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Is there a resource curse in Timor-Leste? A critical review of recent evidence

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ABSTRACT

Shortly after oil production commenced in 2004, Timor-Leste became one of the most oil dependent countries in the world. The purpose of this piece is to assess whether Timor-Leste has been suffering from the typical political and economic ailments associated with the 'resource curse' hypothesis. The study critically analyses available evidence with reference to some of the common manifestations of the resource curse: conflict, rent-seeking behavior, Dutch disease and revenue volatility. It confirms that all of the examined mechanisms of the resource curse are present in Timor-Leste to varying degrees. This does not necessarily point to a causal relationship between mineral dependence and these socio-economic problems. Many of these problems, common amongst developing countries, are attributed to a wide array of historical and political factors (which are likely to be associated with colonialism and inherited weak governance structures). While it might be tempting to attribute these problems to mineral discoveries and related income shocks, careful examination suggests that the extractive sector exacerbates pre-existing problems than necessarily causes them.

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1. Introduction

Shortly after oil production commenced in 2004, Timor-Leste became one of the most oil dependent countries in the world; 36% of its GDP stemmed from the sector in 2017, while 83% of the state budget for 2019 derived from oil-based sources (Ministry of Finance 2018). Whilst vast oil wealth can be advantageous for a country starting out on the path of development, proponents of the 'resource curse' thesis claim that mineral dependence often impedes broader socio-economic progress in the long term. The term 'resource curse' was first coined by Professor Richard Auty in his 1993 seminal book *Sustaining Development in Mineral Economies: The Resource Curse Thesis* to indicate the paradoxical tendency of resource-rich countries to grow more slowly than resource-poor ones (Auty 1993). The causes and symptoms of the resource curse have been at the center of intensive research over the last two decades.

While academic interest was initially confined to the economic domain, nowadays the multifaceted and complex nature of the curse is widely acknowledged within scholarly and policy circles – several studies show that excessive mineral dependence is associated not only with inferior economic outcomes (e.g. subdued growth, loss in export competitiveness,

volatility), but also more broadly with poor performance in several socio-political aspects (e.g. political stability, rent-seeking, public accountability). Mineral wealth often incentivises firms and individuals to lobby/rent-seek by allocating own resources to capturing part of the extractive rents (e.g. in the form of bribes, striking, selective voting, Baggio and Papyrakis 2010). Public accountability can also be limited within the context of excessive mineral dependence, when politicians (especially in authoritarian regimes) make use of mineral rents to win political support and prolong their stay in power (Andersen and Aslaksen 2013; Ross 2001). Another branch of the literature has linked the availability of mineral resources with the occurrence of conflict (Collier and Hoeffler 2005), especially in the case of low-income and ethnically-fragmented societies (Hodler 2006; Østby, Nordås, and Rød 2009).

At the same time, it is widely acknowledged that the resource curse is, by no means, an iron law – although there is a general tendency for mineral-rich nations to underperform in the aforementioned dimensions, countries that had a sound institutional framework in place prior to resource discoveries, as well as more diversified economies, managed to turn the curse into a blessing (as in the case of Norway [Cavalcanti, Mohaddes, and Raissi 2011; Mehlum, Moene, and Torvik 2006]).

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Furthermore, many of the socio-economic problems of developing countries are attributed to a wide array of (often common) historical and political factors (which are likely to be associated with colonialism and inherited weak governance structures) – while it is often tempting to attribute these problems to mineral discoveries and related income shocks, what is more meaningful is to assess whether the extractive sector exacerbates pre-existing problems than necessarily causes them.

Motivated by this prior empirical evidence, our analysis aims to examine whether Timor-Leste (one of the newest sovereign states, for which little is still known in terms of its resource management) has been experiencing any resource curse symptoms similar to the ones outlined above. Our aim is to provide a critical analysis that examines in such detail the development effects of mineral resource management in Timor-Leste (and whether these are necessarily attributed to poor resource management or other socio-political and historical factors). Our analysis contributes to the literature by examining whether there is a ‘resource curse’ in Timor-Leste, the mechanisms through which this might occur and measures in place to mitigate its effects. The aim of our study is not to develop new theoretical insights and mechanisms but rather scrutinize how already identified socio-economic problems common to many other mineral-dependent nations may also be applicable in the case of Timor-Leste. We find that several of the examined mechanisms of the resource curse are present in Timor-Leste to varying degrees.

The paper is structured as follows: Section 2 provides a brief overview of Timor-Leste’s historical and current context. Section 3 discusses in detail key (political and economic) resource curse mechanisms and evidence of their presence in the context of Timor-Leste. Section 4 concludes.

2. Timor-Leste – a brief overview

The Portuguese first settled in Timor during the sixteenth century (before the arrival of the Dutch, who gained control of the port town of Kupang during the mid-seventeenth century). Initially Timor had a rather informal (and small) Portuguese presence until 1701 when Antonio Coelho Guerreiro was appointed as the first Governor of Timor and Solor (and it was not until the mid-nineteenth century that Portugal attempted to build a functioning colonial regime in East Timor) (Kammen 2019). A treaty signed in 1859 established the border between the territories of Dutch (West) Timor and Portuguese (East) Timor (de Magalhaes 1992). Following the 25th of April 1974 Revolution in Portugal, the new government backed the right of Portuguese colonies to

self-determination, and independence was unilaterally declared in Timor-Leste on 28 November 1975. Following this, on 7 December 1975, Indonesia invaded Timor-Leste and the following year declared it the 27th Indonesian province. This occupation, lasting until 1999, saw the start of a long running resistance movement, and led to the deaths of between 100,000 and 230,000 people, from military action, starvation and disease (Burr and Evans 2001). The removal of Indonesian President Suharto in 1998 opened the door to international negotiations regarding the fate of Timor-Leste, leading to the Popular Consultation (independence referendum), which took place on 30 August 1999 (Molnar 2010). Despite increasing violence leading up to the poll, 98% of voters turned out with 78.5% voting in favor of full independence. This result led to widespread destruction of infrastructure in Timor-Leste; Kingsbury estimates that 70% of buildings were destroyed, as well as water, electrical, and telecommunication equipment (Kingsbury 2000). On 20 September 1999, the UN Security Council approved an international armed peacekeeping force INTERFET led by Australian troops – the International Force for East Timor – to intervene, prevent further slaughter, demobilize the militias and supervise repatriation of the Indonesian military. In October of the same year, the Security Council appointed a UN mission UNTAET – the United Nations Transitional Administration in East Timor – to take over, maintain law and order and set up a transitional administration (that lasted until full independence was achieved on 20 May 2002 (Molnar 2010; Kammen 2019)).

Post-independence, Timor-Leste saw the beginning of oil extraction from its Bayu-Undan field in 2004, which doubled its GDP size (Ministry of Finance 2015). The economy of Timor-Leste has been reliant on oil and natural gas ever since (with the extractive sector nowadays accounting for more than a third of all income produced) (Ministry of Finance 2018). Inflation has also been high in Timor-Leste with prices increasing by about 42% between 2010 and 2017 (World Bank 2018), due to large government expenditure financed by oil rents (Asian Development Bank 2015). The country’s vision – as portrayed in the Strategic Development Plan 2011–2030 – to create a high-income country with a diversified economy has not materialized yet and there are real doubts whether this idea is practically achievable (Ministry of Finance 2011).

Whilst the economy is reliant on oil revenues, oil-generated income from the Bayu-Undan field is projected to drop steeply over the next few years, with the oil production already declining and expected to cease by 2021. In order to create a sustainable source of revenue, the government founded the Petroleum Fund

of Timor-Leste in 2005, a sovereign wealth fund into which petroleum rents are paid, designed to manage oil-based resources ‘for the benefit of both current and future generations... in a fair and equitable manner’ (Central Bank of Timor-Leste 2016, 14). The Fund, hence, aims to support intergenerational equity (by putting aside income for future generations) but also perform a stabilizing role in the economy whenever necessary (e.g. by stimulating economic activity in periods of slower growth). The majority of the Fund’s resources are invested in government bonds (approximately 60% is invested in US Treasury bonds and other equities from developed economies, Doraisami 2018). By the end of 2017, the Fund held assets of US\$16.8 billion (Ministry of Finance 2017); however, withdrawals have consistently exceeded their targeted annual levels (i.e. the so-called Estimated Sustainable Income, that corresponds to 3% of the money in the Petroleum Fund and the expected discounted future revenues, Asian Development Bank 2015). This has been justified as part of a front-loading strategy (i.e. an attempt to increase investment to encourage development); however, the government faces challenges when it comes to delivering investments with substantial economic returns. A key example of this is the proposed Tasi Mane project, which includes a seaport, airport and facilities for oil and gas processing; this has been widely criticized since it relies on the uncertain future development of alternative oil deposits, namely the Greater Sunrise oilfield and the processing of oil onshore in Timor-Leste (with the latter more likely to take place in Australia, ConocoPhillips Australia 2016). In addition, discussions on the most efficient way of investing revenues from oil resources have exacerbated the differences among political leaders. Drysdale (2007) reports that Timor-Leste’s petroleum revenues were decided to be invested entirely offshore to appease concerns about political leaders investing in family businesses. Furthermore, there were few opportunities to invest revenues in Timor-Leste, as industry and infrastructure were not yet developed.

3. The resource curse in Timor-Leste – an in Depth analysis of key mechanisms

This section critically analyses several key ‘resource curse’ mechanisms in the context of Timor-Leste. The analysis aims to verify the presence (or absence) of resource-curse type of phenomena and any measures in place to mitigate them. Political explanations of the curse often focus on conflict (Le Billon 2001), rent-seeking behavior (Shaxson 2007) and the emergence of a rentier state (Neves 2013), whilst economic channels

typically involve Dutch disease effects (Natural Resource Governance Institute 2015), revenue volatility and declining terms of trade (Frankel 2012). Naturally, there is no strict demarcation line across these two categories (and across mechanisms), given that, in many cases, both economic and political elements interact to generate resource-curse conditions.

3.1. Political conditions

3.1.1. (Intra-group / inter-state) conflict

Timorese history is characterized by multiple periods of internal and external conflict and tension – these include the maritime boundary disputes between Timor-Leste and Australia (going back to colonial days), the Indonesian invasion and occupation, and the subsequent violent resistance movement between 1975 and 1999. Post-independence, there have also been shorter periods of violence and instability, including extensive clashes in 2006 (and the 2008 unsuccessful assassination attempts against the President José Ramos-Horta and Prime-Minister Xanana Gusmão by rebel soldiers). These tensions are linked to Timor-Leste’s past (Portuguese colonization, Indonesian occupation, the UN interim regime) and deep-rooted institutional weaknesses and grievances across different groups. The presence of oil revenues more recently simply intensified pre-existing tensions, especially in relation to differences of opinion on how oil resources should be used. In such a small country as Timor-Leste, politics become ‘more intimate and contentious’ (Kammen 2019).

The intra-group conflict was largely fueled by the formation of different interest groups with divergent priorities. Already during the Portuguese colonization, mestizos (largely children of Portuguese fathers and indigenous mothers) and educated natives living in towns saw themselves as separate elite groups with interests closely aligned with Portugal and its colonial administration (Robinson 2010). They and original settlers were the main beneficiaries of the limited education and health care services provided under Portuguese rule (while for the majority of the population, the colonization period was one of overall neglect) (Kammen 2019). Since the late 70s, supporters of the Indonesian rule antagonized the (pro-Portuguese, nationalist, communist) opponents of the regime, generating social discord and division (Robinson 2010). In the early 80s, extensive clandestine networks of civilians (both in rural and urban areas) provided support (through supplies and shelter) to anti-Indonesia communist sympathizers (Kammen 2019). It is worth noting that this intra-group conflict has long-term historical roots in a divide-and-rule

strategy adopted for many centuries by external powers. Local militia groups have been successively mobilized by Portuguese governors, the Japanese occupying forces during the Second World War and the Indonesian forces during occupation to fight against dissenting elements and groups (Robinson 2010). During the period under UN administration (1999–2002), East-Timorese were side-lined within the transitional administrative structure, which favored the involvement of foreign advisers (as a means to address Timor-Leste's lack of human capital, instead of investing in its own people) (Kammen 2019). The previous Indonesian Government did exactly the same (with Indonesians holding the majority of senior positions and few East Timorese developing skills in government administration) (Drysdale 2007). Even after independence in 2002, intra-group tensions persisted – the then President Gusmão came at odds in several occasions with the parliament (vetoing several proposals, as in the case of the 2002 Bill on the Modification of the Tax System).

Indonesia's annexation of Timor-Leste is often attributed to the fear that Timorese independence would inspire other secessionist movements (Burr and Evans 2001). In addition, the brief civil war in mid-1975 between the forces aligned to the UDT (the Timorese Democratic Union party) and Fretlin (the Revolutionary Front party) political parties (initiated by the August 1975 coup by UDT) provided the motive behind the Indonesian invasion later in the same year. Military officers in Indonesia were fervently anti-communist and, hence, much opposed even to a remote prospect of Fretlin (with its communist inclinations) being in charge of East Timor (Robinson 2010). Tacit international support (notably by the US, Australia and the UK) left the Indonesian invasion and claimed sovereignty in East Timor rather unchallenged. Robinson (2010) claims that the presence of offshore oil in East-Timor was an additional (although less important) incentive behind the annexation, in a period of 'rapidly rising oil prices' and given the 'bankruptcy of Indonesia's state oil company, Pertamina' early in 1975. It is also worth noting that while Australia and Indonesia were negotiating their own maritime borders in the early 1970s, Portugal (as the colonial power of East Timor) declined to participate in the UNCLOS (United Nations Convention on the Law of the Sea) negotiations to agree on the maritime borders of the so-called Timor gap (the waters between East Timor and Australia, where most oil reserves are located, Ward 2014). When East Timor became annexed in 1975, most of East Timor's oil reserves were placed inside Australian territory and unsurprisingly Australia was one of the first countries to recognize Indonesian's annexation (The Independent

2004). Recently declassified documents reveal that Australia's commercial interests in oil were indeed influential at the time (The Guardian 2018). This was echoed by Australian diplomats, with Ambassador Richard Woolcott suggesting that Indonesia was more open to striking a deal on oil reserves than Portugal or an independent Portuguese Timor. In the late 1980s, Indonesia and Australia agreed to set up a joint zone of cooperation and split equally any future oil revenues (Sýkora 2013). This tacit support of an invasion and occupation appears to have been, hence, rooted in Australia's desire to acquire access to significant deposits of oil (Burr and Evans 2001).

In September 1999, upon its exit from Timor-Leste, Indonesian troops and pro-Indonesia militia groups implemented a scorched-earth policy, in which 70% of buildings were destroyed, alongside roads, water, electrical infrastructure, and telecommunication equipment (Kingsbury 2000). Robinson (2010) claims that the mobilization of pro-Indonesia militia groups was part of strategic planning by state officials in East Timor and Jakarta (who provided both funding and training). This wave of violence was characterized by massive displacement and significant destruction of public infrastructure (Patricia, Leone, and Salardi 2014). The motives behind are more likely to be related to Indonesia wishing to prevent the further break-up of its vast archipelago country and have little to do with the loss of petroleum reserves (Crouch 2003). The Timor-Leste Strategic Development Plan highlights that the Indonesian occupiers' destruction of Timorese electrical infrastructure resulted in an electricity sector that is still 'inadequate, run down and in urgent need of reform' with latent effects in Timor-Leste that still persist (Ministry of Finance 2011). The damage extended beyond the destruction of physical infrastructure; the flight of Indonesian officials led to a collapse of whatever state institutions were in place (Kammen 2019).

Since independence in 2002, the East-Timor/Australia dispute on their maritime borders continued driven by disagreements on the division of revenues from the Sunrise field. Australia continued acquiring half of the accrued oil revenues from their joint zone and, even more recently, with the 2018 Maritime Boundaries Treaty, the agreed maritime boundaries (following the median line between the two countries) will only come into force in the far future after the commercial depletion of the oil/gas reserves (Banks 2018).

With regard to Timor-Leste's 2006 crisis, a 2006 USAID report lists a large number of conflict triggers, the majority of which have no direct connection to Timor-Leste's natural resources. Motives are associated with pre-existing grievances already present during the 1975 civil war and during the Indonesian occupation.

Many citizens were frustrated by the fact that the material benefits of the (long-awaited) independence were not materializing and also by the privileges of many Fretlin supporters (who were for instance receiving lucrative contracts for rice imports) (Kammen 2019). A clientelist discriminatory use of government contracts was also followed by subsequent administrations (e.g. by the AMP – Parliamentary Majority Alliance – government after 2007). The 2006 USAID report also mentions that a greater awareness, that state resources (through oil revenues) were growing, led many to believe that the state was either corrupt or primarily focussed on retaining control over the resources, rather than using them for the benefit of the people. In 2006 (the year when general violence took place), oil rents as a share of total GDP reached their peak value at about 62% (with oil dependence being negligible immediately after dependence, rising to 45% in 2004 and gradually declining to 39% in 2009, 33% in 2012 and 15% in 2017) (World Bank 2018). As Blunt (2009) puts it, government legitimacy in East Timor depended to a large extent on whether ordinary people felt at large that they received a fair share of the ‘fruits of independence’ in the form of income accruing from oil and other national assets. This climate of unrest and political instability had immediate repercussions for the economy with domestic investment falling to only 2% of GDP in 2006 and remaining subdued for a long period of time (being less than 20% until 2016) (Ingram, Kent, and McWilliam 2015).

3.1.2. *The rentier state and rent seeking behaviour*

States which receive substantial amounts of unearned income, e.g. in the form of royalties from resource extraction, are often referred to as rentier states. Luciani (1987, 134) summarizes the overarching problem with rentier states as the fact that they do ‘not need to formulate anything deserving the appellation of economic policy: all [they] need is an expenditure policy’. Kammen (2019) states that democratic processes and stability since the achievement of independence in Timor-Leste was built on ‘a ruling strategy of purchase’ (i.e. financial inducements based on oil rents). While the oil-dependent nature of Timor-Leste’s economy is likely to intensify rent-seeking behavior and patronage-based systems of governance, the country’s socio-political and historical context suggests that a wide range of interacting factors are at play. A good overview of these complexities is discussed in a research paper by Peter Blunt (2009). Portuguese colonialism was not conducive to any economic growth process in the country and there was a very limited effort to extend education to the whole population of Timor-Leste; access to education was a privilege only for Portuguese settlers and urban

elites and the literacy rate at the end of the Portuguese rule was close to only 10% (Ingram, Kent, and McWilliam 2015). The historical legacy of the Indonesian occupation was no better and created the later foundations of a rather inefficient and non-transparent public administration. The Indonesian administration strengthened destructive informal institutions (as in the case of corruption practices) which were entrenched in Indonesia at the time (Drysedale 2007). UNTAET – mobilized to deal with the aftermath of Timor’s separation from Indonesia – did not engage with the political history of the country nor made any effort to address the corrosive relationship between prominent leaders and their supporters. Because of that, the three years of UNTAET inter-reign did not manage to create a new political settlement in the country (one that would rely more on tax than external funding and set the foundations for an efficient administration that would benefit the majority of the population). The historical social fabric of the Timorese society, where allegiances to ethnic groups, political parties and other social groupings (e.g. military groups) remain very strong, is also likely to have played an influential role in creating a patronage-based system of public administration.

Various statistics suggests that Timor-Leste behaves as a rentier state. Domestic revenues from taxation in Timor-Leste are minimal compared to the non-tax petroleum revenues; domestic tax revenues accounted for 8.5% of government revenues in 2018 (Ministry of Finance 2018), which makes Timor-Leste the country with the third-lowest total tax rate in the world (Ingram, Kent, and McWilliam 2015). Nevertheless, this is still an improvement compared to previous years; in 2009, for example, tax revenues made up only 2% of total government revenues (Ministry of Finance 2011). In 2009, the World Bank (2009) named Timor-Leste as the top tax reformer, indicating that the administration had managed to streamline its tax regime, cutting the time taken to comply by 50%. Additionally, Molnar (2015) claims that, during 2014, Timor-Leste signed a number of agreements with foreign nations designed to improve tax collection and policies. These are not the actions of a state uninterested in generating greater tax revenues. Despite these improvements, however, momentum has slowed, with tax revenues remaining low – while petroleum revenues fluctuate substantially based on oil market prices, non-petroleum tax revenues have remained relatively stagnant in recent years (approximately \$199 million in 2016, \$190 million in 2017 and \$189 million in 2018) – and while these values are approximately twice as large compared to the ones in 2009, projections for the near future signal little hope of improvement with values close to \$198

million and \$208 million for 2019 and 2020 respectively (and as a matter of fact, the share of tax non-petroleum revenues in overall government revenues has been slightly falling since 2013) (Ministry of Finance 2018). In general, we know that there is a general tendency of oil-rich states to rely less on tax revenues (in relation to mineral rents) for their public budget – rulers take advantage of reduced income and sales taxes to appease the public, which correspondingly demands less transparency and accountability (McFerson 2010). This general pattern seems to be relevant also for the case of Timor-Leste. Data from the Worldwide Governance Indicators of the World Bank (2019) based on firm, citizen and expert perceptions on governance quality suggest that over time there has been little improvement either with respect to voice and accountability (i.e. regarding the ability of citizens to participate actively in decision-making and benefit by unhindered freedom of expression and association, as well as free media) or control of corruption (i.e. regarding constraints on public power exercised for private gain). Both indices take values between -2.5 and 2.5 (with higher values corresponding to better quality of governance) and in the case of Timor-Leste they have remained consistently low (in the case of voice and accountability, the index increased only slightly from 0.06 in 2006 to 0.22 in 2016 with minor fluctuations in-between – similarly, in the case of control of corruption, the index marginally increased from -0.60 in 2006 to -0.54 in 2016). A 2013 survey of public servants revealed that more than a third of all respondents witnessed corruption at their workplace within the last year alone (Anti-Corruption Commission 2013).

At the same time, there has been a particularly generous allocation of revenues towards public consumption (e.g. in the form of transfers and wages) in Timor-Leste, a common symptom of rentier states (Hamdan 2015). While for all lower middle-income economies (the group to which Timor-Leste also belongs), the average share of government consumption in GDP ranged between 10 and 11% since 2002, this has been consistently higher in Timor-Leste (and increased from 13.5% in 2005 to above 30% since 2015) (World Bank 2018). Kammen (2019) mentions that just between 2010 and 2015 the number of employees in state-owned enterprises increased by more than 7.5 times. The opposite holds for public investment – for example, close to the 2006 crisis, public investment only accounted for approximately 1.5% of GDP, while the corresponding figure was 6 times higher for all low middle income countries as a whole. In the case of education, for example, only between 7-10% of all government expenditure financed educational activities (while the

equivalent percentage has been consistently above 16% for the group of lower middle-income economies as a whole). Similar trends are also observed in the case of health – in comparison to the overall group of low middle-income economies, Timor-Leste consistently allocated a smaller share of its government budget to health services since its independence (e.g. in 2007 the corresponding figure was a meager 1.27% versus the corresponding 5.07% for all low middle income countries; in 2016 the equivalent figures were 3.22% and 5.5% respectively). While again one cannot attribute excessive public consumption (and reduced public investment) to the resource curse, it is a typical feature of many petrostates to myopically underinvest their mineral rents and instead redistribute them in the form of transfers to specific interest groups. This does not imply that the government of Timor-Leste has not been generous with respect to its government expenditure, but simply that much of it was allocated towards short-term consumption rather than investment. In 2013, for example, overall direct transfers (for pensions to veterans, support for the elderly and disabled, payments for single mothers etc) accounted for about 20% of non-oil GDP, while spending on road and electricity infrastructure projects for another 25%. In 2017, the transfers increased to 23%, while the corresponding figure for infrastructure development fell to 11% (Doraisami 2018). The World Bank raised questions regarding the sustainability and poverty impact of the current public spending schemes (Asia 2013). The World Bank links this to rent-seeking motives, which we will discuss in more detail below; the aim of veterans' pensions, for instance, may not be to reduce poverty, but to redistribute resource rents to resistance members who have managed to solidify their power and influence in post-occupation Timor-Leste. Furthermore, Neves (2013) suggests schemes, such as veterans' payments, are key to maintaining the state's visibility outside of the capital; rather than providing services or fostering economic success, the government relies on social transfers to maintain their presence in rural areas, a certain sign of the rentier state at work.

However, due to the enclave nature of its oil sector, the state may not have much choice when it comes to high levels of expenditure (this being one of the few means to stimulate the economy). The oil sector is largely disconnected to the wider domestic economy, creating comparatively few jobs (with little potential to reduce unemployment); linkages between the oil sector and the rest of the economy are hence weak, providing very little in terms of a multiplier effect (Karl 2007). This is confirmed to be the case for Timor-Leste by the IMF, that concludes that 'the [oil] sector directly accounts

for virtually no on-shore employment' and that 'its economic impact is entirely via government spending' (Leach 2016, 469). The latter of these statements is important; the government must spend generously in order for Timor-Leste's oil resources to have any trickle-down impact on the wider economy.

There is some evidence suggesting that the Timorese government has a scheme underway to bring oil jobs onshore; as the private sector is lacking in the country, the government has to take the lead when it comes to stimulate investment. This is a move in the right direction as long as other projects (of possibly higher rates of return) also receive funding. As an example, the Tasi Mane Project is made up of three clusters on the south coast of Timor-Leste: a petroleum supply base, a petrochemical refinery and a Liquid Natural Gas plant (Ministry of Finance 2011). Whilst a project on this scale could provide significant numbers of jobs, it relies on the future development of the Greater Sunrise oilfield and the willingness of its operators to refine the extracted material in Timor-Leste (Strating 2018). Local NGO La'o Hamutuk (2013) claims that the Tasi Mane Project received budget allocations from the Timorese Petroleum Fund of around five times the combined amount given to agriculture, fisheries, water and sanitation (approximately US\$1.3 billion). Furthermore, Scambray (2015) adds that no feasibility study has analysed the projected cost against the possible employment and financial returns. He also highlights that, rather than being strategically placed for technical reasons, the three hubs are spaced across a stretch of the south coast (with no explanation thereby), hence driving up costs.

A very similar case is represented by the Oecusse special economic zone, which refers to the development of a trade, commerce and tourist hub in the enclave of Oecusse. The \$4.11 billion public project has been criticized for marginalizing the mountain-dwelling and rural population through the loss of productive agricultural land and risking depleting the Timorese Petroleum Fund in case foreign investment does not materialize (Doraisami 2018). The alternative to these investments would be to shift the oil revenues to Timor-Leste's people, making heavy investment in education, health and nutrition (Inder and Cornwall 2016). In view of this, in December 2015, the President of Timor-Leste vetoed the 2016 state budget, based on concerns that too much money is attributed to major projects like Tasi Mane and the Oecusse special zone, whilst criticizing that not enough is allocated to health, education and agriculture; the parliament, however, reconsidered the budget and decided unanimously not to make any changes (Bovensiepen 2016).

The project was also handed to the former Fretlin Prime Minister Mari Alkatiri and was seen as an implicit attempt to buy off the political opposition (Kammen 2019).

The generous pension scheme to veterans is possibly the most typical example of rent-seeking behavior taking place within Timor-Leste's oil economy. These are awarded to those who took part in the resistance struggle during Indonesian occupation, ranging from \$230 to \$750 per month in 2014 (Doraisami 2018). These sums are disproportionately large, when compared to the average Timorese income (where over 40% of the population survived on below US\$38 per month, with the elderly and disabled receiving even less (Kent and Wallis 2014). In non-oil GDP values, veteran pensions accounted for 1.2% of GDP in 2009 and gradually increased to more than 4% by 2017 (Doraisami 2018). It should also be noted that every Timorese Prime Minister and President, both current and former, was an active member of the resistance movement. This suggests that members of the resistance movement have been able to garner themselves positions of power within Timor-Leste since independence, and the substantial pensions that other veterans receive are a direct result of this. The Timorese Petroleum Fund has also fallen victim of this rent-seeking behavior; as discussed in Section 2, actual withdrawals have since 2008 consistently exceeded their targeted Estimated Sustainable Income annual levels. Initially it was envisaged that the parliament would provide consent to excessive spending only infrequently (e.g. in periods of time when the economy would have been in need of a stimulus). However, the parliament has consistently abused its power to legitimise excessive withdrawals – as a matter of fact, while withdrawals were 25% above the allowed ESI targets in 2009, they were twice as large in 2015, and three times as large in 2018). Cash transfers (the largest share of which is for pensions to veterans) are supported by these excessive withdrawals and gradual depletion of the Fund. In 2010, Prime Minister Gusmão (from the Parliamentary Majority Alliance) responded to criticism by opposition parties and civil society organizations by stating that a policy of savings is inappropriate and attempted (unsuccessfully) to pass proposals that would remove the need for parliamentary approval of the state budget (Kammen 2019).

The IMF (2013) has been concerned that rent seeking behavior potentially undermines long term growth. Barma (2014) mentions that reports of rent seeking around large-scale government investments are common and Transparency International (2015) recently highlighted a case, where the Minister of Finance Emilia Pires signed a procurement document allocating a

contract to a company owned and operated by her husband. Evidently, Timor-Leste exhibits signs attributed to rentier states. The Tasi Mane Project and veterans' pensions appear targeted to maximize political benefit rather than necessarily returns in terms of jobs, poverty alleviation or economic development. Elite members believe that they are entitled to a disproportionate share of public resources; the state pays for elite members to fly to overseas hospitals, whereas little investments are made in the national health sector. Roads and bridges in the capital city mostly used by VIP visitors are frequently repaved, unlike those located in rural communities (Ingram, Kent, and McWilliam 2015).

Overall, whilst there is evidence of rent-seeking behavior, Timor-Leste has taken some steps to improve transparency, especially with regard to the use of oil revenues. Early steps were already undertaken by the former Prime Minister Alkatiri who ordered a criminal investigation which resulted in sixty-six cases of alleged corruption between 2001 and 2005. Improvements can be possibly attributed to some strong Timorese institutions in place. In particular, the Anti-Corruption Commission (CAC) (which is believed to be independent and fairly effective), has opened several investigations regarding allegations of corruption, some of which resulted in the conviction of high-ranked public officials. This institution has, however, been the subject of attacks by politicians, including the October 2014 termination of contracts of its international legal advisors (Marx 2014). This fits well within Ross's theory of rent seizing, according to which elites often attempt to weaken/dismantle institutions preventing them to appropriate and distribute resource rents (Ross 2001).

3.2. Economic mechanisms

3.2.1. Dutch disease

Dutch disease (a term first coined by *The Economist* in 1977 (The Economist 1977), and subsequently theorized by Corden and Neary (1982)), describes the situation where a positive income shock (as in the case of an oil boom) can reduce the competitiveness of exporting sectors. Corden and Neary attribute this to two possible effects: a real exchange rate appreciation (either as a result of a rise in the nominal exchange rate or domestic inflation; this is the so-called *spending effect*) and a shift of production factors towards the booming resource sector (as a result of wage and interest rate premia) and away from other exporting activities (this is, the so-called *resource movement effect*). Parts of these mechanisms are not relevant to the Timorese context, however. The de facto currency of Timor-Leste is the US dollar and, therefore, domestic factors (such as an

oil boom) cannot result in an appreciation of the real exchange rate through a rise in the nominal exchange rate. Second, the number of Timorese employed in the oil sector is negligible, limiting, hence, the extent of a 'resource movement' from other productive activities towards the extractive industry.

There is, however, some evidence suggesting that Timor-Leste has not been entirely immune to the Dutch disease. The manufacturing sector remains small and has seen a falling trend since independence (Rasiah, Vinanchiarachi, and Vadakkepat 2014); in 2000, manufacturing contributed US\$14 million to GDP at constant prices, in 2013 this had fallen to US\$8 million (Ministry of Finance 2015). It is evident that the government has not done enough to diversify the economy; the contribution of the services sector to GDP fell from 54% in 2002 to 44% in 2017. The manufacturing sector has consistently contributed less than 1% of GDP since 2004 (while it was slightly above 2% in 2002; when Timor-Leste gained its independence). Lack of a skilled labor force together with a small internal market have inhibited diversification – in addition, while discussions on promoting diversification focus on investing in agriculture and tourism, budget allocations to these sectors have never exceeded 10% of the state's annual budget (da Cruz Cardoso 2019). Whilst the aforementioned statistics hint at the presence of Dutch disease, it is vital to look for any causal linkages between the boom in natural resource revenues and poor performance in the manufacturing sector.

Between January 2010 and December 2014, Timor-Leste's consumer price index (CPI) rose from 100 to 121.3, with much of this increase taking place between 2011 and 2012 when inflation reached 10% (Asian Development Bank 2015). By comparison, the average annual inflation for other economies using the US Dollar as their currency was 4.4% between 2011 and 2012. By 2017, prices had increased by about 42% compared to 2010 (although the inflation has eased in more recent years, being just over 2% in 2018). Additionally, the Timorese Ministry of Finance found in its own analysis that recurrent government expenditure contributed to such high levels of inflation. Considered alongside poor performance in the manufacturing sector, these statistics point towards the presence of a spending effect (via inflationary pressures and consecutive loss of competitiveness) in Timor-Leste. Lundahl and Sjöholm (2009) highlight that high prices and wages have been present from the beginning of Timor-Leste's period of independence, suggesting that the influx of 15,000 expatriate workers created an aid-driven urban economy with a high purchasing power, resulting in a quadrupling of wages.

Persistent competition across aid agencies was identified as one of the primary causes of inflationary pressure on Timorese wage levels (OECD 2010). High wages and prices were therefore a symptom of a positive income shock, initially driven by an influx of aid, and then reinforced by excessive oil rents.

Evidence pointing to a 'resource movement' effect is more difficult to identify. Only one comprehensive survey of the Timor-Leste labor force has been conducted, and therefore a time comparison of changes in employment across sectors is not possible (Ministry of Finance 2010). Capital reallocation to resource-based exports also makes up part of the Dutch disease, and there is evidence in support of this in Timor-Leste; according to the most recently available budget for the Timorese Petroleum Fund, the Tasi Mane petroleum infrastructure project received almost five times the amount awarded to agriculture and fishery infrastructure. Considering that coffee is Timor-Leste's biggest export after oil, this implies that other export industries are being crowded out by the oil sector in Timor-Leste (partly due to the resource movement effect).

The Timorese government's initiative to set up the Petroleum Fund in 2005 (see also Section 2) could potentially provide a mitigating mechanism against the Dutch Disease. The Fund is designed to dampen domestic inflation in the prices of non-tradeables, by discouraging excessive consumption (and instead favoring investment both domestically and abroad) and, hence, alleviating the impact of the 'spending effect' (McKechnie 2013). However, as we discussed in Section 2, there has been little evidence of fiscal discipline, with excessive withdrawals being the norm, minimizing hence the ability of the fund to accumulate wealth and stabilize prices (Ministry of Finance 2012). Furthermore, increased expenditure from the Petroleum Fund has greater inflationary consequences than increased expenditure from other domestic revenues. This is because in order to spend more from non-oil domestic sources, the government would first have to collect further revenues through taxation, an act which is contractionary by nature.

3.2.2. Revenue volatility

Fluctuating oil prices and, as a consequence, volatile revenues pose problems for long-term planning in mineral-rich countries; they tend to encourage increased spending when prices are high, which is difficult to reduce when prices drop (Shaxson 2007). Fortunately, in Timor-Leste, the government relies on conservative estimates for future oil revenues based on the average values of the US Energy Information Administration (EIA) low-case and reference-case

scenarios (Ministry of Finance 2013). As a result of this precautionary approach, the government budget (between 2009 and 2015) was based on forecasts below what the actual oil price turned out to be in six out of seven years (Ministry of Finance 2012, 2013, 2014). This does not suggest, by any means, that the government did not spend generously (as we discussed earlier on), but that, at least, its expectations regarding future oil revenues were realistic. 2015 was an atypical year, during which the even conservative estimate for the average oil price (per barrel) proved to be largely optimistic (exceeding the actual oil price by over US \$35, see Ministry of Finance 2015). In cases like this, fortunately, the Petroleum Fund acts as a stabilizing mechanism that offers additional liquidity to compensate for the unpredictably low commodity prices (Kern 2007). However, as we discussed earlier on, the long-term viability of such a stabilizing mechanism has been jeopardized by an overexploitation of the Petroleum Fund in recent years (which will only be aggravated in the future as oil rents entering the Fund are projected to fall). Whilst the financial management of the Fund is far from ideal (a fact which one could interpret as a symptom of the resource curse), it certainly helps to mitigate the volatility that fluctuating oil prices can induce on the real economy.

5. Conclusion

The overarching conclusion that has surfaced from our analysis is that Timor-Leste has not been immune to the 'resource curse'. Several of the typical resource curse mechanisms seem to be at play. Many of these socio-economic problems are attributed to a wide array of historical and political factors that, in effect, precede the discovery and extraction of oil. While it might be tempting to attribute these problems to mineral discoveries and related income shocks, careful examination suggests that the extractive sector aggravates pre-existing problems than necessarily causes them. In the case of conflict, whilst the presence of oil was not the catalyzing factor behind it, it is likely to have provided a motivation, both for Australia to support the Indonesian invasion and later departure, and for some Timorese people to push back against the government in 2006. Rent seeking behavior has also been prevalent, as exemplified in the case of generous veterans' pensions, which receive a disproportionately large budget allocation. At large, Timor-Leste appears to be a prime example of a rentier state – state-owned enterprises abound, the tax base and therefore government accountability remain minimal and there is large public expenditure on inefficient transfers (as well as expensive schemes with political benefits

but with little development potential). There is evidence of a Dutch disease through both the spending and resource movement effects, but this has been somewhat limited by the use of the US Dollar as currency. In addition, while the use of a Petroleum Fund has substantially reduced revenue volatility, the government has consistently fallen into the trap of overzealous expenditure funded through excessive withdrawals when prices are high.

As already alluded to, several factors have been identified which can help mitigate the impact of the resource curse (e.g. anti-corruption institutions, the dollarised economy and the Petroleum Fund). Due to government action, however, in both weakening local institutions and persistently over-exploiting the Petroleum Fund, the mitigating nature of such protective mechanisms has been reduced. Our study is one of the first research endeavours dedicated to critically examine the development effects of mineral resource management in Timor-Leste. Future research can probe into each of the resource curse mechanisms we discussed in greater detail – this will help in formulating evidence-based policy recommendations that can alter the Timorese government's perspective and ensure the best possible use of Timor-Leste's resource endowments.

Disclosure statement

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