

The challenges of the "Development from above" and "Development from below" in the Lobito Transport Corridor (Angola)

Abstract

As the efforts to modernise the Lobito Transport Corridor in Angola advance, people's lived experiences are shaped by the interactions between official "developments from above" efforts and a myriad of inventive, often messy, adaptations that could be seen as "developments from below". As a result of a combination of a variety of adaptive strategies (of coping and accumulating) pursued by diverse kinds of rural and urban Angolans and of official projects to improve transport infrastructure and services, a transformation of society is in progress. Beyond the obvious utilitarian function, the transport system provides a window on many socio-economic and political facets of the region. From an assessment of the dynamics, effects, impacts and linkages, the modernisation of the Lobito Corridor can be made part of a sustainable development and poverty-reduction strategy in the development process. Nevertheless, those dynamics have not induced maximum multiplier effects in terms of increased employment and income earning opportunities of the poor despite their improved mobility. The transport economy is a site of capital accumulation and change where social stratification goes in parallel with increased socio-economic inequality and precarious conditions in the labour transport market. To some extent the government is bound to reinforcing long continuities by improving infrastructure. People then adapt to this framework and it partly serves but partly constrains development. In this context, an improved regulatory and institutional framework for the transport system (top-down approach) and an integration of the non-formal dynamics that have been developed within the real transport system with the formal ones (bottom-up-top approach) is essential.

INTRODUCTION

Hirschman (1958) has argued that economic development might be achieved through the positive effect of imbalances that push the economy forward as economic agents exploit the possibilities created by bottlenecks in the market. Such imbalances are conducive to change and provide more benefit than any other strategy. This is apparent in the real transport system, particularly in the Lobito Transport Corridor. In the intersection between people's material and social lives ("reconstruction from below") and the infrastructure and social relations around transport and mobility ("reconstruction from above"), this is what characterises the "real" transport system along the Lobito Corridor.

The paper will first summarise historical events and developments related to the transport and trade systems in Benguela (the starting point of the Lobito Corridor) under the Portuguese colonial rule. In the context of infrastructure and the development process, reference will be made to the impetus behind Benguela railway construction in Angola during this period.

The Lobito Transport Development Corridor, a multimodal road and rail system anchored to the port of Lobito. Lobito itself is one of the biggest commercial ports on Africa's Atlantic seaboard and the network it supports runs deep into the heart of the continent (specifically to the Democratic Republic of Congo - DRC and Zambia). The corridor includes a rail network, named the Benguela Railway Company—CFB, which runs from Lobito Port to DRC and Zambia through the Luau-Dilolo border post (1,344 km);¹ and a road network from the Lobito Port to DRC and Zambia through the Luau-Dilolo border post (TAH 9 is parallel to Benguela Railway). The road also links with the National System Cong road at

¹ The rail links with the National System rail of DRC at Kolwezi.

Kolwezi (DRC); a road from Luena (Angola) through Cazombo to Solwezi in Zambia via the border post at Jimbe; and a planned direct rail link from Solwezi in Zambia through Jimbe border post to Luena in Angola.² This paper will look beyond the primary function of the transport system along the Lobito Corridor, which is the moving of people and goods, and will identify and characterise the dynamics and the effects that have developed within the transport system (and across other sectors). It will identify both direct and indirect ways in which people use the transport system and therefore ascertain direct and indirect impacts, and forward and backward linkages of its development on Angolans' lives, particularly on the welfare of the poor. It will assess how communities are using the transport system to meet their needs and wants and what constraints are imposed on their socioeconomic conditions by the state of transport infrastructure and services.

Transport, as with other infrastructural investments, can make possible other activities and enhance the welfare of poor people, and transport investments can contribute to economic growth that may expand the economic opportunities available to the poor and provide additional resources for poverty reduction. However, the linkage is not an inevitable one because other political, socioeconomic, and cultural factors are likely to be important in determining the poverty impact. In addition, the attempt to understand the extensive and complex economic activities within the transport system has led to conceptual difficulties and produced a variety of

² The Southern African Development Community (SADC) and its transport corridors strategy have identified 18 regional transport development corridors that are grouped into four clusters (western, southern, eastern and north-south corridor clusters). Each cluster serves a set of common members and shares nodes/internodes. Angola anchors three of the corridors and is also a part of the western corridors cluster that includes: Lobito/Benguela (Angola, DRC, Zambia); Namibe (Angola, Namibia, Zambia); Malanje (Angola, DRC); Bas Congo (DRC, Angola); Trans-Cunene (Angola, Namibia, Zambia); Trans-Kalahari (Namibia, South Africa, Botswana); Trans-Caprivi (Namibia, Zambia, DRC); and Trans-Orange (Namibia, South Africa).

overlapping terms. For the purpose of this paper the term "real transport system" is considered and its significance will be presented.

In attempting to account for the development of the provision of transport services in the Lobito Corridor, an assessment of key actors operating will be considered. Investments by private transport operators and their dynamics and effects, including increased income and stimulation of entrepreneurship (terms of accumulation and class formation), employment opportunities (labour market), increased social mobility, and better distribution of goods, will also be assessed ("development from below"). Finally, this paper will also examines the formal dynamics that are developing along the Lobito Corridor, such as the transport infrastructure reconstruction projects implemented by the government and international firms, and how these influence economic development ("development from above").

COLONIAL BENGUELA AND THE DEVELOPMENT OF THE TRANSPORT AND TRADE SYSTEMS

In the nineteenth century, the fact that the Benguela Highlands were thickly populated and strategically placed between the producers of the major export commodities and the coast contributed to the prominence of the Ovimbundu – the inhabitants of the highlands – in the transport system of the area (Heywood, 1985). The opening of the central highlands route was linked to the need to transport goods from central Africa to the Atlantic coast: initially slaves, and later products such as ivory, wax, honey, and other agricultural products, which replaced the slaves as trans-Atlantic exports (Pössinger, 1973; Heywood, 1985). The Ovimbundu responded to the demand for the transport of these goods mainly intended for export by organizing a system of long-distance trading based on royal caravans, *omaka*, and formed complex trading and political alliances between their states on the highlands (Soremekun, 1977). By about 1840, Catumbela, on the coast, was being built up by Portuguese traders because the Ovimbundu liked to stop there on their way to Benguela. Bastos, writing in 1912, tells us a great deal about the Ovimbundu trade with the coast in the nineteenth century, especially with the towns of Catumbela and Benguela. Those years of trade in slaves and items such as wax and ivory heralded a ‘new era of unfolding prosperity and riches’ (Bastos, 1912: 13, 18), no doubt in response to increased European trading demands in the wake of the Industrial Revolution.

The geography of the highlands made human portage the most feasible means of transport and the emergence of the Ovimbundu as renowned porters was primarily due to the nature of human portage itself, and not to any special attributes. Humans, for instance, could travel under all conditions in the highlands, and thus portage was faster than alternate means, such as the use of boats or ox-wagons. Porters, who could carry as

much as 35 kilograms each, could travel along any route in the highlands, while the lack of navigable rivers hindered the use of boats for transporting goods. The journey using ox-wagons was not possible when there was no grass for the oxen to eat along the way or when the holes in the river beds were so dried up that water could not be found for the animals even in the deepest diggings (Birmingham, 2008). In addition, ox-wagons could only make the 550-kilometre trip in two months, travelling five hours a day (Malheiro, 1903);³ whereas porters could cover more than 19 kilometres per day and thus make the same trip in less than half the time (Heywood, 1985). While carrying their heavy loads, porters would only stop after a five-hour walk, then they would prepare a camp (which involved construction work) and gather water and wood before resting, and all on relatively limited rations. Short journeys from the agricultural lands to the coast were even more demanding. People carried little or no supplies, and many ate nothing during the journey, obtaining their sustenance from water (Johnson, 1969; Cameron, 1877).⁴ Some observers remarked that the return route was like a graveyard, littered with the bodies of those who died on the way back home (Silva Porto, 1840-1887; Johnson, 1969). Eyewitnesses were able to report that the bodies were Ovimbundu traders since items of their trade were often left on the hastily dug graves. Ox-wagons, however, were more susceptible to natural disasters than human carriers. For example, heavy rains might destroy the road and bridge system necessary for the wagons, but humans could bypass such impediments (Brásio, 1970). When the rains began, travel was equally difficult because constant repairs and modifications to the wagons because of heavy rains made them expensive to maintain (Birmingham, 2008). Even in good weather, an ox-wagon might take twice as long to reach the plateau as a caravan of

³ Arquivo Histórico Ultramarino, Angola, 2ª Repartição, Caminho-de-Ferro de Benguela, 'Tarifos'.

⁴ Porters were largely slaves or dependants who were relatively powerless and thus easily subjected to such precarious conditions (Candido, 2008).

experienced porters, but the weather was not always good and oxen could either be left gasping with thirst or be waylaid by raging torrents.

With the legal abolition of slavery in the late 1870s and the rise of commodity production, trade in Benguela had expanded into a complex pattern of local exchange alongside the trade oriented to the coast. The port of Benguela was opened to overseas trade and agricultural products were exported to England, France and Portugal (Dilolwa, 1978). Between 1870 and 1900, individuals in Ovimbundu society came to dominate trade between the producing areas of Central Africa and the coast and gained the opportunity to enhance their social position and to increase their political standing. Most caravans belonged to high-ranking Ovimbundu officials or to Portuguese traders (Heywood, 1985).⁵ The trading caravans must have been impressive sights with some ranging as far as Lake Tanganyika from the central highlands (Clarence-Smith, 1983). The largest one ever recorded in East and Central Africa left Bié for the coast in 1873, comprising some 20,000 people (Bastos, 1912). A normal caravan, however, was about fifty people, with the larger ones containing up to two hundred. Cameron (1877), for example, noted in November 1875 that on his way to Benguela he met ten caravans, numbering on average between seventy and eighty men.

The rise of rubber as the main export (followed in importance by ivory and wax, with some slaves still being offered but no longer as a major trade commodity) was in large measure responsible for this development. Raw

⁵ While the rapid increase in the level of Ovimbundu trade in the second half of the nineteenth century, which came to dominate all aspects of Ovimbundu society, swamped out European competitors from the Highlands, at the coast it was different. By the 1870s 'the life of a European in Benguela is purely and exclusively a commercial one. The caravans which come in... the products that are brought forward, the prices made through the competition of others, and his negotiations with the natives absorb every moment of daylight.' (Capello and Ivens, 1882: 15-16).

rubber had become the main merchandise for the caravans and the main export product of Angola, owing to a growing demand from European industry at a time when Brazilian rubber export was still rather limited (Pössinger, 1973; Dilolwa, 1978). A substantial proportion of the population did indeed engage in trade (Heywood, 1985).⁶ It is also important to highlight that the long-distance trade caravans with their African, Luso-African and European leaders played a prominent role that went beyond the economic and commercial aspects. Heintze (2008) argued that as carriers of information that connected small-scale (local) with wider areas of communication, the caravans had created 'tightly woven information' and communication networks of considerable political and economic significance for the shaping of West Central Africa. The exchange carried on by trade caravans comprised not only goods, skills and knowledge but also information, news and rumours. News and information regarding what had previously been unknown now travelled much more quickly were available in more detailed form and were transmitted across cultural boundaries. Heintze (2008) also emphasized the flexible and changing nature of the information and communication networks created by the caravans. They were not static but subject to change, such as when caravan routes were abandoned or moved elsewhere.

In the highlands, the number of Portuguese traders (now government officials, both military and civilian too) increased dramatically because of the economic prosperity that the rubber boom had brought.⁷ The new Portuguese community soon realized that the success of government activities depended on the willingness of Africans to provide transport

⁶ *O Jornal de Benguela*, 23 August 1918, p. 3.

⁷ The final years of the nineteenth century and the early years of the twentieth century, after the Berlin Conference (1884-1885) and the official end of slavery, correspond to the period during which the map of Angola was defined through intense military activity (Clarence-Smith, 1983). The history of Angola suffered a *volte-face* and the traffic of slaves was replaced by military occupation to enable a 'peaceful' exploration of Angola (Dilolwa, 1978).

services. By the 1880s, porters were increasingly hired or people carried their own products. In one month in 1885, a total of fourteen caravans entered the city of Catumbela, seven of which brought agricultural products. Most of these came from Bailundu, which was nearest to the coast and usually included small-scale operators transporting their own agricultural products for sale on the coast; those that came from Bié, further east, generally brought wax, ivory, or rubber (Silva Porto, 1840 – 1887). The profitable inland large-scale trade, mainly in rubber, that mushroomed following the opening of the road to Bailundo and Bié was the basis for Catumbela's quick development. As the rubber trade boomed, Catumbela grew in importance, reaching its peak in the last two decades of the 19th century. Porters gained the reputation of being competitive traders as they combined portage services with trading activities. Caravans, often comprising over 1,000 people, entered the rubber producing areas and split up, so that porters bartered on a one to one basis with the individual producers (Johnson, 1969). Such trading techniques tended to expand the market to include even the lowliest porter who exhibited a preference for transporting and marketing his own products over working for someone else. Furthermore, as the control that the Ovimbundu upper classes (and Portuguese traders) maintained over the porters of caravans going to the interior was not very rigorous, porters could engage in entrepreneurial activity on their own account, and had no compulsion to report it, or their profits, to the caravan leaders. Wages were increasingly converted into commercial profit, as some porters carried trade goods in addition to their contracted loads. Some who made the outward bound trip on behalf of a Portuguese trader, a member of the Ovimbundu dominant group or any group of foreigners, would invariably, on the return trip, transport a few kilograms of rubber bought with the cloth they received as wages. This rubber was then sold at the coast and more cloth purchased to start their own petty trading. The ease of access to commerce, both on the coast and

in the interior, provided the opportunity for anyone to try his luck at trading. Even though the majority of the men remained porters, there were always a few who put to good use the strategies that made successful entrepreneurs (Heywood, 1985).

The thin line between petty trader and hired porter was easily crossed, depending upon whether or not an individual had access to some capital of his own. The distinction between porters and traders among members of such caravans was not particularly noticeable since both groups contributed labour for the transport of commodities. It would be incorrect to argue, however, that porters were transformed as a class into traders (Heywood, 1985). For the most part, porters continued to be porters, even though some of them traded on their own account. In any event, the tendency of many Ovimbundu porters to become petty traders was a development that had serious consequences for those groups who relied on the porters – the Ovimbundu upper class and the Portuguese traders, both in the highlands and on the coast. Whereas in the 1850s ordinary Ovimbundu normally went out on someone else's behalf, by the 1880s it was increasingly difficult to induce people to trade or carry for anyone but themselves.⁸ The scarcity of porters was such that no-one was spared; there were even 'successful African traders who cannot get carriers for their goods, so numbers of loads are stored up at Catumbela.'⁹ Thus, the competition for porters intensified at a time when the Ovimbundu no longer wanted or needed to do such service for others. This problem was of particular concern to the new Portuguese traders, many of whom were bent on making it rich quickly and

⁸ At this time, women and children often provided the labour needed by ambitious Ovimbundu porters who wanted to become independent traders. In one caravan bound for the interior in 1890, nine of its 97 members were *pombeiros* (that is, itinerant merchants connecting the interior markets with the coast) who carried no load, 50 were porters, and the remaining 36 were youths, many of them slaves who had to carry their masters' loads. Some were no older than nine or ten years (Johnson, 1969).

⁹ National Archives of Zâmbia, HM9/F13/1/1, Diary of Annie Fay, vol. 29, 1889.

returning to Portugal (Heywood, 1985). Portuguese officials and merchants tried to control Ovimbundu labour through force by obliging the conquered upper class to supply them with porters. Merchants competed with each other and with the government and missionaries to obtain adequate numbers of porters for their goods, but still demand was greater than supply.¹⁰ By 1885, Benguela was more a trading station than a city (Robson and Roque, 2001).¹¹ As away from the coast, trade was in the hands of the local population, the coastal district of Benguela was crucial for the development of colonial trade.

Under such conditions the colonial government had to intervene more directly in the control of the transport system and plan its transformation altogether. The first step was to bypass porters by building roads for ox-wagons and by studying the feasibility of using some of the rivers for transport (Heywood, 1985). These actions were partly facilitated by the arrival of several dozen extended families of South African Boers. They reached Angola, after crossing the Namibian ‘thirstlands’, thanks to the technology of the ox-wagon, in response to the chronic shortage of porters to carry rubber to the coast (Clarence-Smith, 1983; Birmingham, 2008).¹² Since the building of the roads depended on the control and availability of labourers and the government did not have the capacity to enforce Ovimbundu labour, road construction had represented an unsuccessful measure in the short run. In addition, it was soon realized that ox-wagons, even when proper roads were available, were unable to compete with porters for speed and cost, a point that has already been noted. The fact that

¹⁰ In this period both members of the nobility and Portuguese traders found it difficult to use the coercive power of the state and the labour of kinsmen to acquire wealth and transport services (Heywood, 1985).

¹¹ In 1900 there were just two cities in Angola: Luanda with 20,000 inhabitants and Benguela with 10,000 (NEP, 1992).

¹² The number of Boer in Angola grew from about 300 in 1879 to approximately 2,000 at the time of the trek out of Angola in 1928 (Bender, 1978).

the climate and the geography of the highlands were more favourable to human labour made it even more important to control porters while at the same time continuing the efforts to find alternate means of transport. The speed and reliability of transport on the wagon trails of Angola in 1906 left much to be desired. Bringing goods up to the plateau from Benguela by porter was both faster and cheaper than bringing them up by wagon even when twenty oxen had been spanned.¹³ But porters were very hard to recruit, and were sometimes less than trustworthy, so wagons were used as the next best option. There were some merchants who experimented with the transport of rubber by ox-wagon between 1911 and 1914, but the experience was costly and proved a time consuming lesson (Birmingham, 2008).¹⁴

The consideration of the difficulties of wagon-trail transport in southern Angola and the potential for profits from the control of transport led several local Portuguese merchant houses, companies, and private speculators to apply formally to the government for a concession to build a railway from the coast to the highlands.¹⁵ Although the Portuguese bourgeoisie was keen to trade with Angola, it was much more reluctant to invest in the colony. The amounts needed to build a railway were enormous, and the risks extremely high (Clarence-Smith, 1983). In 1902, the government gave the

¹³ The uncompetitive cost of wagons was also the result of the fact that they has three major requirements: large-scale financial credit for the capital outlay, veterinary knowledge to keep the teams of twenty oxen alive and healthy, and carpenters or blacksmiths to repair the wagon beds or to refit the great metal hoops which rimmed the wooden wheels. None of these services could be adequately supplied by African merchants, stockmen and artisans nor indeed by Portuguese-speaking settlers moving up from Benguela coast (Birmingham, 2008).

¹⁴ In 1914, a total of 70 wagons arrived in Huambo after a three-year trip from Huambo in the south to Luanda – thus bypassing the central highlands. During this journey the organizers lost 1,500 oxen and 22 wagons. Bridges had to be built along the way. Only 2,000 kilograms of rubber were transported, and the venture was deemed a failure (Tanganyika Concessions Holdings, London, Extracts from Africa Reports, 1915 – Report of General Manager, 31 December 1914).

¹⁵ Arquivo Histórico Ultramarino, 1ª Repartição, Angola, Diversas, Maço 467; Arquivo Histórico Ultramarino, 1ª Repartição, Angola, Diversas, Maço 783; Arquivo Histórico Ultramarino, Direcção Geral das Colónias, 2ª Repartição, Angola, Assuntos Diversos, Maço 778.

British capitalist Robert Williams a concession to build the Benguela railway from the Atlantic Port of Lobito through the central highlands in Angola to the copper producing area of Shaba (Katanga) on the Zambia-Zaire border, along the traditional route followed by traders (Katzenellenbogen, 1973).¹⁶ Williams was granted a concession for 99 years on 28 November 1902, and his Benguela Railway Company commenced construction on 1 March 1903.

Even though the railway authorities looked to the profits from the transport of copper as their main reason for building the railway line, they were aware that they could also displace the porters. Therefore, between 1902 and 1914, as the railway was extended from the coast to Bié, 520 kilometres inland, systematic attempts to eliminate porters as a means of transport were witnessed. In 1906, the railway contractors concluded that no other intermediate region was as important for the railway as the heart of the Ovimbundu domain.¹⁷ They wanted to tap the labour as well as the extensive trading network that had developed in the nineteenth century.¹⁸ In this process, they hoped to replace all traditional forms of transport in the

¹⁶ The concession included mineral prospecting rights and commercial privileges extending 120 kilometres each side of the line (Katezenellenbogen, 1973). It was granted rapidly and secretly by the Portuguese to Sir Rober Williams, a dynamic entrepreneur who had acquired in 1900 40% interest in the Katanga mineral wealth. This was seen by the Portuguese as a demonstration of its independence from both Britain and Germany since this railway, owned by a British entrepreneur, would run through the part of southern Angola allocated to Germany in the (most widely known) 'secret' Anglo-German agreement of 1898 (Hutchinson and Martelli, 1971). This agreement provided that if either Britain or Germany was prepared to offer Portugal a loan secured on the revenues of Angola, Moçambique, or Timor, the other would be informed and given the opportunity of participating. A 'secret' convention attached to the agreement added that in the event of Portugal's deciding to give up these colonies Great Britain and Germany would divide them (Katezenellenbogen, 1973).

¹⁷ Tanganyika Concessions Holdings, London, Benguela Railway, Letter from contractors J. Norton Griffiths, 24 February, 1960; Tanganyika Concessions Holdings, London, File 39, Sir D. Fox and Partners, 1903 – 1932, letter from Company, 25 May 1905.

¹⁸ The huge numbers of shovel-wielding labourers who could be made to work long hours on the short rations and minimal pay needed to build the Benguela railway were not easy to recruit; not only because the south of Angola through which the British wished to run the railway was scantily populated, but also because of fierce competition, from long-distance merchants needing hundreds of bearers for their rubber caravans and brandy distillers needing cheap labour to work the sugar-cane plantations (Birmingham, 2008).

area of the railway, especially portage, which they argued did not contribute to the formation of 'civilized life' among the Ovimbundu (Caminho-de-Ferro de Benguela, 1912a). The construction of the Benguela railway and the investment in developing roads and markets was also a response to the urgent need to complement the colonial occupation of the interior areas of Angola during the early years of the twentieth century. Angola lacked the requisite infrastructure, for most of the 1900-50 period, to execute the settlement policies legislated (Carvalho, 1940; Baião, 1966; Almeida Santos, 1966).¹⁹ Until the mid-20s, for example, Angola had practically no roads or rail lines, which meant that settlers had to transport their agricultural produce from the interior by expensive Boer ox-carts or African porters (Wheeler and Pelissier, 1971; Norton de Matos, 1926). The renowned Benguela Railway was completed only in 1929.

The rapidly growing slave trade was the basis for the opening of a second port at Benguela (south of Luanda) in 1617, from where access to the southern part of the highlands was much easier. The dynamics of the Benguela Railway and Lobito port construction were the new factor behind the economic, political and strategic importance of Benguela. In this context, the economic interaction between the Portuguese and indigenous societies in the twentieth century moved beyond its early slave-trading nature (Guimarães, 1998). The railway became a symbol of colonial stability. For the Portuguese, the Benguela Railway was a new means of transport that opened up the hinterland for effective military deployment and the realisation of their colonial plans, not to mention the disciplining of the population. Economically, it served to control the established main trade route and open up new areas for economic development (Esteves, 2000). Furthermore, the railway construction was one of the largest

¹⁹ Between 1900 and 1950, the government devised scores of programmes and passed innumerable laws designed to bring about the fruition of the planned settlement dream. For a summary of pre-1950 settlement schemes in Angola see Galvão (1937).

examples of investment held by foreign investors under the New State's colonial rule and allowed for equilibrium in the Angolan exchange market (Dilolwa, 1978). This combined with the fact that during the New State's colonial rule, local industry in Angola had little opportunity to get off the ground, meant that infrastructural sector development gave Benguela a unique role within colonial trade development.

The pressure on Ovimbundu trade and carrying services came not only from the railway but also, and most directly, from the colonial government. Essentially, the government's intervention led to a decrease in the wages received by porters and other restrictions such as colonial laws constrained the expansion of Ovimbundu activities. Initially, Ovimbundu porters were able to combine agricultural, trading and portage activities under the relatively lax system of controls that existed up to the First World War. Registers of passports issued to caravans show that caravans under the direction of Ovimbundu greatly exceeded both the size and numbers of those under European direction. However, in 1908, a local Benguela newspaper noted the gradual disappearance of the caravans, which 'do not come down here with the frequency of happier times' (*A Voz de Angola*, February 16, 1908:2). Ovimbundu caravan trading was paralyzed almost instantly in 1912 after the railway line reached Huambo in the highlands in 1911, although even then 'traffic is still carried by the natives on their backs.'²⁰ In that year, the railway statistics showed that the bulk of the rubber (2,221 tons) was transported by rail, whereas only 473 tons were brought to the coast by porters, generally from areas far removed from the rail line, from where it was still more convenient to carry rubber to Benguela and Catumbela (*Caminho-de-ferro de Benguela*, 1912a). However, it was genuinely believed that ox teams would haul all freight to

²⁰ American Board Conference of Foreign Missions, Boston University, vol. 19, Doc. 262, Hollenbeck letter, July 1911.

the areas to either side of the railway line and a report of 1914 noted that once the line reached Bié the company would introduce special rates to encourage the Boer wagons to carry freight from the terminus of the line to the interior.²¹ As the action of railway authorities contributed to the quick demise of porters and traders as professional groups among the Ovimbundu, they had to find alternate means of employment, mostly in agriculture.

By the beginning of the World War I, the era of prosperity and social mobility for the Ovimbundu, which could see a humble man rise to a minor official and village ruler in his lifetime, had effectively ended (Heywood, 1985). The colonial era that dawned would bring the Ovimbundu much harder days than they had known. As the structure of commerce changed in Angola in the 1920s, sales for cash become frequent as taxation was imposed on Africans, and traders became labour recruiters. The corruption of officials was compounded by the ignorance of labourers, who had no idea of their legal rights. State labour fell heavily on women, who built the network of dirt roads, often with their own tools (Ross, 1925). The disappearance of the Ovimbundu caravans and with it the decline of African porters aspiring to be merchants also coincided with the sudden collapse of rubber prices in 1913-14 (Boletim Oficial da Província de Angola 4, January 24, 1914).²² The demand for rubber carriers or rubber-carrying wagons in Angola vanished overnight when prices for wild rubber fell so low that it was not worth harvesting it (Birmingham, 2008).²³

²¹ Tanganyika Concessions Holdings (London), BR 7, Report of General Manager, 31 December 1914.

²² Angolan raw rubber, then the only important merchandise besides wax and honey, was replaced on the world market by rubber from Brazil and Asia (Pössinger, 1973). The explosive demand for rubber to insulate electric wires and cushion vehicle wheels outstripped the supplies available in Africa and the industrial world turned to plantation-grown rubber from Malaysia, a competition which killed off the long-distance commodity trade in Angola (Birmingham, 2008).

²³ The old Boer communities of farmers and transport-riders held on for another eighteen years but eventually they returned to South Africa after fifty-year sojourn on Angola soil. Ox-wagons did not make a comeback, though oxen continued to be used as draught animals and ploughing

Against this background, the Ovimbundu intensified the production of maize (Clarence-Smith, 1983) and Ovimbundu themselves began to export agricultural products such as maize and maize flour (*fuba*) to markets in Benguela and Catumbela (Heywood, 1985). In the 1920s, Ovimbundu maize became the colony's second or third largest export by weight; and with the sustained increase in agricultural production in the late 1930s, maize became the largest-volume crop, accounting for 75 percent of Angolan exports. The Benguela Railway provided transport to the coast, and colonial maize received protection on the Portuguese market. Since production was of low-grade maize for pig-fodder, profit margins were low and the crop did not attract white farmers. Therefore, land alienation did not become a serious problem and the Ovimbundu could easily pay their taxes by selling maize across a broad swathe of territory on either side of the railway.²⁴

Lobito was the maize port of Angola, with more than 90 percent of the country's crop coming from Benguela's Bié Plateau. Lobito was also the major port of Angola for African-grown beans, manioc, rice, and for sisal grown on European-owned estates. Maize, beans, dry manioc, and salt, though low in volume, made up more than half of the domestic exports shipped through Lobito. Other important domestic agricultural commodities shipped via Lobito were castor seed, groundnuts, sugar and hide (Hance and Van Dongen, 1956). It was therefore not surprising that for most of the period of Portuguese presence in Angola the urban and commercial centre of Benguela was, alongside Luanda, the focus of

continued to be practised in southern Angola. In southern Angola, as in the north, it was the small lorries of bush traders that brought about a transport revolution in the 1920s (Birmingham, 2008).

²⁴ Railway statistics show that the export of maize from Benguela increased from 490 kg in 1909 to 1,355 tonnes in 1913, of which most was produced by the Ovimbundu. Export of maize flour also grew from a low figure to a total of 2,244 tonnes in 1914 (Caminho-de-ferro de Benguela, 1915).

colonial trade. This was further demonstrated by the completion, in 1949, of the longest tarmac road in Angola (30 km) linking Lobito to Benguela (Dilolwa, 1978). Data from 1950 and 1960 illustrate not only increased traffic on the Benguela Railway, but also the fact that the movement of loads, passengers and receipts exceeded that on the other three railway lines (see table 1).

Table 1: Number of Passengers, Tonnes of Goods Moved, and Receipts Registered by the Four Railway Lines in Angola in 1950 and 1960

		1950	1960
Caminho-de-ferro de Amboim	Passengers	5,413	10,246
	Goods	12,755 tonnes	34,026 tonnes
	Receipts	1,801 <i>contos</i>	-
Caminho-de-ferro de Benguela	Passengers	540,618	725,500
	Goods	1,211,882 tonnes	3,604,242 tonnes
	Receipts	129,973 contos	-
Caminho-de-ferro de Luanda	Passengers	438,208	221,941
	Goods	216,659 tonnes	445,836 tonnes
	Receipts	32,811 <i>contos</i>	-
Caminho-de-ferro de Moçâmedes	Passengers	34,024	73,797
	Goods	51,624 tonnes	445,863 tonnes
	Receipts	4,565 <i>contos</i>	-

Source: Dilolwa (1978)

The Benguela Railway connection with the border was completed in 1929. While the primary purpose of the project had been to capture the export trade in Katanga minerals, until the Belgians connected with the border in 1931, Sir Robert Williams was left with only the domestic Angolan traffic. In the original plans this was considered to be of secondary importance; however, it developed and supported the line over the years and proved to be its main source of revenue until Congo's independence in 1960. It was at this point that a new political and economic calculus enabled the Benguela Railway to realize its original goal, and the line jumped from carrying only 24% of Katanga minerals to 40%.²⁵ Williams had paid his first stockholder dividend in 1956 largely based on the domestic Angolan traffic. The combination rail–water–rail route through Matadi built by Belgian interests had carried about 40% of the Katanga minerals until independence, and thereafter the primary routes were the more efficient direct rail connections through the Portuguese Atlantic port of Lobito and Indian Ocean port of Beira, both of which were far quicker, more direct, and hence more cost effective. The Benguela Railway proved very successful and profitable, and increased in importance, particularly in 1973 after Rhodesia closed its border with Zambia, and mineral exports had to find a new rail route.²⁶ The Benguela Railway was predominant also because the seaport Lobito was the only in Angola that had connections with rail networks of adjacent territories and thus handled a good volume of extra-territorial trade (Hance and Van Dongen, 1956).²⁷ For almost two decades, Lobito ranked first among Angolan ports in the volume and value of total overseas trade and in the total volume of domestic trade. Communications were modernised, and settled agriculture slowly replaced

²⁵ Katzenellenbogen, *Colonialism in Africa*, 395.

²⁶ The Tanzam Railway from Zambia to the Tanzanian port of Dar es Salaam would not be completed until 1975, so for Zambia the Benguela Railway was its key economic lifeline.

²⁷ In 1973, sisal was the third largest export from Angola (12 percent of total exports), and the *concelho* of Cubal and Caimbambo in the *distrito* of Benguela were producing 80 percent of the total production of sisal in Angola (Dilolwa, 1978).

raiding, hunting, collecting and caravan trading. Fixed stores along roads and railways replaced the itinerant traders of earlier years.

As a consequence of its importance in terms of transport linkages and because it was extensively used for transporting Portuguese troops, the Benguela railway line was a target for sabotage under colonial rule. The line was first seriously damaged on Christmas Eve in 1966, when UNITA launched its first major operation (Cornwell, 2000; Marcum, 1978; Bailey, 1976). After several attacks and traffic disruptions, on 10 August 1975, the line was closed completely and services were halted. At this time, while much of the railway was under MPLA control, part of the line was taken over by UNITA forces (African Development, 1976). The invasion against southern Zaire in March 1977 prepared by mercenaries of Katanga who had been underground in Angola since 1963 and which started at Dilolo, the crossing point of the Benguela line, jeopardized any chance of re-opening the line. The movement of goods and passengers was a dream of the future and a major disaster, not only for Zambia and Zaire, but also for Angola and the Benguela Railway Company.

THE "REAL TRANSPORT SYSTEM" AND THE NON-FORMAL SECTOR

The attempt to understand the extensive and complex economic activities within the "real transport system" has led to conceptual difficulties and produced a variety of overlapping terms, such as "informal", "parallel", "second", "black", "underground", "shadow", and so forth (Meagher and Yunusa, 1991). For the purpose of this paper, the terms "parallel" and "underground" have been dropped because, first, activities within and linked to the transport system intersect with formal ones in many complex ways and, second, many of its activities are carried out quite openly. The real transport system as considered by this paper includes the formal and non-formal sectors and the direct/indirect effects and linkages related to, and within, the transport system, that developed as war mechanisms, have expanded in the war-to-peace transition and continues to develop under the reconstruction process.

The non-formal sector is an integral part of the "real transport system".²⁸ In this paper it is used the "non-formal" concept in order to go beyond the concept of the informal sector as coined by Keith Hart in his study (1973) on informal income opportunities outside the wage economy in (Accra) Ghana.²⁹ In Hart's study, informal activities were found to be opportunities for increasing the income of the poor. The main message of the paper was that Accra's poor were not unemployed. They worked, often casually, for erratic and generally low returns, but they were definitely working. He found that people solved the problem of the inadequacy of urban wages by holding more than one job or by engaging in petty enterprises of all types

²⁸ The formal sector consists of those activities linked to and within the transport system that are taxed, licensed and subject to other regulation. Because those activities fall inside the scope of the nation's technique for monitoring and accounting economic activities are officially reported and measured.

²⁹ The starting point for the subsequent notoriety of the "informal sector" was the 1972 International Labour Office report on employment and poverty in Kenya.

often in addition to wage employment.³⁰ In distinguishing between formal and informal income opportunities, 'the key variable is the degree of rationalisation of work – that is to say, whether or not labour is recruited on a permanent and regular basis for fixed rewards', that is, the presence or absence of bureaucratic form (Hart, 1973: 68). At the same time, most economists saw informal income in quantitative terms as a sector of small-scale, low-productivity, low-income activities without the benefit of advanced machines. However, the non-formal sector of the "real transport system" in Benguela should not be viewed as a peripheral sector but as the base of the real transport system in the province, and as a permanent rather than a short-term phenomenon.

While it is important to understand the concept of informal employment in relation to the legal framework in any given country, and in this context to consider the informal sector as comprised of unregistered and unregulated enterprises whose owner operators choose to avoid registration and, thereby, taxation (Chen, 2004), this is far from being the whole story. Non-formal sectors also comprise entrepreneurs and self-employed individuals who produce legal services, such as the transport of goods and people, albeit through irregular, unregulated and unregistered means, because the regulatory environment is too punitive, too cumbersome or simply non-existent. In this context, it is possible to identify those transportation activities that in some way avoid taxes, licensing and other regulation, and second, those activities that are unreported and unmeasured because they fall outside the scope of the nation's technique for monitoring and accounting economic activities. Using these two dimensions, this paper follows other writers who have used the term 'unofficial' because they found it important to distinguish between activities that are merely

³⁰ Neither size nor productivity can be intrinsic to the definition of the informal enterprises (Hart, 1985). Hart is also careful to point out that the term 'informal sector' refers to activities and roles and not to persons (Hart, 1973).

unmeasured and those that are concealed in order to evade taxation, licensing and other regulations (Smith, 1985; Mattera, 1985; Blades, 1982; Gershuny and Pahl, 1980).

In addition to the characteristics of micro and small enterprises and self-employment, the non-formal concept focuses on the nature of employment arrangements. The objective is to include non-standard wage workers who are not protected and whose employment relationships are not clearly defined and regulated. Some wage workers have found themselves without legal recognition or social protection because their employment relationship is ambiguous and not clearly defined. An employment relationship clearly exists, but it is not regulated, nor is it registered who the employer is, what rights the worker has, or who is responsible for securing these rights. In some instances, it may be doubtful as to whether an employment relationship really exists. However, this is not to say that the labour market within the real transport system is of limited significance. Rizzo (2002) argued that the 'informal' transport system in Dar es Salaam goes beyond home-based or individual enterprises with few or no employees, consisting in fact of a labour market where it is possible to distinguish between those who own the capital (the class of bus owners) and those who own the labour (the class of casual workers whom the former class employs). Small-scale transport operators (whether regulated and registered or not) choose ambiguous employment relationships as a means of avoiding their formal obligations as employers. It is not the non-standard wage worker that decides to operate non-formally and enjoys the benefits of it; most non-standard wage workers would welcome more stable jobs and workers' rights.

Finally, when defining the term non-formal, it has been borrowed from Chingono (1996) the argument that there is a need to add a dimension of

war, which has given the economy distinctive features. These are usually lacking or less amplified in other countries where alternative economies have evolved gradually over time and under relatively peaceful conditions. It is in recognition of this uniqueness that Chingono (1996), when researching Mozambique, uses the term 'grass-roots war economy' in preference to others currently in vogue. It relates to a set of social relationships, a number of different ideas and processes, many of which are often impossible to define precisely. In addition to the war and post-war dimensions, the non-formal sector has a political one. A non-formal sector represents a community's spontaneous and creative response to the state's incapacity to satisfy the basic needs of the impoverished masses. The fact that people travel and goods are transported in a context of non-existent public transport services is a significant indicator of the enormous size of the non-formal sector and of the dynamism of the real transport system in the war-to-peace transition. Finally, the non-formal sector has both a component of survival and rent-seeking because unregulated, unregistered and irregular activities conducted within the sector can be characterised as having two groups linked to each other. Economic elites are engaged in non-formal sector for profit and exert control over the production and distribution of assets and opportunities, while elements of the general populace participate in the non-formal sector as a coping or survival strategy.³¹ Relations and activities linked to and within the real transport system using family bonds or particular group networks are used, not only to create rent-seeking opportunities (imposing high transport fares and paying low wages), but also to organise reliably ordinary economic transitions such as the transport of basics and the movement of people.

³¹ See also Pugh and Cooper with Goodhand (2004) and Nordstrom (2004).

"DEVELOPMENT FROM BELOW"

Relative low vehicle ownership, the absence of public transport services and an increased demand for mobility and access have resulted in the expansion of passenger transport services provided by small-scale private operators named *candongueiros* ou *hiaces* to meet the transport needs of urban and peri-urban areas.³² Some of the few large operators who own three or more *hiaces* employ full-time drivers to operate all their vehicles and concentrate on running their business. The employed vehicle drivers have to return a specific target income to the vehicle owner each day and are paid according to how much they make. In an economy where the scarcity of basic skills is one of the main bottlenecks the importance of the driver is very great and they represent a key actor in the sector. When owners do not drive their own vehicles, much of the entrepreneurial skill required in the sector is concerned simply with choosing good and reliable drivers.

Another key actor involved in the provision of transport services are the owners-drivers who had started under severe warfare conditions. They are individuals who had entered the transport sector by driving their own motorised vehicles on a particular route and because they had accumulated disproportional gains are called 'winners' from war.³³ They comprised politically and economically well-connected individuals within Angolan society. Under the transport sector modernisation dynamics, yesterday drivers and owners-drivers who have enough money from their existing operation, place a deposit for the purchase of another vehicle, and employ a driver to operate the second or more vehicles, and small-scale entrepreneurs emerge. As a consequence of private accumulation by transport entrepreneurs in the road transport sector, it is possible to identify

³² *Candongueiros* or *hiaces* are motorised vehicles (normally a Toyota Hiace van) that can hold 7 to 12 people.

³³ See Cramer and Goodhand (2003).

a nascent bourgeoisie which enjoys a middle-class lifestyle, puts its children and itself through university, and passes on wealth to those children. It is therefore beginning to establish itself as a class.³⁴ Through the transport economy, the members of this class are able to secure a living and in some cases enrich themselves. In this context, road freight transport for example, an arduous, costly and time-consuming undertaking, has increased from the near-zero level and now involves activity such as the collection of small-scale production from scattered rural buying posts by urban-based small-scale transport operators.

When private actors involved in the transport economy (goods and passenger haulage) discovered that the provision of transport services using an intermediary means of transport could be another form of private accumulation a new class has emerged. Parallel to the social stratification that has occurred within the Angolan contemporary elite with the formation of a class of transport entrepreneurs using motorised vehicles, it is possible also to identify new strata within the rest of population, namely the family groups of operators of a taxi type of service performed by a motorcycle and motorcycle with a small back wagon (called *kupapatas* and *kaleluias*, respectively). They are ordinary, struggling individuals who have scraped together enough money to buy a motorcycle and offer a taxi service. The new service provided is important not only as a mean of passenger and goods transport but also as a way of reducing poverty by providing regular income-earning opportunities for communities and therefore improving living conditions.³⁵ In addition to their complementary role in boosting

³⁴ Similar arguments have been presented by MacGaffey (1991) when researching the real economy of Zaire and also by Hawkins (1958) for the road transport sector in Nigeria.

³⁵ A number of studies concerning intermediate means of transport have been carried out in various developing countries that emphasise the economic role that such means of transport can play in the development process: Barwell *et al.* (1985); De Veen (1991); Riverson and Carapetis (1991); Airey (1992); Dawson and Barwell (1993); Howe and Dennis (1993), Edmonds and De Veen (1993); Malmberg-Calvo (1994); Grieco *et al.* (1996); Porter (2001); Starkey (2001); Heyen-Perschon (2005); and Hook (2006).

commercial trade and thus earning opportunities for poor and isolated households, the *kupapatas* and *kaleluias* have played a key role in the creation of employment in two different forms: self-employment for those who own and drive the motorcycles, and wage labour for those who are only drivers. This form of job creation, non-formal though it is, has been beneficial for those previously unemployed, mainly young people, who now have an income-generating activity.

Despite the popularity and importance of the transport services provided by *candongueiros*, *kupapatas* and *kaleluias*, the emergence of an almost insatiable demand for transport, has resulted in the exposure of their failures and inefficiencies as a road transport services. For example, regarding the motorised taxi services, *candongueiros*' inadequacy, unreliability and inefficiency are critical. In spite of the significant role *candongueiros* have played in the transport of people since the beginning of the 1990s, communities tend to display an ambivalent attitude towards them and are unsatisfied with the services the taxis offer. There are always some complaints from the travelling public about breakdowns of *hiaces* and the resulting long delays and discomfort. Users also claim that the *candongueiros* tend not to be roadworthy, are overloaded, and are frequently irresponsibly driven, flouting the most basic traffic rules. Predictably, *candongueiros* and *kupapatas* are one of the most dangerous means of travel in the world and their users as a group are losing out from the present developmental state of road transport services. Reckless driving and high speeds combined with several other factors, such as the increase in traffic density, the narrowness of the road, and the reconstruction work, have resulted in a high daily percentage of fatal road accidents. Young taxi drivers are renowned for driving at high speed, overtaking on the left and right, stopping without warning, doing U-turns and exposing themselves and their passengers to untold further dangers. Some *candongueiros* and

kupapatas are convinced that they have the right of way anywhere on the road, simply because they perform essential transport services for the population.

When assessing the adequacy and efficiency of the service provided by *candongueiros*, another crucial issue has to be considered. The *candongueiro* operates on a specific pre-set itinerary or zone, which might be within the city, between cities or even between different provinces, depending on the owner. However, if at any moment, the driver identifies a more profitable route he may well change immediately to it, even without the owner's knowledge and without regard to the needs of transport users on the original route. Attempts to assign *candongueiros* to specific routes, in order to provide a public service, may thus be ignored by drivers if the returns obtained from operating on quieter, less busy routes are perceived to be too low. In this context, thought should be given as to what extent the *candongueiros* are efficiently stimulating passengers' mobility, particularly that of the most vulnerable transport users.

The extensive nature of the transport system results in often complex, and sometimes unanticipated, impacts of its development (Simon, 1996). However, any assessment of this development depends on the balance of socio-economic gains and losses, both directly within the transport system itself and indirectly in the wider social economy. In this context, it has to be considered that a significant number of people (the *hiaces*' potential passengers) sustain their livelihood by an array of non-formal activities that are likely to produce a very irregular pattern of travel demand. On the one hand, the flexibility of itineraries reveals *candongueiros*' ability to meet spatial and temporal travel patterns that are likely to be diffuse in character. On the other hand, the result of *candongueiros*' actions is that some itineraries are particularly badly served as long as there are more profitable

ones in the same area. Therefore, transport users using such unprofitable itineraries are forced into a relatively static state, in which lack of mobility and poverty are clearly related. This latent demand for transport is invisible to market forces and remains unfulfilled as transport provision is not efficiently responding to demand. This lack of provision of the transport services that would normally be expected from a local government arises because of the concrete class interests associated with a specific pattern of accumulation. As transport operators may be more concerned with private accumulation of wealth than with the efficient provision of transport services, increased road transport services may become a cause of social stratification. The pursuing of individual economic interests widens income differentials, increasing inequality not only between those who demand and those who provide the transport services, but also within the group (the class of employers and workers) that provides the services. The result is that socio-economic development does not follow from real transport system growth or at any rate that the development that follows is highly uneven.

Another essential dynamic of the real transport sector that affects its adequacy, efficiency and reliability is the conflict of interests between workers and their employers. The distinctive feature of the transport labour market arises because of the existence of a class of small-scale owners whose interests are distinct from the class of workers whom they employ, particularly *candongueiros* workers and the drivers of lorries owned by small-scale operators. Transport operators and owners take advantage of the high levels of formal unemployment to employ young men under unfavourable conditions. Employers do not offer *candongueiro* drivers a formal or written contract and, in a strict sense, workers are not "waged". There is a verbal contract that requires the *candongueiro* driver to hand over a substantial proportion of his daily earnings to his employer. The

magnitude of the worker's daily revenue in turn depends on the number of journeys per day and passengers transported. Their attempt to make the best out of a difficult situation results in their switching to more profitable routes, working long days and displaying risky behaviour such as speeding, overloading, and other rule violations that threaten the safety of passengers. Therefore, many of the inefficiencies characterising the road transport system are a consequence of the unfavourable conditions of employment and earning capacity of employees.

The pattern of private accumulation is also facilitated by the lack of an effective legal framework or regulation of transport services. When *candongueiros* circulate without a licence for the transport of passengers, the small private entrepreneurs, drivers, mechanics, tickets' chargers, *chamadores*, those who wash cars, and those who assemble transport users are outside the government control and do not appear in the official statistics.³⁶ Therefore, they do not constitute legally responsible and taxable agents, which prevent the transport system from providing the basis for building an integrated and self-sustained economy. As the class of transport entrepreneurs expands, the lack of effective regulation and unfavourable working conditions have allowed transport owners (in particular *hiace* owners) to protect their own margins of profit at the cost of their workers and ultimately of the passengers, thus increasing social inequality. The constraints and opportunities operating in the transport sector have clearly allowed these small-scale entrepreneurs to prosper.

Along the Lobito Corridor, the carriage of passengers interacts with the carriage of local products. The latter is scarcely organised owing to the shortage of resources available for collection of the products from the point

³⁶ *Chamadores* (meaning 'those who call') are young men who stay at the taxi and bus stages pulling together people to get into taxis or in the buses.

of production and their transport to the place of sale.³⁷ Local products, mostly foodstuffs and other agricultural surplus, are moved in small quantities and their movements are financed either by the lorry owners or by small-scale traders. The low standard of services is not a handicap for small-scale transport operators and they have the convenience of mixing freight and passengers to increase the percentage of capacity utilised. This mixing of traffic provides a positive advantage because so much freight is moved in small lots accompanied by the owner or the trader. Some passengers and freight are, therefore, "indivisible" and must move together. The small size of each lot, together with the mixed nature of transportation does not yet make it a worthwhile business for larger operators. As for the passenger business, this forms a very important part of the overall transport market, and the routes in the urban and peri-urban areas are the most important.

Despite the increased number of road transport operators, there are local transport demands that are not being efficiently met, as more services has not equated to better services. A great number of households living by the Lobito Corridor are on very low-incomes and their limited turnover or capital resources restrict their opportunities to use road transport services. Furthermore, only a few entrepreneurs are willing to transport goods and passengers to and from areas distant from all-weather road network. People living in off-road settlements remote from the Corridor lack access to road transport services. There is a genuine inadequacy since the few transport operators that do serve local transport needs are highly irregular and inefficient. Against this background, the modernised Benguela Railway – *Caminho-de-Ferro de Benguela, EP (CFB)* – has been particularly beneficial to the communities living close to the railway transport corridor.

³⁷ One aspect of the freight market is the carriage of imports, which allows lorry owners to plan more regular services with full loads, making this section of the market more profitable to operate in.

The coming of the train has integrated their movements and economic activities. This paper suggests that an increased traffic on the railway line have influenced the growth of trade initiatives and movement opportunities. A stable pattern of demand for train transport has resulted, as *CFB* provides affordable and regular services to and within remote areas utilised by the poor and professionals (teachers, nurses, and others). While enabling social mobility the reconstruction of Benguela Railway has clearly made a major contribution by supplementing the road transport services provided by private operators and impacting on poverty reduction.

The dynamics along the railway line have also allowed the reestablishment of commercial links between urban and rural areas and between inland and coastal areas.³⁸ When analysing the pattern of small-scale trade development and railway rebuilding in the deprived interior areas there is major evidence to suggest that the railway's reopening has had significant effects. *CFB* and the road network, operating as complementary transport modes in the Lobito Corridor, have served to encourage the mushrooming of small trade centres at strategic points, forming an intermediate step between urban and rural settlements. The "intermediate trade centres" that have emerged suggest that communities immediately made use of the passage of the train not only for their own movement, but also to trade their agricultural surplus and charcoal. These "intermediate trade centres" act as collection and distribution points for low-income households and also represent a fundamental social infrastructure, because information and ideas can now spread more freely. Finally, the centres not only provide a basis for a more equitable distribution of social services but also act as attraction points to small-scale traders and transport operators and training grounds for rural-to-urban migrants. The villages and settlements along the railway that appeared to be deserted in wartime are now bustling with

³⁸ Both trade links were obstructed during the prolonged conflict (Cilliers and Dietrich, 2000).

small-scale trade, market farming and passenger activity along the *CFB*. In the Lobito corridor, the *CFB* and the road network help each other to play a greater role in the redistribution of the benefits of transport sector development to areas that are geographically isolated from national centres of economic and political activity. The present success of the railway can be traced ultimately to the fact that it was the main transport "skeleton" of Benguela and, in a country where cross-country distances are on a large scale, it is of prime importance.³⁹

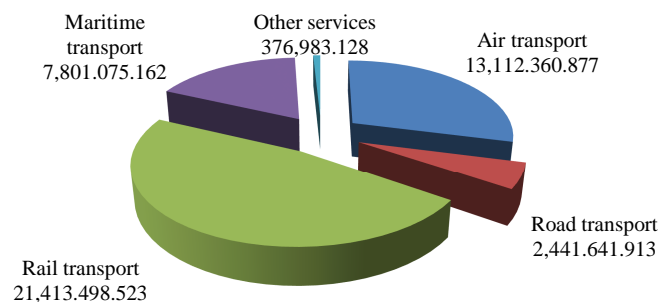
³⁹ The Benguela railway was, first, the railway served the coastal hinterland south of Lobito (second city coast in the province of Benguela); second, it permitted the exports of Portuguese colonisation centres such as Nova Lisboa and Silva Porto, and served the distant Dundo (Lunda) diamond fields, which were connected by road from Vila Luso. Third, the railway took traffic to and from Katanga Province of the Belgian Congo and, to a smaller extent, the Copperbelt of Northern Rhodesia (Hance and Van Dongen, 1956).

"DEVELOPMENT FROM ABOVE"

In the context of profound economic and social imbalances between various groups and a clear line dividing the more affluent coastal areas and the neglected inland, it is critical to emphasise the importance of investing in infrastructure reconstruction to reconnect the interior to the coast and thus to the main markets accessible to the poorest. Public resources together with international funding where new partners have emerged (including China and Brazil), is being allocated to road and railway modernisation of the Lobito Corridor for the creation of provincial markets and their integration into a national and regional economy.

Government efforts to reconstruct the severely damaged transport infrastructure were, firstly, a priority when conflict ended, and latter a major objective leading up to the 2008 and 2012 elections in Angola. According to Pushak and Foster (2011), in Angola in 2011 around 4.3 billion USD was spent on infrastructure, which represented 14% of GDP. In 2012, according to the *Balanço do Programa de Investimentos Públicos*, a governmental document which refers to the year of 2012 and is produced by the Ministry of Transports, public investment (PIP—*Programa de Investimentos Públicos*) on the transport sector of approximately Akz 45,145,559,602 were toward the following subsectors (see Figure 1).

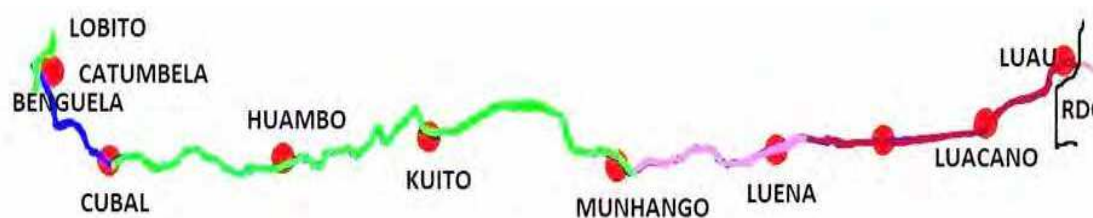
Figure 1: Public Investments in the Transport Sector in 2012



Source: Ministério dos Transportes de Angola (2012).

According to Figure 1, in 2012, the transport sector reconstruction efforts include huge public spending. In fact, already in 2010 according to data from the World Bank (2012), the total road network expanded to 62,560 km, which represents approximately 83% of the total. Secondly, according to Figure 1, almost 50% of public funding goes toward rail transport despite the Chinese credit line to this particular subsector.⁴⁰ At present the works being undertaken are in the final Luena-Luau track and are projected to be concluded by the end of 2014 (see Figure 2).

Figure 2: Benguela Railway Network



Source: *Caminho-de-Ferro de Benguela, EP, 2012.*

⁴⁰ China International Fund Ltd. (CIFL), a Hong Kong based construction firm, is currently undertaking the rehabilitation and modernisation of the line using a million dollar oil-backed loan agreed with Exim Bank of China in 2004. Restoration of the approximately 1,300 kilometre rail line from Lobito to Luau, on the border with the DRC, was planned to start in January 2006 and estimated to take 20 months and be completed by August 2007 (CCS, 2006). However, in 2007 the Benguela railway rehabilitation came to a standstill and had restarted in early 2008. Completion of the restoration of the railway to the border with the DRC is expected to be completed by the end of 2014.

As a consequence of the infrastructural reconstruction efforts, the government expects that public transport enterprises will have the capacity to handle tonnes of loads and millions of passengers between 2013 and 2017 as illustrated by the following tables (see Table 2 and Table 3).⁴¹ Estimates anticipate an exponential growth of the number of passengers and tonnes of goods moved. Data projected by the Benguela Railway Company and presented at the International Conference on "The Transport Infrastructure Development in The Lobito Corridor" held for November 29-30, 2012 in Lobito (Angola) indicate that after conclusion of the reconstruction works the railway will have the capacity to move 4 million passengers and 20 million tonnes of goods per year, including the minerals coming from DRC and Zambia. Nevertheless, at present, freight transport is still based on road and rail movements and despite the superior potential of the railway in terms of its efficiency. This is particularly relevant if one considers the strategic linkages of the Benguela Railway with DRC and Zambia where the corridor serves the major economic mining production zones.⁴² The Lobito Corridor constitutes the shortest route to a port (Lobito Port) for the Katanga region (South DRC) and the Cooper Belt (North-western Zambia). The mineral Port in Lobito will have a capacity to move 3,650,000 tonnes that will be expanded to 4,050,00 tonnes when the Benguela Railway is working at its full potential.

⁴¹ Data include public enterprises and non-formal market.

⁴² Benguela Railway provides a vital transportation conduit for the agriculturally rich regions along railway corridor, but also forms the main route along which copper, cobalt and manganese mined in Congo Kinshasa and Zambia can be carried to the sea (Hance & Van Dongen, 1956; Katzenellenbogen, 1973).

Table 2: Estimates of the Loads Moved by Public Enterprises in the Transport Sector (2013-2017)

Denomination	2009	2010	2011	Estimated 2012	2013	2014	2015	2016	2017
Road transport									
ETP Cabinda	199,624	252,000	172,241	177,408	186,279	195,593	209,284	228,120	253,213
TCUL	20,496.635	26,561.390	39,605.031	40,397.132	41,609.046	42,441.226	43,290.051	45,454.554	48,636.372
Railway transport									
CFB	392,621	389,303	125,405	156,756	235,134	376,215	639,566	1,151.218	2,302.436
CFL	3,558.211	2,880.627	2,861.475	3,004.549	3,154.776	3,375.611	3,713.172	4,270.147	5,124.177
CFM	96,058	21,865	0	0	506,880	608,256	790,733	1,107.026	1,660.539
Air transport									
TAAG	1,087.130	1,011.920	1,017.033	1,1067.885	1,121.279	1,199.768	1,319.745	1,517.707	1,821.248

Source: Ministério dos Transportes de Angola (2012).

Table 3: Estimates of the Passengers Moved by Public Enterprises in the Transport Sector (2013-2017)

Denomination	2009	2010	2011	Estimated 2012	2013	2014	2015	2016	2017
Road transport									
ETP Cabinda	460	573	1,002	1,052	1,105	1,182	1,300	1,495	1,794
UNICARGAS	1,629.312	775,870	932,736	979,373	1,028.341	1,100.325	1,210.358	1,391.912	1,670.294
Rail transport									
CFB	30	4	0	0	540,670	594,737	683,948	820,737	1,025.921
CFL	0	12,440	6,606	7,267	7,993	9,192	10,755	12,906	16,132
CFM	7,288	14,462	0	0	364,440	400,884	461,017	553,220	691,525
Maritime transport									
P. Cabinda	350,893	436,270	490,704	515,239	541,001	578,871	636,758	732,272	878,727
P. Soyo	44,813	246,414	240,634	252,666	265,299	283,870	312,257	359,095	430,915
P. Luanda	9,022.912	9,157.534	7,308.046	7,673.448	8,057.121	8,621.119	9,483.231	10,905.716	13,086.859
P. Lobito	2,462.084	2,396.427	2,792.054	2,931.657	3,078.240	3,293.716	3,623.088	4,166.551	4,999.861
P. Namibe	770,175	696,960	913,755	959,443	1,077.415	1,077.934	1,185.727	1,363.586	1,636.304
P. P. Amboim	111,709	130,444	240,667	252,700	265,335	283,909	312,300	359,145	430,974
Air transport									
TAAG	17,674	11,962	15,366	16,134	16,941	18,127	19,940	22,931	27,517

Source: Ministério dos Transportes de Angola (2012).

In contrast to the reconstruction of the Benguela Railway, Chinese, Brazilian and Western private construction and engineering companies are major partners of the Angolan government in the reconstruction of the main road infrastructure. Construction work has been done in small independent units, a suitable approach in the present context where the market is being opened up and traffic is still small. Despite the priority that the Angolan government has given to road reconstruction and the aforementioned expansion of the road network, the parallel road in the Lobito Corridor is only passable from Lobito (the starting point of the corridor) to Kuito in Bié province. The roads stretching approximately 710 km from Kuito to Luau (the ending point of the corridor in Angola) are still in a very poor condition, implying that communities living in this area are still very isolated and highly dependent on the rail transport that twice per week runs from Kuito to Luena (and in the opposite direction) in the Moxico province, a 409 km distance that lasts approximately 17 hours.

Despite the massive investment in the transport sector reconstruction and an estimate increase in the number of passengers and tonnes of goods moved, it is argued that the infrastructural reconstruction of the transport sector along the Lobito corridor is not fulfilling its potential for generating domestic linkages or multiplier effects. The transport economy is a site of private accumulation and change, where social stratification goes in parallel with increased socio-economic inequality and unfavourable conditions in the labour transport market that ultimately may impose high direct fares and indirect costs such as lack of access to health centres and schools.

As railway and road modernisation efforts advance, the development of competitive, as well as complementary linkages, have become prevalent. The two modes of transport are in dispute for the prioritisation of the

infrastructural funds available. However, despite competition and the fact that road and rail can be alternative ways of meeting similar transport needs, it is possible to identify essential differences between investments in roads and railway in the Lobito Corridor.

In general, investing in railways is a very capital-intensive method of providing transport facilities. It is not merely that the costs of construction and maintenance per mile are high, but also that railways are indivisible investments. The reconstruction of the *CFB* has been particularly expensive, not only because of the aforementioned reasons, but also because its dilapidated state bears witness to deliberate destruction and years of neglect since the late 1970s. In the face of the Angolan government's lack of financial capacity and non-existent interest of Western international private enterprises and others in such a huge and risky investment, the Chinese are reconstructing the Benguela Railway. In an under-developed area such as the ones crossed by the Lobito Transport Corridor, the railway has to be rebuilt ahead of the demand for its services, in the hope that the facilities provided will give rise to the traffic to justify the investment.⁴³ This is another factor affecting its competitive advantage over the road network. However, the importance of the reconstruction of the railway lies in the fact that it not only provides a vital transportation conduit for the agriculturally rich regions along railway corridor, but also forms the main route along which copper, cobalt and manganese mined in Congo Kinshasa and Zambia can be carried to the sea (Hance and Van Dongen, 1956; Katzenellenbogen, 1973). Once rehabilitated and equipped, the *CFB* will be able to handle million tonnes of goods and millions of passengers. In the future, new railway lines may be constructed linking Angola to the Namibian and other Zambian networks. By supporting trade

⁴³ There is a well-recognised danger of a project becoming a 'white elephant' as a result of inadequate demand for its outputs (Hirschman, 1967).

relations with South Africa and offering easier Atlantic access to the Zambian Copperbelt, these rail links may have significant effects on regional trade, they may facilitate the resettlement of internally displaced persons, and they may consolidate the recovery of the agricultural sector.

The extent to which road and railway reconstruction works are dependent on imported materials, equipment and machinery arriving at the port of Lobito also heightens the importance of the *CFB* in the port area. The reconstruction of this section is a top priority as it provides an appropriate and necessary platform for the rehabilitation of the railway itself and of the rest of the transport infrastructure of the Lobito Corridor. Overland transportation systems have to work in synergy in order to achieve maximum utilisation of the port. A functioning port and railway will assist in the integration of the road infrastructure and organisation of road services and therefore increase the efficiency and pace of reconstruction work by international firms.

In contrast to the reconstruction of the Benguela Railway, Chinese, Brazilian and Western private construction and engineering companies are major partners of the Angolan government in the reconstruction of the main road infrastructure. Work has been done in small independent units which are a suitable approach in the present context where the market is being opened up and traffic is expanding rapidly. The relative granularity of investment in road transport compared with investment in the Benguela Railway is an important competitive advantage. In addition, political and economic interests have led the government to prioritise the allocation of international aid and loans to road rehabilitation, to the detriment of the *CFB*. This priority that the Angolan government has given road reconstruction is related to the exponential increase of road transport services (including passenger and freight transport) operated by private

entrepreneurs. The scarcity of entrepreneurial skills means that successful road transport operators earn higher rewards than those obtainable in other sectors, despite the cost of buying a vehicle.⁴⁴ Within the group of transport operators who live comfortably from their joint earnings from transport work and public service some enjoy a different status and exercise control over government economic policy itself in order to further their own aims. By targeting investment at road reconstruction, the government is not only looking out for those who have invested in the provision of war and post-war road transport services, but is also securing an alternative to the public transport services that it has allowed to decay.

Despite the valuable expansion of the transport entrepreneurs, this development will probably only lead to social sustainability of the real transport system (i.e. the future take up of the road transport services in the long term even if sub-optimal) and thus to further growth if the entrepreneurs possess those qualities that will stimulate the economy. The most important of these is a willingness to invest both profits and experience from operating in the real transport sector into the development of other sectors. The most popular field of investment (apart from transport itself) have been residential building and education. How far these entrepreneurs are prepared to enter into more risky investments and apply their skills in new fields is dependent on other factors. First, it requires productive entrepreneurship. Second, it depends on both provincial and central governments' actions. Not only transport policies have to be better managed to reduce poverty, but also the transport sector has to be developed in tandem with a regulatory and institutional framework that establishes private property rights and imposes legislation on private sector

⁴⁴ Since entry into road transport is easy, the forces of competition should operate to ensure that the profitability in road transport is no greater than in alternative trades. Nevertheless, transport operators subvert attempts to introduce competition and particularly the owners of lorries, are among the wealthier classes of society; some of them are amongst the wealthiest people in the province of Benguela, the starting point of the Lobito Corridor.

participation. This will have a positive effect on the emergence of new productive enterprises, promotion of the entrepreneurial class, and wider popular participation. Most importantly it will have a positive impact on the progressive integration and social sustainability of the transport sector where non-formal transport services are sustained alongside formal and public sector infrastructure and services.

AMBIVALENT CHARACTER OF THE LOBITO TRANSPORT CORRIDOR DEVELOPMENT

Notwithstanding the great importance of an efficient transport system along the Lobito Corridor where poor and scattered communities extend over great distances, the reconstruction and modernisation of the transport sector and developments of the transport services have an ambivalent character. This was already a feature in the first half of the 20th century as the transport network's creation of regional and national spaces with new centres and peripheries established a new hierarchy of social groups and gave rise to significant cultural changes. The effects of roads, railways, and other new means of transport were experienced in very different ways by different actors. For example, initially roads were seen for both Europeans and African collaborators as an instrument of progress and as a symbol of the massive use of forced labour. Despite the arguments within management of the transport system regarding its importance for economic growth and development, according to Esteves (2008) and Neto (2008), between the late 19th and 20th centuries, road and railway were built to open up the hinterland for effective military deployment, the realisation of colonial plans and to control the population. Thus, the construction of the transport system was seen as means of wealth as well as poverty, inroads of repression as well as paths to personal liberation, and as tools of fragmentation as well as of unification (Esteves, 2008; Neto, 2008).

At present, the reconstruction and modernisation of the transport system, on the one hand, it is a site of accumulation where social stratification goes in parallel with increased socio-economic inequality and unfavourable conditions of the labour transport market that ultimately may impose high direct (fares) and indirect (lack of access to health centres and schools) costs on transport users and the population in general. The inefficiency, irregularity and unreliability of road transport services restricts social

mobility, as the transport demands, particularly of the poor who sustain their livelihoods on small-scale trade and daily need to transport their agricultural surplus, are not being met. Furthermore, road freight services provided by private operators hardly satisfy local demand because the transport services that do materialise are neither physically nor financially available to the poor population, particularly those living far from the corridor.

On the other hand, it is possible to identify complementary linkages influencing the developments and dynamics of road and railway services that can reduce poverty. To supplement the road transport services provided by private operators, the reconstruction of the Benguela railway has enabled mobility, stimulated trade dynamics and thus income earning-opportunities. When analysing the pattern of small-scale trade development and railway rebuilding in the interior areas, which are farmed well below their potential, badly populated and deprived "intermediate trade centres" have emerged. As the centres are separated by long stretches with sparse population and low production, the opportunity for the extension of the railway line to "open up" the interior and rural areas is great. Nevertheless, the sustainable growth of the "intermediate trade centres" is contingent upon an appropriate transportation strategy aimed at prioritising basic accessibility over mobility. The paths, tracks and unpaved and unclassified roads that link communities to the *CFB* and the market places provide this access. Policy emphasis should be placed on a least-cost engineering solution that ensures all-weather motorised and non-motorised access for the greatest number of households, rather than on overly high standards of performance.⁴⁵ The social sustainability of the Lobito Corridor development (i.e. the affordability and accessibility to rural communities of

⁴⁵ Prioritising mobility over accessibility favours people who are already mobile, especially vehicle owners and users (World Bank, 1996). See also Barwell and Malmberg-Calvo (1989); Dixon-Fyle (1998); and Gannon and Liu (2000).

transport services) demands more sensitivity to beneficiaries and their real transport needs (rather travel patterns), especially rural poor women.⁴⁶

A transformation of society is in process as a result of the development of Lobito Transport Corridor, that is, the combination of official infrastructure reconstruction projects and the variety of adaptive strategies (of coping and accumulating) pursued by diverse kinds of rural and urban Angolans. Beyond their obvious utilitarian function, transport services provide a window on many socio-economic and political facets of the area. They are associated with issues of local entrepreneurship, transition to a market economy, class and respectability, and rural-urban migration. Transport operators have played, both directly and indirectly, a major role (but one that is essentially unquantifiable because it is largely unrecorded) in stimulating employment growth and providing better access to income-earning opportunities. The livelihoods of those hundreds of thousands of poor and unskilled workers who cannot find a job in the formal sector of the economy have improved. Nevertheless, the social sustainability of the real transport system requires better correspondence of the distinctive interests that have emerged within the labour market in order to recoup losses and maximise the benefits of those who, despite being employed, are working under unfavourable (non-formal, non-regulated and non-safe) conditions. Investments in the Lobito Transport Corridor have not induced maximum multiplier effects in terms of increased employment and income earning opportunities of the poor who consequently also lose despite their improved mobility.

⁴⁶ See also Mashiri and Mahapa (2002).

CONCLUSION

This paper aimed to analyse the challenges and the development of the Lobito Transport Corridor. In this context, attention has been drawn to the formal dynamics that have developed within the transport system, such as the transport infrastructure reconstruction projects implemented by the government and international firms, and how they have influenced the Lobito Corridor ("development from above"). It has assessed investments by private transport operators and their dynamics and effects within the real transport system, including increased income and stimulation of entrepreneurship (terms of accumulation and class formation), employment opportunities (labour market), increased mobility, and better distribution of goods ("development from below"). The insights of this paper do not represent just a case study but a case study "of" causal mechanisms, aiming to shed light on the importance of local and non-formal dynamics in a particular geographical context.