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## **The history of railway in Ethiopia and its role in the economic and social development of this country**

*Abstract:* The paper presents the history of the Ethiopian railway from its beginnings up to now. Its main aims are to inform the reader about the role that Franco-Ethiopian railway played in the economic and social development of that African country. The Ethiopian railway also played a significant role in the political relations between the Empire and the Western powers. In this article the rolling stock of the Ethiopian railway is described thoroughly, which is often overlooked in other publications. The fate of the Ethiopian railway is examined against a background of the crucial historical events in Ethiopia so that the reader could understand not only the factors that contributed to its length and equipment but also its function in the Ethiopian economy and in changing the social relations among the Ethiopian nations.

*Keywords:* Ethiopian railway, rolling stock of the CFE company, new railway projects in Ethiopia, colonial rivalry in Ethiopia

### **Introduction**

The Ethiopian railway was built by the French to facilitate the transport of merchandise which previously had to be carried on the backs of animals. Taking into account the natural topography of this country and the lack of proper roads it was extremely difficult to transport goods from central Ethiopia to the ports of the Red Sea, and merchants spent months travelling from Addis Ababa to Massawa, Zeila or Berbera, which put a crimp on the export of goods from Ethiopia. Not only did the Ethiopian railway contribute to bring the country out of its centuries-old isolation from the rest of the world

but it also played an important role in changing the social relations between the Ethiopian nations. Even though the railway line had limited transport possibilities because of the gauge (950 mm) and enormous differences in level, it became the most important thoroughfare of Ethiopia for many decades.

### **The reasons of building a railway in Ethiopia**

When it comes to the reasons of constructing the railway line in Ethiopia, they were numerous but the most crucial one was to make the country less dependent on the Muslim world which encompassed the Ethiopian empire. The Ethiopians have always been at the mercy of the Muslims from the Sudan and the Ottoman Empire as to their international commerce due to the location of their country. As mentioned before, the Ethiopian emperors wanted to boost the economic development of their country by shortening the time needed to carry the merchandise through the mountains and the Great Rift Valley as it took even more than two months for the merchants to transport the flagship goods of Ethiopia from Ankober to the Red Sea ports. What aggravated the transport of merchandise in Ethiopia was the fact that the roads could be washed away by the rivers that burst their banks during the summer rains and that the merchandise had to be shifted from mules to camels and vice versa due to the much harsher climatic conditions in the mountains (Bartnicki, Mantel-Niećko 1987: 390).

Another reason for building a railway line in Ethiopia was the increased international trade with the province of Shoa in the 19<sup>th</sup> century. Having become autonomous since the time of Prince Abiyye who won the battle with the royal troops from Gondar in the middle of the 18th century, this province was attractive for the European and Muslim traders because of the uniform customs charges and sensible regulations issued by its princes who were fully aware of the inconveniences of mule transport and its costs that greatly hindered the trade in various commodities such as coffee, ivory, wax or hides and skins. The Ethiopian emperor Menelik who came from Shoa knew that the international trade could not be developed without the

use of the blessings of European civilisation in his country and thanks to the railway the competitiveness of Ethiopian merchandise could be seriously increased while the civilizational differences between Ethiopia and the European countries could be limited at least to some extent (Bartnicki, Mantel-Niećko 1987: 325).

Evidently, the political situation of Ethiopia in the second half of the 19<sup>th</sup> century put a severe impact on the construction of railway line in this country. Of all the historical events in Ethiopia in that time, the most important were the military expedition of Lord Napier in 1868, the war with Egypt under the reign of Emperor Yohannes IV, the Italo-Ethiopian conflict (1894-1896), the rivalry of the colonial powers in Ethiopia as well as the internal antagonism between the northern and southern parts of Ethiopia. When Lord Napier landed in Ethiopia in 1868 to free the British hostages in the fortress of Maqdala, he built a short strategic railway line so as to ease the transport of troops and weapons inland, which was dismantled on his return to England. Because of that, Emperor Menelik feared that if he allowed Alfred Ilg, his Swiss advisor and the French company to build such a railway, it could be used by the Muslims or the European powers to conquer his country. As for Emperor Yohannes IV, Menelik's predecessor, he forbade the Shoan authorities to construct any railway as it could put the entire country in dire straits given the ambitions of both the Egyptian khedive and the Italians to colonise Ethiopia.

In regard to other factors which put a crimp on the construction of railway in Ethiopia was the Italo-Ethiopian war of 1894-1896 which resulted from the territorial aggrandisement of northern parts of Ethiopia by the Italians who had set up their colony of Eritrea in 1885 and attempted to extend it to the entire Abyssinia trying to win by any means. Although the concession to build the railway in Ethiopia was awarded to the French by Menelik in 1894, the project could not be moved forward and because of the conflict with the Italians the construction work was commenced almost three years later while the first shunting steam locomotives were brought to Ethiopia no sooner than in 1898. Even though the Ethiopians won a tremendous victory over the Italians, the French capitalists were

unwilling to invest in Ethiopia despite strong arguments of the railway's promoters, that is Alfred Ilg and Leon Chefneux.

What contributed to the further delay of constructing the railway line in Ethiopia was the bitter rivalry of the European colonial powers in that country with a predominance of England, France and Italy. The British wanted to link to their empire the western parts of Ethiopia where the springs of the Nile are featured. As for the Italians, they failed to consent themselves with their colonies in Eritrea and Somalia and they were eager to extend their territories at the expense of Ethiopia. But for the sagaciousness of Emperor Menelik who applied the policy of counterbalances towards the predatory actions of these countries, Ethiopia would have become a British or Italian colony. Only France was a very welcome ally for Ethiopia as it was not inclined to join the areas in the vicinity of their protectorate apart from the territories near the Gulf of Tadjourah which were not important for the emperor. Menelik skilfully created a counterbalance for the diplomatic actions of Italy which cheated him as to the interpretation of the 1889 Ucciali treaty and he granted the concession to the French (Marcus 1994: 107ff).

### **The influence of the Ethiopian railway on the external and internal political situation of the Ethiopian empire**

The construction of the railway proceeded slowly also because of the centuries-old antagonism between the northern and southern provinces of Ethiopia. Due to the even limited access to the sea, the northern provinces developed rapidly while the southern ones were left behind to some extent. The Ethiopian governors from the south were envious of the increasing affluence of the north and they wanted to control these territories or even to corrupt their development in some way. Not surprisingly, Emperor Menelik failed to push the Italian troops out of Ethiopia after he had won the battle of Adwa but he allowed the lands of Eritrea to be recolonised by the Italians in order to suppress the rapid development of northern Ethiopia lest his enemies depose him. Even the Ethiopian noblemen from the south aimed to use the railway for themselves and interrupt its connection with Djibouti.

As for the imperial concession of March 9, 1894, it consisted of fifteen articles. It should be pointed out that even though it was awarded by Menelik to the Ethiopian company, the contribution of the Ethiopians was fictive in that enterprise. The first article stated that Alfred Ilg, Menelik's adviser, was to establish the *Compagne Imperiale des Chemins de Fers Ethiopiens* in order to build and operate the line from Djibouti to the White Nile via Harar and Entoto. The third article laid down that the concession for the entire line would expire after 99 years from the time of its completion and specified that no other company would construct competing lines neither from the Red Sea or the Indian Ocean coast into Ethiopia nor from Ethiopia to the White Nile. Worth mentioning is the fact that the French tried to protect their interests in Ethiopia so adamantly that they wrote in the French version of the concession that no other railway would be permitted to compete with the Franco-Ethiopian railway while the Amharic one stipulated that no other railway would be permitted near the mentioned railway. Anyway, the Ethiopian emperor failed to take the necessary measures for that divergence even though it resembled the Ucciali treaty. According to the fourth article, the concession was to be invalidated if the construction work on the first section wouldn't commence within two years but the tracks started to be laid with an over two year's delay (Pankhurst 2015).

Other articles stated that the company had to build and operate a telegraph line at its own expense. Each state message was to be sent free of charge. It was forbidden for the company to carry the troops and warfare without the emperor's consent and the soldiers and the military devices were to be transported for free in war time whereas in peace, at prices mutually agreed by the emperor and the company. In regard to the charges for the transport of merchandise by train, they had to be lower than the existing cost of transport by other means. The custom charges levied by the imperial government at Harar had to be 5% in proportion to the goods' value and they should not exceed million francs. The company was also entitled to levy a 10% tax to secure its invested capital if the line was not extended to the White Nile. The customs charge was to be reduced to 5% should

the company's profits exceed 2.5 million francs or totally withdrawn if its revenues were bigger than 3 million francs. If the profits were to exceed that amount, they should be divided equally between the company and the Ethiopian authorities. As for the final article, it stipulated that the company would pay 100,000 Maria Theresa dollars to the emperor in return for that concession and the railway property could be purchased by the Ethiopian government at the end of the concession (Pankhurst 2015).

Although Emperor Menelik's concession was awarded to the French, they had to fight for the railway with the British so as not to be supplanted from their enterprise. As England and France aimed to grasp and control the sources of the Nile in order to have an impact on the politics of the Sudan and Egypt, these countries looked forward to having a concession awarded by the Ethiopian emperor from Djibouti and Zeila to the Sudan and Uganda. The British wanted to urge Menelik to be allowed to construct a railway by them so they brought out the high costs of the line's construction and exploitation by the French who had to increase the charges because of the low popularity of the railway. They told the Ethiopian emperor that the merchants were inclined to carry their goods on animals as in the past, which was more profitable than the railway given the durability of the most popular merchandise in almost all weather conditions. The Englishmen offered to enable the transport of goods from the province of Kaffa through the Sudan after its pacification. They also alarmed Emperor Menelik that his concession was sold to other French company.

As for the French company, it started to be financially inefficient from the beginning. The costs of the railway's construction were much bigger than expected. Even though the company issued 36,000 shares each worth 500 francs as well as 56,700 debentures each valued at 500 francs, not many people became interested in them. In order to avoid bankruptcy, the French company had to accept the foreign capital from England. It was on the verge of being taken over by the British New Africa Company but because of the conflicts as to the line's abandonment and making a new one from Zeila or Berbera the Franco-Ethiopian line remained in its place. It was finally

negotiated that a junction would be built in Harar where the British railway from the Red Sea coast would meet the French one. Simultaneously, the French shares and debentures started to be increasingly bought out by such British companies as the New Africa Company, the New Egyptian Company and the Oceania Consolidated Company. What is more, the British gave a loan to the Franco-Ethiopian railway company amounting to 3 million francs and they created the International Ethiopian Railway Trust and Construction Company (Trust) which affiliated the British and French shareholders. The British acquired the right to construct the remaining sections of the railway but they lacked funds which would allow them to overtake the railway entirely. As the French feared that the British might take possession of their railway as they already did when it comes to the Suez Canal, they resolved to sign the 1902 Bonhoure-Chefneux convention which would keep their enterprise away from the British hands.

The Bonhoure-Chefneux convention was signed by the Governor of the French Somali Protectorate, Bonhoure and the Ethiopian Consul General for Europe, Chefneux on February 6, 1902. Although this agreement regulated the terms of the further construction work and the train traffic towards Addis Ababa, the French failed to inform Empeor Menelik or any of his officials as to the negotiations. The convention consisted of 18 articles. The most important ones concerned the annual subsidy for the CFE, the use of the territories on which the French were to lay the track and build railway stations, the customs charge the Ethiopian railway company agreed to pay for the French Somali Protectorate, regulations as to the loans the company could be given and the fates of the railway after the expiry of the 1894 concession. When it comes to the annual subvention for the line's operation, it was granted by the French Somali Protectorate for 50 years in the amount of five hundred thousand francs on condition that the company would be controlled by the French authorities and its status will be changed in accordance with the French law, which meant that all the company members were to be Frenchmen and their director had to be approved by the Ministers for the Colonies and Foreign Affairs. In addition, the company's

headquarters had to be located in Paris and under no circumstances should they be moved into other cities. What is more, it was solely the Minister for the Colonies who could empower the company to increase its capital, accept loans or even invest the money in other projects (Bartnicki, Mantel-Niećko 1987: 294).

As stated in article 4, the Franco-Ethiopian company was entitled to occupy the territories on which the railway line was to be constructed as well as other buildings free of charge until the end of the concession. Other article stipulated that the trains would reach Addis Ababa before December 31, 1902, which was impossible. It was also concluded that the French Protectorate would protect the trains on its own territory while the French legation in Addis Ababa would watch over the safety of the passengers and the merchandise and it was a flagrant violation of Ethiopian sovereignty. The tenth article ruled that the CFE was not allowed to accept mortgage loans from the British for the construction of any stretch of the railway line. The following article stated that the Franco-Ethiopian company had to pay the French Protectorate the annual customs charge depending on the revenues obtained by it. For every 5-8 thousand francs the charge levied was 10% while for 8-12 thousand francs it amounted to 20%. Were the company to exceed the amount of 12 thousands francs, it was obliged to pay as much as 30% of the income. The law came into force on July 1, 1902. In regard to the rolling stock, tracks, stations and other properties of the CFE, they were to belong to the French government and not to the Ethiopians at the end of the concession (Pankhurst 2015).

### **The increasing financial problems of the Franco-Ethiopian railway company and its imminent bankruptcy**

Even though the 1902 Bonhoure-Chefneux convention protected the French interests in Ethiopia as for the railway line, it could not save the Franco-Ethiopian company from indebtedness and the ultimate insolvency. There were many factors which contributed to the company's bankruptcy. Because of the undue customs charges amounting to 15% of the transported goods' value, the Franco-



Ethiopian line enjoyed little popularity among the traders who continued to carry their merchandise on animals due to the lack of feeder roads to the line. As for the tracks, they were laid sloppily by the French workers, which resulted in frequent derailments without the possibility to use a railway crane. The derailed cars were set on the tracks with the use of simple machinery or simply jettisoned en route. Although the CFE was constantly being equipped with new carriages of different types from Europe, the lack of rolling stock was troublesome for the railway company. Another problem which was burdensome both for the company and its workers were the attacks of the Afar and Issa people from the Danakil region on the trains. They disconnected the tracks and used the fishplates and bolts that link two rails together to make ornaments. As the speed of the trains made it possible for the tribes to enter the train, they often killed the passengers and stole their luggage or other merchandise carried on the train (trains in Ethiopia usually consisted of both passenger and freight carriages). Not surprisingly, the railway company did not want to take responsibility over the damaged merchandise and in order to avoid insolvency it carried the goods free of charge on dangerous sections of the line.

Had it not been for the ubiquitous corruption, the Franco-Ethiopian railway could have avoided its bankruptcy. The railway statistics were forged and the money was swindled from the French government. The Ethiopian emperor was alarmed by the British that the actual cost of laying track towards Dewele on the Ethiopian frontier was 30,000 francs per kilometre while the French spent as much as 65,000 francs per kilometre. The railway property was often damaged by the French dignitaries who blamed the Afar and Issa people living in the Danakil region for the losses and they grabbed the money allocated to pay compensations to those tribes for having blasted the line over their burial places.

What prejudged the limited tonnage of the trains in Ethiopia was the narrow gauge of the track as well as an extremely difficult profile of the line with gradients up to 2,5%. The trains negotiated enormous level differences. Starting at Djibouti the line increases to 1200 m above sea level (a.s.l.) at Dire Dawa and then goes down several

hundred metres to the Great Rift Valley to climb again to the altitude of 2400 m a.s.l. at Addis Ababa. The number of carriages had to be limited to fifteen units which were often hauled by two locomotives. It took as much as 14 hours for the trains to reach their termini and the length of the stretch between Djibouti and Dire Dawa was 310 kilometres. It should not be overlooked that the limited capacity of the route allowed only two trains a day. As for the passengers, only a small number of the Ethiopians could afford the tickets at the turn of the 20<sup>th</sup> century. The trains carried mainly foreigners while the richest dignitaries paid little for the fares or travelled for free<sup>1</sup>.

The 1902 Bonhoure-Chefneux convention was agreed behind Menelik's back. In the consequence, the Ethiopian emperor decided to withdraw a considerable number of the company's privileges. The French could no longer use the stones to construct their military buildings. They also lost the right to levy 10% of the customs charge not to mention the right to extend the railway line further to Addis Ababa. The customs officials from Harar were ordered not to shift the merchandise on the railway, which forced the company to increase the charges for the transport of goods. From that time the traders had little reason to use the railway and they profited more from the traditional animal transport. What is more, the Ethiopian emperor awarded the new concession to the British who were to construct a new line from Berbera to Harar and link it with their railway network in the Sudan and Uganda. Even though the British failed to construct the above-mentioned line, they showed the world how to bargain with France.

When the three colonial powers (England, France and Italy) decided to sign the 1907 Treaty of London in order to secure their interests in Abyssinia and divide Ethiopia into their spheres of influence, this action really added fuel to the fire when it comes to the French relations with the Ethiopian emperor who withdrew the last remaining privileges of the company. So the French allowed the British to buy out their shares and debentures. However, the French Ministry of Finances ceased to subsidise the Franco-Ethiopian

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<sup>1</sup> [www.train-franco-ethiopien.com](http://www.train-franco-ethiopien.com) [accessed 10 January 2015]

company because of the too high share of the British capital. Fearing the imminent bankruptcy, Chefneux passed the governmental subvention on to the two insurance companies, that is La Générale Vie and La Nationale Vie, which was to bring him 25 million francs within 50 years. As this period was too long, the Ethiopian Consul General for Europe, that is L. Chefneux, had to pay 3 million francs of the loan awarded to the company by the British as well as to liquidate the Trust. Eventually, the CFE company was closed down despite the loan offered to the French government from the Banque de l'Indochine.

### **France wins Menelik's favour again for the completion of the railway to Addis Ababa**

As the colonial powers expected, the Ethiopian emperor's health started to fail and it was Britain who yearned for his country to be joined to its colonies. Even though Menelik did not want to make another deal with France who had earned his displeasure, he had to do it again because he knew about the rapacious plans of Britain as to his country. Thanks to Dr. Vitalien, Menelik's personal physician, the French authorities agreed to set up the new railway company – the Compagne de Chemins de Fer Franco-Ethiopien de Djibouti à Addis Ababa. Having been persuaded to sell the new concession to the Banque de l'Indochine and disappear, Vitalien showed loyalty to the emperor who gave him much more money than the bank had offered him. The 1909 concession consisted of a preamble and 18 articles and it was adjusted to the Ethiopian law (Pankhurst 2015).

The first article stated that the Ethiopian government should be the new company's shareholder so that the French could not use that concession as a means of putting pressure on the Ethiopian politics. The new company was to pay the emperor 2.3 million francs with a 5% interest for the old concession. The emperor obliged to provide the capital in cash or human work. According to another article, the construction work on the line towards Addis Ababa should commence no later than a year after the signing of the concession. The fifth article ruled that the emperor would provide the company with the land for the construction of the tracks, stations and depots as

well as a strip of land from the frontier to the capital city of Ethiopia. As for the subsoil, it was to remain in the hands of the Ethiopian government, though the French company was free to use water, wood, limestone, sand and ballast for the further construction of the railway. In regard to the company's capital, it could not be increased without the consent of the Ethiopian emperor who had the right to control its capital routinely. The company could turn to the French government for financial aid only when it was solvent. It was entitled to charge the duty of 6% of the value of the goods transported by trains of which 2% were to be paid to the royal treasury for the construction of feeder roads and other ventures for the benefit of Ethiopia. As stated in the eleventh article, the Ethiopian emperor had to be informed about the president of the Franco-Ethiopian company in France and his representative in Ethiopia who could be recalled if found incompetent by the Ethiopian government without the prior notification of the French authorities. The following article stipulated that in return for the concession the Ethiopian government claimed the charges amounting to 15%, 20% and 25% of the income per kilometre should it exceed 6, 8 and 12 thousands francs respectively. At war time the entire railway infrastructure had to be given back to the Ethiopian emperor who had to pay fixed charges for the transport of troops and weapons. With the consent of the railway company, the military trains could be stopped anywhere on the route in order to load or unload the soldiers and military devices (Pankhurst 2015).

It was already said that the Franco-Ethiopian railway boosted the country's economy and changed the relations between the nations of Ethiopia. Thanks to the construction of railway the French town of Djibouti developed rapidly. From the start of the construction work towards Dire Dawa, the town was famous for the new buildings, enterprises, lime kilns, coal warehouses and even an ice factory. The port was equipped with four lighthouses, a breakwater and a reservoir of fresh water. The main road was made of crushed coral, which was a mark of the town's richness. As for the railway station, it was opened in 1900 and it consisted of two pavilions that framed the central building. The apartments of the railway company's director and the station master were found on the ground floor. What is more,

the railway station housed a hospital for railwaymen and their families, a supply store as well as a culture club. Outside the station there were many other buildings that is offices, a storage shed, two repair workshops, a locomotive depot with a turntable and two large houses for the personnel as well as lodgings for the temporary staff. The flats for the railway workers were supplied with bathtubs and showers, though these amenities were not intended for the Africans. In regard to piped water in the town, it came from the wells localised five miles from the town. Given the town's rapid development, a suburban railway was planned to be built there but this enterprise has never come into being in Djibouti.

As for Dire Dawa, this town constructed by the French also benefited from the railway. Having been originally named Addis Harar, the town had to be given another name as it was constantly being confused with Addis Ababa by the European dignitaries. This town was placed 310 kilometres south-west of Djibouti on the territory of Ethiopia. Opened in 1902, the station has been one of the railway's main supply base until today. The station of Dire Dawa housed general workshops such as forging, casting, metalwork and carpentry, repair workshops for passenger and freight carriages, a learning centre for the equipment and traction service including a training centre for the company's technical personnel. In the vicinity of the station there was a hospital for all the company's officials and their families. After the completion of the line from Harar, this station was to be upgraded to a junction but so far only a feeder road has been built from Harar to the station of Dire Dawa. With the completion of the line from Djibouti, Dire Dawa became the most progressively developing town in Ethiopia which was also a hub converging most of the Ethiopian merchandise. In the early 1900s almost ten thousands inhabitants lived there. Although the population was multinational and consisted of the Shoans, Somalis, Danakils and Oromos, everyone lived in perfect harmony and no racial segregation took place there.

**Rapid development of the Ethiopian railway from its completion until the outbreak of the Italo-Ethiopian war**

Not until 1917 did the Franco-Ethiopian railway reach the capital city of Ethiopia. Even though the first station buildings were made of wood, they were demolished once the new station building designed by P. Barraix was opened there in 1929. The station building featured the offices of general administration of the railway, an accountant's office, a school for the railwaymen, a hospital for the railway workers and their families as well as a railwayman's club. Within the station, there were workshops for routine maintenance of locomotives and other rolling stock, a 80-ton weighbridge and the railway's terminal facilities and private service facilities were in not short supply there. Worth mentioning is the fact that the station of Addis Ababa has been the pride for the Ethiopians for many years<sup>2</sup>.

Because of the line's difficult profile, trains were hauled by steam locomotives in double traction. The trains were composed of both passenger and freight carriages, though the passenger ones were almost exclusively found at the end of the train. A typical train in Ethiopia consisted of a guard's van, a few goods carriages of different types with a predominance of open trucks, a third class carriage, mixed first and second class ones as well as a first class longue used by domestic and foreign diplomats. As for the social relations of the Ethiopian and foreign labourers who helped in the construction of the railway, they changed diametrically. Not only Armenian and Indian immigrants but also the local Danakil, Somali or Oromo people were employed in the construction work. Even though the tasks of the uneducated people were menial in character, the local people willingly carried heavy rails, sleepers and other materials necessary for the construction of the Ethiopian railway. The Ethiopian militia managed by C. Beauvais strived to protect the trains and the infrastructure from the attack of the Issa people as well as the *shifita*<sup>3</sup>. As for the racial segregation which was so commonplace in Djibouti, it was not tolerated in Ethiopia and the

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<sup>2</sup> [www.train-franco-ethiopien.com](http://www.train-franco-ethiopien.com) [accessed 10 January 2015]

<sup>3</sup> *Shifita* – an Ethiopian term referring to groups of bandits or outlaws. See: Bustorf D., 2010, “Šəfta”, in: S. Uhlig, 2003-2014, *Encyclopaedia Aethiopica*, Harrasowitz Verlag: Wiesbaden, p. 594.

Europeans shared their compartments with the Africans. No African was even forced to leave the train for smoking in the presence of women (Pankhurst 2015).

In Ethiopia, the railway served mainly to transport freight. The trains carried coffee, ivory, hides and skins, imported coal, minerals, live camels for the Saudi Arabian and Yemeni markets and many other goods. It is not surprising that just before the outbreak of the 1935-1941 war with Italy, 86% of all the carriages owned by the Franco-Ethiopian company were freight ones.

When it comes to the rolling stock of the Franco-Ethiopian railway since its opening and until the Italian annexation of Ethiopia, it came mainly from Switzerland and France, though there were also a few second-hand locomotives from the Yunnan railway in Vietnam. The first two steam shunters were brought to Ethiopia in 1898. They were of the Pinguely type and were named Djibouti and Harar. They had the axle formula of 0-3-0 and weighted 19 tons. As for heavier locomotives, they were imported to Ethiopia a couple of years later from the factories of SLM Winthertur, Switzerland and SACM Graffenstaten and Belfort, France. The Swiss locomotives had the wheel arrangement of 1-3-0 while their counterparts from SACM had the axle formula of 1-4-0. However, the French locomotives had too many defects so they were not popular among the drivers. Most of these engines were fuel-fired and each of them had a name connected with Ethiopian geography and culture, for example, Lion, Rhino, Elephant, Ankober, Shoa, Gojjam, etc. Other locomotives brought to Ethiopia were manufactured by Henschel, Germany and labelled as class HK numbers 11-30. They were rarely used in Ethiopia because of their excessive coal-consumption and too much power as for the Ethiopian standards. Another nine second-hand Pinguely locomotives were sold to Ethiopia from the Beaujolais Railway (France) but they never reached the country of their destination as the ship which carried them to Ethiopia had been torpedoed by the Italian submarine in 1935<sup>4</sup>.

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<sup>4</sup> [www.train-franco-ethiopien.com](http://www.train-franco-ethiopien.com) [Accessed 10 January 2015]

As for the carriages, the CFE was supplied with French passenger and freight carriages, whereas some of the freight ones were also made in Germany. The roster contained of Buire lounges from 1913, first and second class carriages from Decauville (1900, 1925), Buire Lyon (1912) as well as third class carriages made by Carel et Fouche. The freight cars came from the factories of Decauville, Nicaise, ACNF, Delcuve and Nenhausen and they were of different types such as open trucks, flat cars, flat bed covered cars with tarps for the transport of live camels and other inventory. Curiously, the fleet of the Ethiopian rolling stock was practically devoid of modern tankers until 1947. On the eve of the Italian invasion the Franco-Ethiopian railway company had in stock 54 steam locomotives, 46 lounges, 10 first and second class cars, 26 third class cars, two service cars, and as much as 445 goods wagons of different types. According to the official French data, the revenues from the trade in Ethiopia exceeded 47 million francs in 1914<sup>5</sup>.

### **The fate of the Ethiopian railway during the Italian occupation of the country**

In revenge for the lost battle of Adwa in 1896, the Italians invaded Ethiopia in 1935 and occupied that country for six years. Taking advantage of the lack of modern warfare in Ethiopia and the unreadiness of the Ethiopian troops who had little idea of conducting military operations in the European way (Bartnicki, Mantel-Niećko 1987: 373ff; 378), they pushed forward to the capital city of Ethiopia fighting the encountered resistance by hook or by crook. When they seized Addis Ababa, the Ethiopian Emperor Haile Selassie and his entourage had already left the country in order to fight for its independence abroad. The Ethiopians never resigned themselves to the lost fatherland and once their troops were disarmed by the Italians, they continued their guerrilla warfare until the country's liberation by the Allied Forces in 1941.

One of the main reasons of colonising Ethiopia by the Italians was the exploitation of its mineral resources and the creation of

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<sup>5</sup> Ibid.



convenient living conditions for the Italian immigrants. Nevertheless, the extraction of raw materials and their transport to the coast required good quality roads which were scarce in Ethiopia. The construction of new roads and railways was dependent on the amount of financial resources allocated for that purpose by the Fascist government and this amount was constantly reduced at the expense of the military operations in Ethiopia. So the Italians only managed to export salt from that country on a large scale, though it was hardly profitable given the deplorable state of roads in Ethiopia at that time. Having been at the mercy of the only one line in Ethiopia, the Italians used it to transport their troops and weapons but their actions were continually disturbed as the Ethiopians often interrupted the line to prevent their enemies from their uninhibited movement across the country. During the occupation of Ethiopia the Italians wanted to construct the following lines: Addis Ababa–Desse–Addigrat–Massawa, Desse–Assab, Desse–Gondar–Om Ager and Addis Ababa–Dollo–Mogadishu, but none of these lines was ever built (Bartnicki, Mantel-Niećko 1987: 389ff).

In order to upgrade the fleet of the Ethiopian railway so that their output could be increased, the Italians brought to Ethiopia twelve heavy steam locomotives which could haul not only the military convoys but also other freight trains. Six R302Gr class steam locomotives with tenders came to Ethiopia in 1937 which was followed by another batch of cumbersome engines of the Garrat type with the axle formula of 1-4-1 1-4-1. In regard to the R302Gr locomotives, their tenders had the capacity of 18m<sup>3</sup> and they were used as regular goods wagons carrying water along the line after the cessation of hostilities in 1941. In 1939 one of the R302Gr locomotives was moved to Eritrea. As for the Garrat engines brought to Ethiopia between 1937 and 1940, they were rarely exploited on the line because of its too heavy weight (87 tons) and too big axle load exerted on the rails. Interestingly, the Italians introduced the diesel traction in Ethiopia by importing three railcars nicknamed “Littorina” from their country. These motor cars had 27 seats and they were used in Ethiopia as fast trains on the section Dire Dawa–Addis Ababa. However, these diesel motor units (DMUs) had

problems with overheating and no sooner than in 1948 were they equipped with the new cooling racks. In addition, a number of the new freight cars were also brought to Ethiopia during the war. There were covered cars with a maximum permissible laden weight of 25 tons as well as many self-unloading cars from ACNF, Nicaise Delcuve and Baume Marpent. It should be not overlooked that the retreating Italians blew up the largest railway bridge in Ethiopia over the Awash river with the total length of 151 metres. This bridge was then temporarily rebuilt by the South African sappers but it was officially re-opened in 1946<sup>6</sup>.

### **Modernization of the Ethiopian railway after the end of the Second World War until the Derg takeover**

After the end of the Second World War, the mainstay of the Ethiopian rolling stock was obsolete. The Italian heavy steam locomotives were decommissioned and scrapped, moreover the additional supply of ten fuel-fired Mikado steam locomotives from the US failed to match the increasing railway traffic. Worth mentioning is the fact that the Americans brought these locomotives to Ethiopia in return for the emperor's consent stipulating that they could freely use the Ethiopian military bases and store stockpiles of vehicles and weapons there. In response to the growing needs of the railway's clients, the CFE administration commissioned 12 diesel locomotives in Switzerland which would haul heavy passenger and freight trains. These SLM Winthertur locomotives had to be adjusted to high temperatures on the territory of Djibouti as well as to the constantly changing weather conditions in central Ethiopia. The order of these six-axle locomotives with the possibility of connecting their backs so as to have two-section locomotives was fulfilled at the turn of the year 1951. These locomotives numbered from 1M to 12M had their maximum speed of 90 km/h and offered 651 kW. They were tested on the mountainous sections of the Rhaetian Railways in Switzerland prior to being delivered to Ethiopia. This order was followed by the delivery of the Coferna and Billiards shunters to

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<sup>6</sup> [www.train-franco-ethiopien.com](http://www.train-franco-ethiopien.com) [Accessed 10 January 2015]

replace the old Pinguely steam locomotives. These vehicles were manufactured in France in 1955 and were marked by one forged axle which did not touch the head of the rail. These locomotives had hydraulic transmissions. The Coferna class could run at the maximum speed of 25 km/h while its Biliards counterpart's maximum speed was 30 km/h. Each shunter offered 130 kW and 148,5 kW respectively. The Coferna class locomotives were numbered from C1 to C6 while the Billiards ones bore the numbers from C11 to C14.

Another important type of diesel locomotives for mixed traffic was delivered to Ethiopia in several batches from 1954 to 1989. Time and time again each batch of these BB class locomotives was modified in terms of their speed, power output as well as multiple steering devices. These four-axled locomotives constituted the mainstay of the Ethiopian rolling stock for many years and their sturdiness and reliability have been appreciated by the Ethiopian engine drivers up to the present. The CFE company was also equipped with four six-axle locomotives class CC in 1960. These locomotives had reduced power output in Ethiopia and they were exploited rarely because of their length (15,8 metres). They usually hauled the imperial train. Nowadays two of them are placed in the railway museum in Addis Ababa and they are in a very poor condition without the prospects of major repairs.

When it comes to passenger trains commissioned by the imperial government, five modern DMUs were bought in the French factories De Dietrich and Soule. They were labelled as a series ZA1 and numbered from 01 to 05. They were able to carry up to 250 passengers in three classes at the maximum speed of 85 km/h. The route Addis Ababa-Dire Dawa was covered by them in nine and a half hours including a stop of 45 minutes for the passengers to eat their lunches at the station restaurant in Awash. Each railcar could haul up to three trailers. What is more, another series of passenger cars built by Decauville was brought to Ethiopia in 1955 to replace the wooden third class coaches. The CFE company acquired also several third class cars second hand from the Sarthe Railway, France in 1941. Worth mentioning is the fact that the Ethiopian railway

company rebuilt on its own a number of 1912 Buire Lyon salon coaches in 1954<sup>7</sup>.

It should not be overlooked that the Ethiopian Emperor Haile Selassie I was very often making use of the train services in his country and he had his own imperial train. The first train was offered to him by the French government in 1935 and it consisted of two coaches with Pennsylvania-type bogies which were manufactured by the Société Franco-Belge. The first coach featured a lounge, couchettes and the imperial office while the second one housed a restaurant and kitchen. Having been for the exclusive use of the Emperor, the first imperial train was followed by the second one received from England in 1954. Until its last run in 1973, the new imperial train was composed of two locomotives, a 1913 Nicaise Delcuve generator van for the permanent supply of electricity during the journey, four cars for His Majesty and his family, two first class lounges and couchettes for the Emperor's guests and employees, two second class for the imperial escort and two covered vans for luggage. This imperial train can be presently seen by the tourists in the Imperial Railway Museum in Addis Ababa<sup>8</sup>.

As for freight cars, a new batch of tankers for the transport of fuel and molasses was delivered to Ethiopia in 1947. Thanks to the resourcefulness of the Ethiopian railway engineers, another ten tankers were rebuilt in Dire Dawa from the old frames from the Kenyan railways. In addition, the Dire Dawa workshops constructed from their own resources eight car carriers under the supervision of Lucien Brua. As Eritrea became Ethiopian province in 1962, the imperial government agreed to supply that railway with two Krupp shunters and forty open trucks from the same plant in 1957 and 1967 respectively.

At the beginning of the 1960s the Ethiopian government planned to construct a new railway line from Nazret to Dilla in the province of Siddamo which was to become its own property. It was estimated that the current traffic should oscillate between 24-93 ton kilometres

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<sup>7</sup> [www.train-franco-ethiopien.com](http://www.train-franco-ethiopien.com) [Accessed 10 January 2015]

<sup>8</sup> [www.train-franco-ethiopien.com](http://www.train-franco-ethiopien.com) [Accessed 10 January 2015]

within 15 years. The proposed railway was to carry coffee, oilseeds, pulses, cotton and wood. Given the dense population of that region, also the passenger trains would have been extremely profitable. Nevertheless, the Ethiopian government was unable to build this railway despite having been offered a loan from the French government for that purpose as that loan, if taken, could hardly be repaid because of the lack of reforms in the field of agriculture, which was the country's main income<sup>9</sup>.

Among the primordial reforms that were neglected by the Ethiopian government after the liberation of Ethiopia in 1941 were those in agriculture and taxes. The failure to carry them out soon brought horrific consequences for the country, which eventually turned out to be a cul-de-sac for the imperial government. The social unrest which ravaged Ethiopia since the unsuccessful coup d'état in 1960 was skilfully used by the Provisional Military Administration Council known as Derg in Amharic who took power in 1974, deposed and killed Haile Selassie I and took on the communist ideology in order to win favour of the socialist countries which supplied the country with weapons as the US who failed to acknowledge the new authorities withdrew from selling any military devices to Ethiopia (Meredith 2006: 206).

### **The misuse of railway in communist Ethiopia and its further impairment during the Eritrean and Somalian conflicts**

This period of the communist rule was detrimental for the functioning of the Franco-Ethiopian railway as the communists tended to subsidise the road transport. The railway was being constantly underfunded so the necessary repairs of the rolling stock and tracks were heavily neglected because of the lack of spare parts. Having been devoid of funds and forced to meet the demands, the Ethiopian railway engineers transformed the wooden boxcars from 1937 into relatively unsophisticated passenger coaches. As for the freight cars, they were also victims of the political ideology because no maintenance or repair had been undertaken correctly so the

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<sup>9</sup> Ibid.

wrecks were left to rot along the line. Facing the heavily reduced rolling stock, the communist authorities of Ethiopia turned to Zimbabwe for help. As a result, a number of gondolas and special cars for the transport of livestock were supplied to Ethiopia in the late 1980s. Most of them have remained in use up to the present. Apart from freight cars, the Ethiopian railway also acquired four diesel locomotives from the Fauvet Girel Alsthom plant (France) as well as it continued to purchase the rest of the ZA1 railcars along with their trailers<sup>10</sup>.

Also the Ethiopian conflicts with Eritrea and Somalia during the communist regime had serious implications for the functioning of railway in Ethiopia (Seifu Gebru 2003: 58). The sole railway line in Eritrea was completely dismantled, while the rolling stock was left on the sidings near the station of Asmara, because it was regarded by the Derg to have been used by the Eritrean partisans as a means of shifting the warfare during the war with the Ethiopians<sup>11</sup>. As for the Somalian conflict, it resulted in the destruction of a number of BB class locomotives of which only three were then rebuilt in the workshops of Dire Dawa, three ZA1 class railcars numbers 03, 04 and 07 as well as all the Ethiopian first class coaches.

As a result of Djibouti's independence in 1977, the Ethiopian and Djiboutian governments signed an agreement on March 21, 1981 concerning the further exploitation of the railway line from Djibouti to Addis Ababa. This gave rise to the new company called the Chemins de Fer de Djibouti à Addis Ababa which became the property of both governments. Its management board was recruited from the Ethiopian and Djiboutian representatives. It was concluded that the aim of the railway was to promote the economic and social development of both countries.

### **Attempts of the railway's revival in post-communist Ethiopia**

With the fall of the communist regime in Ethiopia in 1991 and the independence of Eritrea in 1993, the Ethiopian state was virtually dependent on the Franco-Ethiopian railway in terms of its

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<sup>10</sup> [www.train-franco-ethiopien.com](http://www.train-franco-ethiopien.com) [accessed 10 January 2015]

<sup>11</sup> [www.ferroviaeritrea.it](http://www.ferroviaeritrea.it) [accessed 10 January 2015]

international trade as it had lost the ports of Massawa and Assab. Having been in a very poor condition, the line was no longer suitable for intensive use and it enjoyed little popularity which translated into the lack of proceeds from transporting merchandise. so the railway workers went frequently unpaid. Despite numerous difficulties a desultory traffic was maintained mainly from Dire Dawa to Djibouti and such goods as fruits and vegetables, coffee, *khat* or live animals continued to be transported by trains. The freight trains run mainly at night because of the attacks of the Issa people (Blunt 2009).

In order to shift even smaller amount of goods onto trains, the Ethiopian government decided to allocate some of the budget to modernise the railway line in terms of replacing the rails and sleepers for heavier as well as the rectification of curves. In the early 2000s, the section from Dire Dawa to Addis Ababa was closed for the exchange of rails and the improvement of bridges while the stretch from Dire Dawa to Djibouti was regularly closed every few years so as to do similar repairs. The replacement of tracks in Ethiopia was being made with the assistance of the European companies Groum Abate 2006). In addition, the fleet of the BB class locomotives was upgraded by the purchase of four units second hand from the Spanish FEVE railway. Most of the locomotives from the plants of Coferna, Billiards, SLM Winthertur and CC Alsthom were withdrawn and scrapped. Only a small number of the BB class locomotives were used until 2013 and because of the fact that the repairs of these locomotives were rather difficult to undertake in today's Ethiopia, the technicians from the Dire Dawa workshops had no option but to scavenge parts of damaged machines as well as to swap their chassis, cabs and engines<sup>12</sup>.

In 2006, the Ethiopian railway company was taken over by the South African Comazar who obliged to supply it with 46 modern locomotives as well as 600 freight cars of different types. After the line's reconstruction it was planned that as many as ten pairs of trains would run daily. Even though the project was financed by the European Union, it was soon abandoned. Although the Comazar

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<sup>12</sup> [www.train-franco-ethiopien.com](http://www.train-franco-ethiopien.com) [accessed 10 January 2015]

failed to invest in Ethiopia, the Ethiopian government proposed to develop the railway by themselves. Firstly, the Ethiopian-Djibouti Company was created in 2007 to replace the previous one established during the communist regime. Secondly, it proposed a 5,000 kilometre network of standard gauge railway in 2009 which would link the biggest cities of Ethiopia. This railway is planned to be entirely electrified thanks to the hydroelectric stations located on the Blue Nile and the Omo river. Intended predominantly for freight, this network is to be joined with the Sudanese and Kenyan ones. This project was already commenced in 2014 thanks to the loans from Chinese and European banks and if it has ever been completed, it will be one of the most remarkable engineering feats in the 21<sup>st</sup> century (Munford 2010).

Even though the construction of the standard gauge network in Ethiopia was postponed for some time, the Ethiopian Railway Corporation began the construction of a 34 km light railway system in Addis Ababa in 2011. Financed by the Export-Import Bank of China, the project was completed in early 2015. There are two tram lines in the capital city of Ethiopia from north to south and from east to west with a common section of 3 kilometres. The light railway links Menelik Sq. with Kaliti and Ayat Village with Tor Hayloch. The double track line was electrified with an overhead catenary system. The rolling stock consists of 41 Chinese low-floor trams with the maximum speed of 70 km/h whose tinted windows will screen out 90% of ultraviolet radiation. Their electrical equipment is placed on the fast draining roofs. The first trams were delivered to Ethiopia at the end of 2014<sup>13</sup>. After several months of test running, both lines were opened for revenue service on September 20 and November 12, 2015 respectively. Financed almost entirely by Export-Import Bank of China, this first light railway network in sub-Saharan Africa operates daily between 6.00 and 22.00. The Chinese contractor is not only responsible for providing crews and maintenance staff but also

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<sup>13</sup> *Addis Ababa tram supplier selected*, 2014, [www.railwaygazette.com](http://www.railwaygazette.com) [accessed 10 January 2015]



for maintaining the tramway's independent power supply network including four substations with a total rating of 160MW<sup>14</sup>.

### **Today's problems of the Ethiopian railway**

As for the current problems of the Ethiopian railway, they are numerous but less serious as they were several years ago when the refurbishment of the old narrow gauge line was taken into consideration by the Ethiopian authorities. The prolonged repairs on the section from Dire Dawa to Addis Ababa whose end was not in sight precluded the direct train connection with the capital city of Ethiopia by which there is a serious competition from the road and air transport. In addition, the tracks in Addis Ababa were used as a market place for many years. What made the railway less popular than other means of transport in Ethiopia was the already mentioned deplorable state of tracks between Djibouti and Dire Dawa without the prospects of major repairs as well as the obsolete rolling stock. The locomotives and passenger cars came from the 1950s and 1960s with the lack of such amenities as air-conditioning or soft seats. The timetable left a lot to be desired as it was constantly being changed so the passengers have to check it at the station a day before the planned departure and there was no current Ethiopian railway website where one could check the timetable.

Moreover, as of 2013, there were two pairs of trains weekly between Djibouti and Dire Dawa. Each train left at 3 or 6 a.m. and reached its destination at about 8 p.m. so the journey took longer than at the beginning of the past century. Because of the lack of agreement between Djibouti and Ethiopia as to the ticket fares, the price of the ticket bought for the same train was over three times higher in Djibouti than in Ethiopia and it was not surprising that the Ethiopians were likely to choose the road transport on their way home. Other problems were associated with the illegal transport of *khat* through the frontier and the illegal flight of the young

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<sup>14</sup> Addis Ababa light rail opens, 2015, [www.railwaygazette.com](http://www.railwaygazette.com) [Accessed 16.11.2015]

Ethiopians to Djibouti who take advantage of the limited speed of trains crossing the borderland<sup>15</sup>.

When it comes to the care for the railway heritage in Ethiopia, its authorities do not seem to seat great store for that. They are indifferent to the fact that most historic rolling stock is decaying on the sidings of Addis Ababa and Dire Dawa without roofing with the exception of the imperial train. What is worse, the old steam locomotives that are stabled both in the Imperial Railway museum or in the premises of station Dire Dawa are not likely to be reinstated as once the standard gauge line has been officially opened for transport, the old Franco-Ethiopian line will be useless and can be removed in the consequence.

Of particular importance is also the fact that the agreement between Ethiopia and Djibouti as to its free use of the port of Djibouti expires on December 31, 2016. For the further use of the port it was necessary for the Ethiopian Railway Corporation and its counterpart in Djibouti to replace the old railway infrastructure in both countries. Because the former Franco-Ethiopian narrow gauge railway was no longer suitable for further use, it was decided to construct a new 756 km standard gauge line of which 671 kilometres were laid on the Ethiopian territory. Worth mentioning is that the new railway line does not fully concur with the old route. The entire standard gauge line from Djibouti to Addis Ababa is expected to be opened in early 2016, though the first trial run of a diesel locomotive with a rake of 30 empty tankers was conducted on the whole operable line (not yet extended to Addis Ababa) on 31 August 2015<sup>16</sup>. This new railway line in Ethiopia is going to become a chief transport thoroughfare from which branch lines to a number of Ethiopian towns are now being constructed, for example, to Mekkele and Tadjourah (through the Afar region). Even though the standard gauge line has not yet reached Addis Ababa, the Ethiopian

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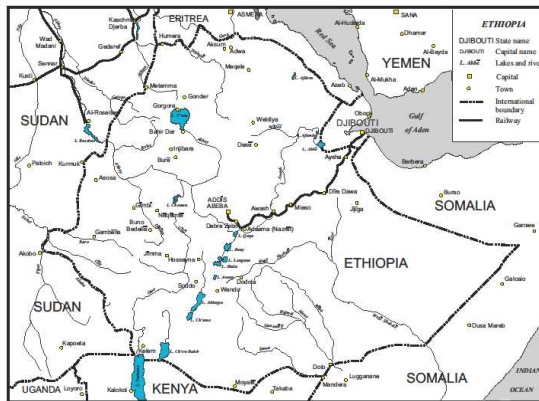
<sup>15</sup> [www.seat61.com](http://www.seat61.com) [Accessed 16.11.2015]

<sup>16</sup> *Premier convoi d'essai sur le chemin de fer Djibouti-Ethiopie*, [www.africantrain.org](http://www.africantrain.org) [Accessed 16 November 2015]

government agreed for the line's further extension to southern Ethiopia and the project commenced in May 2015.<sup>17</sup>

## Conclusion

The Ethiopian railway heavily influenced the economic and social development of the country for many reasons. Ethiopia ceased to be dependent on its Muslim neighbours as far as the transit of merchandise is concerned. Thanks to the Franco-Ethiopian railway the country avoided long-term colonisation and became a member of the League of Nations and in the consequence the seat of the African Unity Organisation. As for the social relations of the Ethiopian nations, they changed radically as the nomadic and pastoral peoples who were employed at the construction of the railway changed their ways of life and conformed to the European lifestyle. What is more, the railway construction contributed to the co-operation of people diversified under the account of beliefs and cultural backgrounds who previously lived in discord.



*Map of the railway line from Djibouti to Addis Ababa<sup>18</sup>*

<sup>17</sup> [www.erc.et](http://www.erc.et) [Accessed 16 November 2015].

<sup>18</sup> The map is based on the one found in Rubinkowska (2010: 288).

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