the initial production expectations by the main overseas companies have, for this reason, not been met. For the moment, the mines in Tete Province are mainly using the Sena Railway Line to the port of Beira. A railway line to the port of Nacala, where a new coal terminal will probably be constructed, is being rehabilitated. Its present capacities are negligible; for instance, trains move at an average speed of 20 kilometres per hour. After rehabilitation, the Sena Line will double its capacity, reaching 6 million tonnes a year. There are plans to double its capacity again by 2018, as well as to upgrade the coal terminal in Beira so that it will be able to handle 20 million tonnes of coal a year, which will still not be enough to meet the demand of overseas mining companies (Scholvin and Plagemann 2014).

Whilst the rehabilitation of the railway corridor to Nacala and/or a new connection to Moatize via Malawi, as well as the expansion of the Sena Line, are sponsored by Vale, Rio Tinto plans to build a railway line on the north-eastern side of the Zambezi River, terminating at the yet-to-be expanded port of Quelimane, and a new deepwater port at Macuze, which is close to Quelimane (OECD/AfDB/UNDP/ECA 2012; Selemane 2013). Once these projects have been concluded, the coal mines in Tete Province will considerably increase their production. According to some projections, the volume of coal shipped via Beira and Nacala will multiply by 20 and 24 times respectively by the year 2020 (Lopes 2013).

Gas

Gas was first discovered in Mozambique in the 1960s in Inhambane and Sofala Provinces but large scale production started only in 2004, when the South African company Sasol began to exploit the gas fields of Pande and Temane . Overall reserves in those two gas fields are estimated to be about 105 billion cubic metres (cum). The output is mostly exported to chemical plants and the Secunda Power Station in South Africa (Chambal 2010; Selemane 2013).

More recently, the Anadarko Petroleum Corporation from the United States and ENI from Italy made large offshore discoveries in Cabo Delgado Province, more specifically in the Rovuma Basin. The two companies have agreed to jointly build a large LNG plant in this part of Mozambique, which is seen as one of the most ambitious developments in the LNG sector worldwide because it may become the second-largest LNG plant in the world, costing USD 50 billion (Chazan 2012, Selemane 2013). The latest estimate of recoverable resources in the area is over 4 trillion cum, far more than in Inhambane and Sofala Provinces. Sector experts even estimate a further 3 trillion cum of gas to be discovered in Cabo Delgado Province (OECD/AfDB/UNDP/ECA 2013). Already 4 trillion cum would make Mozambique second to Nigeria in sub-Saharan Africa in terms of gas reserves. Mozambique is also expected to become the second-largest exporter of LNG of the subcontinent by 2025, provided that production estimates are met (PwC 2013; Selemane 2013). The exploitation of the Rovuma Basin is likely to begin in 2018 and will probably last for about three decades (SPTEC Advisory 2013).

In addition to the already mentioned overseas companies, which play a predominant role in Mozambique's emerging gas sector, various other enterprises have become involved. Amongst Anadarko's most important joint-venture partners are Canadian

Artumas, which changed its name to Wentworth Resources in 2010, Indian Bharat Petro Resources, which is a full subsidiary of the state-controlled Bharat Petroleum Corporation Limited, UK-based Cove Energy, which has recently been acquired by Thailand's national oil company PTT Exploration and Production, and India-based Videocon Industries.

Regarding ENI's joint-venture partners, the China National Petroleum Corporation, the Galp Energia from Portugal and the Korea Gas Corporation are to be noted. Norway-based Statoil and British Tullow Oil cooperate in areas of the Rovuma Basin not ascribed to Anadarko or ENI; so do Petronas from Malaysia, Brazil's Petrobras and South Africa's PetroSA. In all the concessions granted to these companies, Mozambique's National Hydrocarbons Company (*Empresa Nacional de Hidrocarbonetos*), maintains shareholdings of 10 to 15 per cent (Gqada 2013; Selemane 2013).

Hydropower

Mozambique is a key hydroelectric producer thanks to the power station at the Cahora Bassa Dam, which began to operate in the mid-1970s but was cut off from its South African customers during the civil war. Since its rehabilitation in 1997, Cahora Bassa reaches a maximum output of 2,075 MW. Located on the Zambezi River in Tete Province, it is the second-largest hydroelectric project in the Southern African Development Community, just behind the Inga Power Station in the Democratic Republic of the Congo, whose expansion Agathe Maupin analyses in Chapter X of this edited volume. Hydroelectricity of Cahora Bassa (*Hidroeléctrica de Cahora Bassa*), the company that runs the power station, was jointly owned by Mozambique and Portugal (with 18 and 82 per cent of shares respectively) until 2007. Then,

Mozambique took control by buying from Portugal all but 15 per cent of the shares. In 2012, the two governments reached an agreement whereby Portugal will sell all remaining shares to Mozambique in two stages, to be completed by 2014 (OECD/AfDB/UNDP/ECA 2012).

Almost all electricity generated at Cahora Bassa is exported, mainly to South Africa, whose demand continues to grow and whose post-apartheid governments have shown clear interest in cooperating with neighbouring countries on energy, as analysed in Chapter X of this book. Malawi and Zimbabwe import much smaller shares of Cahora Bassa's output. In the context of the Southern African Power Pool, an inter-governmental organisation that seeks to coordinate the energy policies of its 16 member states, Mozambique is working on better transmission lines to its neighbours, in particular Malawi, South Africa, Zambia and Zimbabwe.

At the same time, domestic demand is growing and Mozambique seeks to increase its energy supply to facilitate industrialisation projects such as aluminium smelting. On top of that, the Mozambican government wants to increase electrification from presently 12 per cent of all households to 20 per cent in 2020 (Chambal 2010). It is also working on a north–south high-voltage transmission line from Cahora Bassa to Maputo (OECD/AfDB/UNDP/ECA 2012), the city with the highest energy demand – mostly because of the aluminium smelter Mozal, which accounts for 65 per cent of Mozambique's electricity demand (Justiça Ambiental 2012). As soon as this transmission line is operational, selling electricity from Cahora Bassa to South Africa will not be a rational strategy anymore given that Mozal presently imports South African electricity at higher prices.

In accordance with the considerable current and future demand, several projects are being carried out in order to generate more electricity in Mozambique: Cahora

Bassa's capacity will increase by 850 MW as a consequence of the ongoing northern expansion of the dam. A totally new hydropower station in Mphanda Nkuwa, downstream from Cahora Bassa, is planned. It will reach a capacity of 1,300 MW in the first phase, and about 2,500 MW by the end of the second, and is estimated to be operational by 2017[2] (Chambal 2010). The government of Mozambique estimates that over 60 potential small hydropower projects in the central and northern provinces, meaning Manica, Niassa, Tete and Zambezia, hold a joint potential for another 1,000 MW (Hankins 2009).

Energy Resources in Mozambique: Prelude to the Resource Curse?

A useful tool to analyse the impact of the exploitation of natural resources in developing countries is the resource curse framework. Although it is a somewhat limited approach, the different theories associated to it give interesting insights about the mechanisms that often prevent countries with abundant natural resources from translating their exploitation into developmental outcomes.

The first version of the resource curse approach to be considered is the 'Dutch Disease'. As a consequence of the boom in mineral exports, foreign capital enters massively in resource abundant economies, leading to an over-appreciation of the national currency and therefore hurting the tradable non-mineral sector.[3] The reason for this is that the prices of domestically produced tradable goods increase relatively vis-à-vis imports. The latter become cheap because of the over-appreciated national currency (Corden and Neary 1982). This approach is static, and in consequence

[2] Information gathered from one of the companies involved in the project (http://www.insitec.co.mz).

[3] Tradable goods are all goods that can be produced at one place and consumed/sold at another, cars for example. Goods that can hardly be transported – a haircut for instance – are defined as non-tradable.

neglects the possible role of certain active policies that can stem these macroeconomic effects on the real effective exchange rate (Saad-Filho and Weeks 2013).

The setting for the arrival of large sums of foreign capital is neither volatile nor unpredictable. These sums can be properly managed to avoid decreasing competitiveness of domestically produced tradable goods, using monetary sterilisation; meaning building foreign exchange reserves instead of allowing the new financial inflows to circulate inside the country. Sovereign wealth funds like Norway's Government Pension Fund–Global or Kazakhstan's National Fund have roots in such policies. Mozambique might consider establishing a similar fund to manage some of its resource revenues, an issue which is actually under discussion (AllAfrica 2012, 2013b).

We also have to take into account that not all the turnover made by the sales of these minerals will reach Mozambique, thus limiting the possible effects of the Dutch Disease mechanism. In order to see how much of the total turnover reaches the country, it is necessary to examine the terms of the contracts between the government and the overseas companies involved in the exploitation of natural resources, including the legal framework they face regarding taxes and royalties. The policies of reinvestment by the overseas companies, on which we comment further below, matter as well.

Moreover, we think that Dutch Disease effects can be overcome with active policies in favour of the negatively affected sectors, channelling the additional resources created by resource exploitation into technologically more advanced and job-creating sectors. In the case of Mozambique, that would include basic industries such as food-processing. It would allow those sectors to add more value, thus compensating for

their loss of competitiveness due to changes in relative prices (Saad-Filho and Weeks 2013).

A second feature of the resource curse framework is the rentier-state model, according to which the low growth rate observed in countries with abundant natural resources is due to a steady external rent that results from resource exploitation. This external rent is consumed by the country's political elite and its associates. It feeds corruption and waste of public money (Auty 1993; Ross 1999). Furthermore, if the external rent gives the government a sufficient monetary base, it will not be necessary to tax the population, weakening the social contract between citizens and state. In such a situation, the citizens have almost no control over government spending and the government does not have an explicit obligation to meet social demands (Karl 1997). Personal enrichment of the elite reaches an exceptionally high level in this context.

In the according publications by Sachs and Warner (1995), as well as those by Collier and Hoeffler (2004), the discussion about the resource curse is driven by a definition of resource abundance that is relative to the economic structure – resource exports to gross domestic product. This starting point has become widely used in the literature. However, Brunnschweiler and Bulte (2008) make a crucial point, stating that resource abundance is rather a proxy for resource dependence, which is a more meaningful concept for the political economy of development as it is related to a particular economic structure produced by a historical trajectory. Thus, the curse, if it exists, will have its origins in political economy.

As one of us has argued elsewhere (Colom-Jaén and Campos-Serrano 2013), in order to understand fully the societal effects of natural resource exploitation, we need to widen the focus to include agency, whose role is underestimated by the mainstream, structure-oriented literature on the resource curse. By bringing in actors and their

interests, for example the individual involvement of Mozambican politicians in joint ventures, we can better understand the specific relation of natural resource extraction with authoritarianism, corruption and poor developmental outcomes. What is more, the specific historical trajectory and the international political economy, in which the resource abundant country is set, must be taken into consideration.

As for the historical trajectory, in Mozambique, like in many sub-Saharan countries, the end of colonial rule brought political sovereignty but the newly independent state remained weak and had to rely on external resources. The reconstruction after the civil war resulted in a strong dependence of public finance on international aid: in 2000, almost 75 per cent of total government expenditure was programmable aid (ActionAid 2011).

Because of their weakness, the Mozambican authorities are hardly able to cope with negative impacts of resource extraction on local communities. Whilst the local economic and environmental effects of natural gas projects in Cabo Delgado Province are hardly known, mine workers of Vale have complained about working conditions and wages. Local people consider compensation for land now used by overseas companies much too low. Resettlement policies are regarded as unfair. Civil society organisations have denounced lack of accountability and transparency on the side of the mining companies. Demonstrations and riots, including the blocking of coal trains, occurred in the village of Cateme in January 2012, for instance (HRW 2013; SARW 2012). The central state authorities, which are involved in mining via joint ventures, are also marked by poor accountability and a lack of transparency (Mosca and Selemane 2012).

Apart from that, natural resource extraction in Mozambique has strongly been affected by the liberalisation imposed on developing countries by international

organisations since the 1980s. The structural adjustment policies promoted by the International Monetary Fund and the World Bank encourage foreign direct investment, amongst other measures through the introduction of a generalised legal framework (Gibbon 2002; Wade 2003). The first structural adjustment programme for Mozambique was launched in 1987. After easing harsh conditions for Mozambican monetary and fiscal policy, the country began in the mid-1990s to experience a period of considerable economic growth and high foreign direct investment inflows. The structural adjustment programme has in particular encouraged greenfield investment, that is, investment that creates a new business from scratch, with low taxation.

The outstanding example of the transformation of Mozambique's economy through greenfield investment is the Mozal aluminium smelter near Maputo, one of the largest in the world. It commenced operations in 2000 and its corporate income tax is limited to 1 per cent of sales (Castel-Branco 2004). The pattern for current investments in coal and gas in central and northern Mozambique appears to follow this one, and, therefore, not much tax income will be generated. We need to bear in mind though that the political elites' apparent lack of concern about low tax income generation has something to do with their participation in semi-statal enterprises that operate via joint ventures with overseas mining companies.

Structural Change Through the Exploitation of Energy Resources

To analyse the drivers to structural change when speaking of energy resources, the concept of linkages, as originally defined by Hirschman (1958), is useful. Linkages are not to be confused with trickle down effects. The former refer to structural issues – one business sector connecting to another; the latter to macroeconomic processes. Traditionally, the extraction of commodities for export has held a bad reputation

because of its lack of linkages with the rest of the economy. Thus, the extraction of commodities, especially mineral commodities, has been seen as an indicator of an enclave economy (Singer 1950). Due to declining costs of transport, however, and also because of new communication technologies and economic liberalisation, multinational companies are increasingly able to split their value chains and outsource processing of raw material to the Global South, where they benefit from cheap labour. Mozambique, as other resource-extracting economies, can take advantage of these developments.

First, Mozambique can benefit from forward linkages, meaning the processing of coal and gas, and the generation of hydropower for technologically more advanced activities, such as light industries or agro-processing. Steps with this aim have been undertaken in southern Mozambique (Chambal 2010; Gqada 2013). As said, Rio Tinto and Vale initially proposed two separate coal-fired power stations near their mines in central Mozambique. They have recently begun talks on a joint power station with the intention of selling the electricity to South Africa's energy giant Eskom, which still faces severe problems in meeting the demand in its home market. The aforementioned company Ncondezi has proposed a 300 MW coal-fired power station. It could eventually reach a capacity of 1,800 MW. This plant is meant to meet the local demand. Once the aforementioned north–south transmission line is finished, electricity produced in the central provinces will be transmitted to the areas of higher demand in the south, to Maputo in particular (ESI-Africa 2013; Selemane 2013, 5).

Second, potential backward linkages of the extraction of energy resources by the aforementioned transnational companies positively affect other firms. This linkage has already taken effect in the case of coal: local companies transport coal from Moatize to Beira and cover other needs related to transportation such as vehicle

repairs. They also provide basic services to truck drivers. What is more, nowadays the usual approach of multinational companies trying to pursue vertical integration of the whole value chain is shifting to a pattern in which they focus on their core competences, where they can make a difference and obtain higher gains. Backward linkages might occur because these are about activities that require low skilled labour and moderate levels of investment, so they can be outsourced to local firms.

Beyond that, fostering the backward linkages could stem capital flight, since national capital could find a way to create value domestically. Interestingly, the Mozambican government refers explicitly to backward linkages in its industrial and poverty reduction policies, most importantly in the Action Plan for Poverty Reduction (Plano de Acção para Redução da Pobreza, PARP) (Castel-Branco and Mandlate 2012).

Recent experiences with the coal industry in Tete, however, suggest the opposite. There has been a lack of involvement of local entrepreneurs. Most goods and services provided to the foreign companies come from the home countries of the investors, that is, Brazil and South Africa (SARW 2012). It appears that human capital is insufficient to promote backward linkages in central Mozambique and probably also in the north (World Bank 2010).

Third, there are horizontal linkages, that is, activities that take advantage of projects in energy resource extraction but are not directly related to them. In particular, transport infrastructures have to be built, rehabilitated or upgraded, like the railway corridors of from Moatize to Beira and Nacala or the ports of Beira, Nacala and Quelimane. Companies that do not export energy resources can also use these transport infrastructures. Still, we need to take into account that these harbours and railway lines will primarily serve the needs of the big coal mining companies, not necessarily those of Mozambican firms or even the Mozambican people. Concessions

have been granted for bridges and roads, indicating that using them will involve fees, which overseas companies can easily pay, whereas Mozambicans often lack according financial capacities (Scholvin and Plagemann 2014).

There may, fourth, be fiscal linkages, meaning that the Mozambican government can tax overseas companies and then use this new income to facilitate structural change. Some experts argue that Mozambique can also overcome its high budget deficit and dependency on foreign aid by taxing foreign companies (Castel-Branco and Mandlate 2012). The capacities of the Mozambican authorities to collect taxes efficiently are poor however and the example of Mozal suggests that overseas companies can easily avoid the already low rates (Justiça Ambiental 2012).

The present fiscal regime includes a royalty payment of 6 per cent for gas and 3 per cent for coal, although 32 per cent of corporation tax is applied for any company in the mining sector (Selemane 2013). The royalties are very low compared to other sub-Saharan countries – they amount to 12.5 per cent in Chad, for instance (Colom-Jaén 2012) – and far from the historic fifty–fifty oil agreements reached by Saudi Arabia and Venezuela in the 1950s. Mozambique's land taxes are also very low, taking into account the harsh environmental impact of mining. As an illustration, the three biggest mining companies in Mozambique -Rio Tinto, Vale and the Irish company Kenmare-, only paid about USD 150,000 in land taxes in 2009 (Selemane 2013).

Concluding Remarks

Given the coming energy resource boom in Mozambique, the scenario of a resource curse may appear probable. As noted, there are signs that Mozambique is becoming a country characterised by elements of the rentier state model such as the lack of transparency, a general failure to resist corruption and only very limited institutional

capacities.

Although our paper does not suggest remedies against all negative impacts of resource abundance, we have shown that some aspects of the resource curse, in particular the Dutch Disease, can be avoided or at least alleviated with proper macroeconomic policies that boost different backward and forward linkages, and with institution building (sensible taxation and sovereign wealth funds, for example). Such measures ensure that economic growth triggered by resource exports has a broad-based economic impact and contributes structurally to development. And, more optimistically, there is scope for various linkages of resource exploitation:

- Forward linkages are mainly about processing of coal and gas, and using hydropower as an input for industrial-sector activities. There are, as we have shown, plans to use some of the coal mined in Tete Province for local power stations that will meet the Mozambican electricity demand. Hydropower stations are to be expanded and newly built.
- Backward linkages occur as the supply of services for overseas mining companies, meaning inputs that can be generated by locals that benefit from the low cost of labour in central and northern Mozambique. As noted, reports by the World Bank however indicate that local human capital is insufficient to trigger such linkages.
- Horizontal linkages refer to transport infrastructures. New and/or rehabilitated railway lines, roads and harbours can be used by firms other than the foreign mining giants, although such linkages depend on a regulatory frame in order to avoid the de facto exclusion of locals via toll systems, as Scholvin and Plagemann (2014) argue.

- Fiscal linkages mean that royalties and new tax income will arise from overseas investment into Mozambique's energy resources. Provided that certain problems are overcome, Mozambique may tax these investments, use the new income for sound economic policies, including the creation of sovereign wealth funds, and thusly end its dependence on foreign aid.

In sum, there is a certain potential for linkages resulting from resource exploitation but any optimistic scenario may still be misleading. In addition to the justmentioned obstacles, a number of significant trends and dynamics point in the opposite direction. These include conflicts between overseas companies and local communities over land use, the low level of involvement of local businesses in the provision of goods and services for foreign firms, the building and rehabilitation of transport infrastructures to meet the needs of foreign companies rather than those of the local people, and, as some may argue, the encouragement of foreign direct investment with low taxation as part of a neoliberal programme backed up by the international financial institutions. In this context, energy resource exploitation may simply reinforce a development pattern that is not only characteristic for Mozambique but for many sub-Saharan African countries: they concentrate on a few sectors of the economy that are highly outward-oriented and depend on foreign aid and foreign direct investment. If the aforementioned linkages do not develop, Mozambique will probably become even more outward-oriented. Its dependence on foreign aid and on the royalties paid by overseas companies will increase. The political elite will become entrenched in rent-seeking behaviour.

What our analysis suggests is that the concrete impact of the resource boom on Mozambique is related to historical patterns of overseas trade and politics, non-local actors and a framework imposed by the international political economy since the

1980s. Inappropriate government intervention and insufficient institutional capacities, usually blamed by adherents of variants of the resource curse approach, are certainly important but play a secondary role insofar as they appear to be the outcome of the causes that we touched upon in this chapter.

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