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# Railway as Border Technology: The Khedivial Line and Ottoman–British Rivalry in the Eastern Mediterranean

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# Railway as Border Technology: The Khedivial Line and Ottoman–British Rivalry in the Eastern Mediterranean

## *Sınır Teknolojisi Olarak Demiryolu: Hidiviye Hattı ve Doğu Akdeniz'de Osmanlı–Britanya Rekabeti*

Recep KÜREKLİ*

**Abstract:** This article examines the Khedivial (Abbas Hilmi II) Railway from Alexandria toward Tripoli on the basis of British archival materials, adopting a historical and international-relations analytical framework. It reconstructs the technical and operational anatomy of the line, demonstrating how design choices determined performance and cost parameters. Set within the security economy of the pre-1914 Eastern Mediterranean, the railway is interpreted as a border technology along the Egypt–Cyrenaica corridor: it advanced toward Sollum while articulating with caravan routes, seasonal fairs, and barley shipments, yet operated under British surveillance, Ottoman military sensitivities, and Italian concessionary ambitions. The study further situates the project within Egypt's broader railway development following the 1854 Alexandria–Cairo line (the first operational railway in the Middle East) and its subsequent extension toward Suez, clarifying how a khedivial private line both complemented and diverged from State Railways by projecting authority into the western desert corridor. By illustrating how infrastructure inextricably bound sovereignty, commerce, and strategy, this research contributes a systematic, document-based operational history and recasts the line as a critical nexus of late Ottoman-British rivalry and Mediterranean border governance.

**Keywords:** Khedivial Line • Daira Khassa • Egypt Railways • Ottoman–British Rivalry • Eastern Mediterranean

**Öz:** Bu makale, İskenderiye'den Trablusgarp yönüne uzanan Hidiviye (II. Abbas Hilmi) Demiryolu'nu Britanya arşiv belgelerine dayanarak tarihsel uluslararası ilişkiler analitik çerçevesinde incelemektedir. Hattın teknik ve işletme anatomisini yeniden inşa ederek tasarım tercihlerinin performans ve maliyet parametreleri üzerindeki belirleyici etkisini ortaya koymaktadır. 1914 öncesi Doğu Akdeniz'in güvenlik ekonomisi bağlamında demiryolu, Mısır – Sirenaika koridorunda bir sınır teknolojisi olarak yorumlanmaktadır: hat Sollum'a doğru ilerlerken kervan güzergâhları, mevsimlik panayırlar ve arpa sevkiyatlarıyla eklemlenmektedir; ancak Britanya gözetimi, Osmanlı askerî hassasiyetleri ve İtalyan imtiyaz emelleri altında işlemektedir. Çalışma ayrıca projeyi, 1854 tarihli İskenderiye – Kahire hattından (Ortadoğu'nun ilk işletmeye alınan demiryolu) ve ardından Süveyş yönündeki genişleme sürecinde Mısır demiryolu gelişimi içinde konumlandırarak, hidivliğe bağlı özel bir hattın Batı çölü koridoruna otorite projeksiyonu yoluyla Devlet Demiryolları'nı nasıl hem tamamladığını hem de ondan ayrıştığını açıklığa kavuşturmaktadır. Altyapının egemenlik, ticaret ve stratejiyi ayrılmaz biçimde birbirine bağladığını gösteren bu araştırma, belgelere dayalı sistematik bir işletme tarihi sunarak söz konusu hattı, geç Osmanlı dönemi Osmanlı–Britanya rekabetinin ve Akdeniz sınır yönetişiminin kritik bir düğüm noktası olarak yeniden konumlandırmaktadır.

**Anahtar Kelimeler:** Hidiviye Hattı • Da'ire-i Hassa • Mısır Demiryolları • Osmanlı–Britanya Rekabeti • Doğu Akdeniz

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## Introduction

In the nineteenth century, boundary-making in the Eastern Mediterranean (and the historical development of its port cities) was shaped less by warfare than by competition among firms and institutions operating within the political economy of liberal capitalism, from steamship companies and railway ventures to missionary networks[1]. This struggle over the Ottoman domains intensified in the century's second half, reconfiguring the social and strategic meanings of transport infrastructures. While maritime routes had by this stage become relatively routinized through foreign steamship services, imperial rivalry increasingly concentrated on the rapidly expanding railway sector. Port cities along key maritime corridors therefore became more directly implicated in imperial competition as railways were extended toward the coast, folding maritime hubs into railway-centered strategies of influence and control. Railways and steamship companies operated as auxiliary and complementary infrastructures: regular steamship services underwrote the coastal logistics of railway construction and operation, while rail lines extended maritime circulation inland by linking ports to hinterland corridors of administration, trade, and military mobility. This complementarity became especially visible in the late nineteenth century (particularly after the 1890s) when European capital inflows intensified and railways emerged as a major vehicle of investment. Steamship companies expanded their services, completing the European connection at the ports where railway lines terminated; as a result, both the number and tonnage of vessels increased. Europe's economic expansion, the intensifying competition over Ottoman territories, and rising trade volumes (coupled with the Ottoman state's inability to develop its own merchant fleet despite this growth) created a structural gap that was increasingly filled by foreign steamship companies[2].

Levantine societies, undergoing transformation through long-term policies oriented toward Western industry, were compelled over a relatively short span to modify beliefs, customs, and habitual practices that had endured for millennia. The catalyst for this change was a steam-powered technological ensemble (above all the factory, the locomotive, and the steamship)[3]. Within this competitive infrastructural field, railways emerged as a particularly prominent carrier of modernity. Through their influence, movement, commerce, and civilization flourished. Railways played a central role in expanding trade, fostering economic growth, and tightening cross-border connections. Beyond their transport function, they reordered spatial relations, enhanced state capacity, and reshaped social life along their corridors. As infrastructures of mobility, they carried not only people and goods but also administrative practices, technical standards, and cultural repertoires, thereby diffusing metropolitan norms across wider regions[4]. Indeed, railways were the industry that catalyzed the emergence of investment banking in the 1820s and 1830s in Britain, subsequently spreading rapidly across the European continent and North America. In Europe, railways not only facilitated the rapid industrialization of Western countries but also served as a strategic tool for the development of previously underdeveloped regions, enabling the penetration of remote areas far from political and economic centers. By the end of the

1 Uygun 2018, 414.

2 Ekinci 2006, 75, 84-85.

3 Uygun 2018, 413.

4 Ardeleanu 2024, 7.

1860s, the main railway lines had already been constructed in Western, Southern, and Central Europe. However, in the European East, the Russian Empire's vast majority remained unconnected by railway, and South-Eastern Europe lagged significantly behind. From the 1830s, there had been plans to establish a railway link between Central Europe and its South-East, but only during the 1860s were two isolated and relatively short lines constructed in the European territories of the Ottoman Empire: one in what would later become Bulgaria, and the other in the Dobrucha region, which would eventually be annexed by Romania[5].

Since the advent of railway transport in Europe, the Ottoman Empire planned to make it a reality in its territory. Great Powers were also interested, but their efforts were not always successful. Building railways was a complex technical endeavor that required external involvement. The Ottoman Empire lacked the financial resources and expertise to undertake the project independently. During that era, railways were the most efficient and reliable mode of transportation. State administrators believed they would address national challenges and impact society, affecting security, the economy, and politics. Foreign companies gained advantages for exploring natural resources near the railway lines they were constructing. In Europe, railway lines were prioritized based on economic considerations, but the Ottoman Empire prioritized the Balkans, or its European portion, to enhance security, disregarding other parts of the Empire that were more densely populated or had higher economic performance, where the railway would have a more significant impact. In this respect, railways operated differently across imperial geographies. In Western Europe, they primarily served as instruments for securing direct access to markets and colonial resources. By contrast, in the Ottoman domains they pursued more composite purposes, encompassing the consolidation of central authority, the extension of administrative reach, and the projection of a modern governmental order. Thus, while railways acted as conduits of market expansion for Europe, in the Ottoman domains they also functioned as technologies of territorial rule, reinforcing imperial dominion through infrastructural integration. Conceptually, this distinction underscores that infrastructure should be understood as both a vehicle of capitalist market integration and a modality of sovereignty and territorial governance[6].

The rapid expansion of railway networks (both as a transport technology and an industrial sector) was closely intertwined with overseas capital flows from Europe, which increasingly channelled investment beyond the continent while accelerating the integration of the international economy. This conjuncture decisively shaped nineteenth-century socio-economic change in the Ottoman Empire. A major turning point was the 1838 Anglo-Ottoman Commercial Treaty: by dismantling monopolies and revising tariff structures, it facilitated intensified external engagement through expanding trade, concessionary ventures, foreign lending, and, later, direct investment[7]. Railway construction, in particular, depended heavily on foreign finance and, crucially, technical expertise. In Ottoman Palestine, these dynamics were accompanied by a proliferation of smaller public-works schemes (roads to move goods, people, and troops, and irrigation canals to raise output) alongside urban infrastructure upgrades

5 Hertner 2014, 84.

6 Emini 2022, 52-53.

7 Coşar & Demirci 2009, 19.

in fast-growing towns[8]. Across a landscape dominated by port cities, economic transformation thus became increasingly outward-oriented, driven by export circuits and the transport links (railways and steamship services) that tied inland districts to coastal port cities[9].

Britain attached particular importance to railway schemes in Egypt and selected Ottoman provinces, treating rail transport as a means of enhancing strategic mobility and imperial communications, especially along routes associated with India. Early projects in Egypt, developed in the 1850s, figured among the first railway initiatives in Africa and the wider Near Eastern Mediterranean. In Ottoman territory, British entrepreneurs secured one of the earliest railway concessions in Anatolia with the İzmir–Aydın line, and later British-linked ventures also operated along the eastern Mediterranean littoral; by the early twentieth century, British-controlled rail operations in Anatolia amounted to 373 km on the İzmir–Aydın line and 67 km on the Mersin–Adana line, for a total of 440 km. In parallel, French interests secured concessions for the İzmir–Kasaba line of 168 km and for a 100km Manisa–Soma line, and in 1896 obtained the exclusive right to extend this route to Afyonkarahisar; beyond Anatolia, France also obtained railway privileges in Syria for the Damascus–Homs–Aleppo line, exclusive rights for a steam tramway between Jerusalem and Jaffa through a Franco-Belgian joint venture, and operating privileges for trains between Damascus and Beirut[10], while French capital and technical expertise also participated in building portions of the network in Tunisia and in Bilad al-Sham (the Levant). These concessionary trajectories intersected with the intensifying contest over Ottoman infrastructure projects, particularly as, in 1888, with the backing of Deutsche Bank, the Société du Chemin de Fer Ottoman d'Anatolie was created to operate the railway and assume full control of its construction—developments that unfolded within, and were shaped by, rivalry over communications and transport corridors[11].

The Ottoman Empire's modernizing transport and communications networks enabled rapid circulation of people, information, goods, and pathogens like cholera, profoundly shaping nineteenth-century life. Rail and telegraph lines extended beyond Anatolia into the Hijaz, accelerating communication across the empire. In İzmir, telegraphic connectivity with the capital facilitated Istanbul's coordinated public-health response to cholera by transmitting directives and fostering collaboration with local officials. The intensified movement of passengers and commodities by rail further linked rural districts and urban centers. Despite the completion of a telegraph network connecting the capital with major provincial cities, the Ottoman Empire lacked adequate transportation networks due to financial and technical constraints. Abdülhamid II contracted European firms for railroad construction, expanding the Empire's rail network. During his reign, approximately 6,000 km of rail were laid, and a parallel highway network was constructed. Between 1881 and 1897, the average annual highway construction was about 800 km[12].

The effects of building railways in the Ottoman Empire differed from those in Europe.

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8 Dimitriadis 2018, 483.

9 Chaichian 1988, 25.

10 Görgen 2022, 162-163.

11 Alghafal 2021, 126.

12 Andic & Andic 2014, 138-139.

Unlike Europe, where railways supported national economies, Ottoman railways primarily served international trade, facilitating commercial ties with Britain and preparing the ground for such exchanges. Initially, British merchants sought access to Ottoman raw materials and markets, leading to British capital investing in Anatolian lines. France, Germany, Austria, and Russia followed, aiming to expand their influence over the Ottoman economy. Railway corridors created new commercialized regions within the imperial economy. Previously, inadequate roads and rudimentary transport technologies limited international trade, with caravan traffic operated by semi-nomadic Anatolian groups causing prolonged transit times and increased damage to goods. The wide spacing of villages further hindered foreign firms from ensuring a steady supply. The perceived demands for speedier, more economical connectivity between ports and production areas, particularly in western Anatolia, propelled an urgent program of railway construction[13].

In 1892 the Ottoman government concluded a concession under which the Société du Chemin de Fer Ottoman d'Anatolie (financed by Deutsche Bank) undertook the extension of the İzmit line to Ankara, with construction beginning the same year; a further concession in 1894 authorized the push to Konya. Between 1900 and 1908 the Damascus–Medina Hejaz Railway was built as an Ottoman state project, organized as a waqf and financed by a world-wide subscription across the Muslim world, with significant German technical involvement. In 1903 Abdülhamid II granted a major concession to a Deutsche Bank–led consortium for what became known as the Baghdad Railway, together with ancillary privileges (including rights to exploit subsoil resources within a defined corridor along the track). Taken together, these projects linked Ottoman imperial strategy to German capital and expertise, marrying railway construction with resource development and embedding the empire more tightly in late nineteenth- and early twentieth-century transimperial networks[14].

Britain sought to prevent France from gaining a strategic advantage in the Ottoman domains, fearing that an entrenched French position could undermine British interests in the Near and Middle East. Although London and Paris occasionally cooperated against Germany, both pursued imperial expansion to secure markets and raw materials. After reducing its dependence on France through the purchase of Suez Canal shares in 1876, Britain was likewise unwilling to see the Baghdad Railway concession pass to Germany and create a new dependency. In this sense, the Anatolian and Baghdad Railways mattered as strategic instruments of imperial autonomy and rivalry rather than as transport projects alone[15]. The French (whose canal enterprise had constructed the Suez Canal) entered into an agreement with Britain in 1878 for the construction and public-works development of Egypt. It remained in force until 1881. However, the Egyptian uprising against both foreign influence and the Khedive, led by Arabi Pasha, soon made the arrangement effectively unenforceable. In the ensuing confrontation, Britain assumed responsibility for suppressing Arabi Pasha's forces[16]. Britain's 1882 occupation of Egypt, citing the uprising as a justification, consolidated its effective control over the Suez Canal[17].

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13 Demirci & Coşar 2021, 685.

14 Alghafal 2021, 127. For scholarly discussions of the Ottoman railway network, see also Gülsoy 1994; Özyüksel 2014; Christensen 2017.

15 Gümüş 2011, 159-160.

16 BOA., Y.PRK.TKM., 19/29.

17 BOA., Y.PRK.ASK., 14/59.

For the Ottoman government, these rivalries intersected directly with the problem of communications sovereignty, since Britain's control of the Suez Canal heightened Ottoman strategic dependence, and a wartime closure could effectively sever Istanbul's communications with Syria and the Hijaz. Abdülhamid II therefore advanced the Hijaz Railway as a means to move troops rapidly without relying on the Canal, strengthen Ottoman authority in Arabia, curb Bedouin attacks on pilgrimage caravans, and discipline Sharifian autonomy in Mecca—thereby creating conditions for military and administrative reform[18]. The Ottoman railway network was central to the empire's incorporation into global markets: backed by state financial guarantees, foreign capital was funneled into lines that linked production zones to ports, facilitating exports of primary commodities and agricultural produce. Yet, up to the founding of the Republic in 1923, the network remained spatially uneven and poorly interconnected, limiting internal economic cohesion; accordingly, early republican governments (despite tight fiscal constraints and pressing needs in health and education) prioritized the rail sector by extending new lines and purchasing and consolidating existing ones to promote political and economic integration at the national scale[19].

**Railway Networks in the Province of Egypt**

During Mohammed Ali's reign, Beirut shifted from a modest trading town into a major port city. Although Egyptian rule was brief and marked by tensions between Ibrahim Pasha and European consuls, it established spatial and institutional linkages that shaped Beirut's subsequent trajectory. New connections with Damascus, Europe, Alexandria, and İzmir inserted the city into international commerce and encouraged further investment in transport ventures and consumer-goods industries[20]. Yet this infrastructural drive unfolded within a political economy strained by extensive public-works programmes—most notably the Mahmudiyya Canal (1817–1820), the Suez Canal, and the Cairo–Alexandria Railway (completed in 1856)-which generated substantial government indebtedness. Fiscal extraction operated largely through tax-farming, first under the "*iltizam*" and later the "'*uhda*": the state fixed a target yield, while any surplus accrued to the contractor, creating powerful incentives for over-exaction and abuse. Tax burdens also differed by land category, with "*kharijiya"* lands cultivated by fellahin assessed at lower rates than "*ushuriya*" lands held by notable households as government grants and subject to a tithe. In this setting, railways and harbour expansion consolidated Beirut's position as the principal port, reinforcing the spatial logics of capital and making the city both a product of evolving relations and a platform for continued expansion[21]. Beirut's consolidation as a major maritime hub in the Levant accelerated in the post–Crimean War decades. Modern port construction belongs to the late Ottoman period, beginning in 1887 and completed in 1893. This phase was closely tied to French commercial interests and shipping networks, in which the Compagnie des Messageries Maritimes played a pivotal role[22].

Railway construction in Egypt began in 1851, and the first train entered service in 1854. This marked the first railway in Africa and the Near East; by 1875, approximately

18 Öztürk 2023, 422-423.

19 Coşar & Demirci 2009, 19.

20 Abou-Hodeib 2007, 244.

21 Endelman 2018, 825.

22 Schayegh 2025, 5-6.

955 miles (1,537 km) of track had been completed. Thereafter, the network linked provincial capitals (including Cairo and Alexandria) with other cities. In 1834, Thomas J. Galloway Bey proposed constructing a railway from Cairo to Suez to Mohammed Ali Pasha, the ruler of Egypt. Galloway Bey, a member of the British Engineering Corp. and the House of Messrs. Galloway & Son, Engineers, London, was tasked with surveying and estimating the cost of constructing a railway line from Europe to India. This proposal aimed to replace the existing road and services of Thomas Fletcher Waghorn and his competitor, Hill. Intrigued, Mohammed Ali entrusted Galloway Bey with this responsibility. On May 22, 1834, Galloway Bey presented his proposal. On September 23, 1834, a firman was issued due to his continuous services to the Pasha and Egypt. The correspondence between Galloway Bey and Mohammed Ali reveals the Pasha's interest in the project[23]. The project lapsed when the engineer, Galloway Bey, died the next year, shortly after returning from England with the initial shipment of rails. In the aftermath, the Overland Route was systematically organized by Thomas Waghorn, a retired East India Company officer, and from 1840 the Peninsular and Oriental Steam Navigation Company inaugurated a passenger service between Britain and Egypt. P&O established stations across Egypt and ran steamers on the Nile and the Mahmudiyya Canal until Mohammad Ali centralized transport under the Egyptian Transit Administration. The establishment of regular steamship services and inland waterway transport made shipments of materials and equipment essential for line construction more predictable, thereby reinforcing the logistical underpinnings of railway projects. Railways then became decisive: the Alexandria–Cairo line was built between 1851 and 1856, and in the ensuing two years the line was extended from Cairo to Suez. This network enabled European passengers to sail to Alexandria, cross Egypt by rail to Suez, and re-embark for Bombay, thereby greatly enhancing the overland route to India. Within a few years, receipts from overland traffic alone reportedly yielded approximately £750,000 annually for the railway administration[24].

The Great Powers of Europe competed to establish railroads in the Ottoman Empire, seeking substantial concessions. Until 1870, British firms dominated railroad technology, but French and German companies entered the market, intensifying competition. Foreign investors focused on high profits, while the Ottoman government encouraged investments for economic growth but lacked effective regulation. Delays, disconnected lines, and escalating costs led the government to establish vocational schools and construct second-tier railways. Despite strains, railroad development yielded substantial gains, sustaining territorial cohesion, driving economic growth, and lowering transport and transaction costs. However, as Ottoman political leverage waned, foreign concessionary companies increasingly took over construction, finance, and operation, eroding the state's bargaining position and deepening dependence on external capital and expertise. Railways were pivotal in integrating regions and opening Ottoman resources and agrarian surpluses to global markets[25].

Said Pasha inherited a substantial debt from his predecessor Abbas Pasha and invested heavily in various projects, including the barrage, irrigation canals, railways, and education. The founders of the Bank of Egypt (Banque of Egypt) likely foresaw the

23 Ettouney 2010, 60.

24 Crouchley 1938, 33-34.

25 Coşar & Demirci 2009, 21-23.

wave of borrowing that would sweep over Egypt in the next twenty years, though it remains uncertain how fully they anticipated its scale. This trajectory is consistent with the later expansion of foreign and private banking in Egypt and the escalation of high-interest lending documented for the 1860s and 1870s, when credits extended to the Egyptian government multiplied and repayment burdens rose sharply. In this wider financial environment, the Bank of Egypt appears as one of the early institutional nodes in an expanding banking landscape, alongside subsequent European bank branches established in Alexandria. Against this backdrop, capital investment abroad had become a major policy orientation of the industrialized Western countries. The success of the initial Cairo–Alexandria railway line spurred the establishment of other routes, including the Cairo–Suez line, inaugurated in October 1858. Said Pasha, the newly appointed viceroy, entrusted the engineer M. Mouchelet with designing and constructing this desert railway line. Like the inaugural line, it was single-track and used the same gauge, 4 feet 8 inches (1.43 m). The line completed the Trans-Isthmus link, encompassing 345 miles (394 km) of newly constructed track. The government generated approximately £75 million in annual revenue from this line alone before the opening of the Suez Canal. In 1860, a railway line was under construction to connect Cairo to Port Said and Ismailia on the Suez Canal. These extensions began between Banha and Zagazig in 1860, proceeded to Ismailia in 1868, and finally reached Suez in 1868. The new line, traversing fertile agricultural and commercial land in the delta, emerged as a superior alternative, albeit longer (154 miles or 247 km) than the more direct desert line (90 miles or 144 km). Notably, the new line had a more reliable water supply throughout its route. The success of these lines facilitated the extension of railways to nearly the entire country. The southward movement towards Upper Egypt began in 1867 and progressed gradually. Due to Egypt's geographical configuration and the Nile's northward flow, a map resembles a flower. The Egyptian railway line followed the Nile's watercourse and canals, with the southern line as the stem and the Delta's network as branches[26].

Spanning from 1851 to 1879, Egypt imported approximately 241 locomotives. These locomotives were manufactured by 16 distinct companies operating in five nations: England, France, Belgium, Germany, and the United States. As anticipated, the political landscape played a more significant role in the selection of these countries and their associated companies compared to the technical specifications and performance of the locomotives. For instance, during the reign of Said, from 1854 to 1863, France's influence, exemplified by the close friendship between the viceroy and Monsieur De Lesseps, persuaded the Pasha to opt for France when procuring locomotives. Other factors that may have influenced the decision-making process included cost, credit extended by the exporter country, the role of salesmanship, exemplified by Stephenson's initial efforts, and pure coincidence. A primary factor was availability: British manufacturers were the pioneers in locomotive construction and could supply a greater quantity due to the earlier and more rapid development of their industry compared to their competitors, who entered the market later[27].

During the decades of rapid expansion in transport and communications (1850–1880), Egypt's infrastructural modernization reached a peak under Khedive Ismail

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26 Ettouney 2010, 65; Uygun 2019, 110-114.

27 Ettouney 2010, 66.

(1863–1878). By 1877, the country possessed 1,519 km of standard-gauge railways alongside some 13,500 km of navigable irrigation canals, while the opening of the Suez Canal in 1869 further integrated Egypt into global traffic. In the period between Mohammad Ali's death and British rule, large sums were channelled into public works, with Ismail alone investing roughly LE 40 million (Egyptian pounds) in railways, Nile canals, ports, and Suez-related projects[28]. During Khedive Ismail's reign, the expansion of the railway network spurred economic and social progress in Egypt, boosting tourism. Affluent Anglo-American tourists, particularly those on the "Grand Tour," traveled from Cairo to Luxor and Aswan to explore ancient wonders, supported by Egyptian State Railway services such as luxurious night trains with Wagon-Lits sleepers and the "Sunshine Pullman," a train resembling British models with a white livery. Railways were also crucial for transporting British troops, beginning during the Crimean War; notably, during the 1858 Indian Mutiny, about 5,000 British troops traveled from Alexandria to Suez, possibly aiding in suppressing the revolt[29]. In parallel, Ismail's plans to link the Sudan to the Red Sea were framed around the construction of telegraph and railway lines through Hamasen; control of this corridor was presented as a means to secure a reliable supply of fresh water for Suakin and Massawa and to facilitate the rotation of troops and officials to the cooler highlands. In the same strategic idiom, the occupation of key peripheral towns was cast as a way to strengthen Egypt's position on major Abyssinian trade routes, and Adua, Qallabat, and Harar figured prominently as targets of Egyptian aggression in the early to mid-1870s. Munzinger subsequently extended these designs to the Awsa region, whose plains were identified as Abyssinia's principal source of salt[30].

Khedive Ismail sought to establish a strong Egypt–Sudan connection primarily through the Nile Valley rather than via Suakin as the main corridor. He therefore initiated a major railway programme driven chiefly by political and military considerations rather than economic gain. Within this scheme, three lines were envisaged: Wadi Halfa–Metemma, Abu Gussi–el Fasher, and Shendi–Suakin. This ambitious endeavor encountered significant challenges due to the formidable physical and economic obstacles that presented themselves. Additionally, the financial difficulties encountered by the Khedive rendered its execution practically infeasible[31]. Egypt (the Nile Delta and the country's Mediterranean and Red Sea littorals) did not encounter the same logistical constraints, as steamers and trains enabled swift resupply. In Sudan and Abyssinia, by contrast, where Ismail's imperial aspirations were focused, such resources were far less accessible: the Nile's rapids and rocky shallows impeded navigation, and railways were virtually nonexistent. Although efforts were made to extend lines beyond Wadi Halfa, funding lapsed in 1877; the first-class road planned to link Suakin and Berber likewise suffered from financial shortfalls[32]. But according to some expert assessments between 1870 and 1883, no new rails, locomotives, or rolling stock were procured. The railway maintenance had been severely neglected, and over considerable stretches, the lines were unfit for traffic.

28 Chaichian 1988, 28.

29 Ettouney 2010, 67.

30 Dunn 2004, 99.

31 Ahmed 1967, 48.

32 Dunn 2004, 40.

Maintenance expenditures had escalated to 44% of gross receipts. Subsequently, 340 miles of new rail were acquired, and substantial enhancements were made to locomotives and wagons. Reconstruction and repairs were progressing steadily, but several years would have been necessary to restore the system to efficient operational status[33]. Between 1881 and 1897, a total of 220 miles of new railway lines were opened to traffic. The expansion of railway and telegraph traffic was substantial. The number of second-class passengers increased from 415,000 to 1,153,000, while the number of third-class passengers rose from 3,100,000 to 9,412,000. Freight transported also saw a significant increase, growing from 1,275,000 to 2,796,000 tons[34].

In 1900, net railway receipts amounted to approximately £E1,243,000, compared with £E1,195,000 in 1899 (an annual increase of £E48,000). The Egyptian State Railways Administration had lately been the target of considerable public criticism, which was unsurprising, as the management system was fundamentally defective. Orders had been placed with an Austrian firm for urgently needed passenger coaches and with a British firm for freight wagons. Over the year, thirty locomotives were ordered, and it was anticipated that a similar number would be required in subsequent years to replace worn machines and accommodate rising traffic. In 1899, twenty locomotives had been ordered from a Belgian firm, and these were now entering service. Although many more units were needed, these orders would somewhat ameliorate the situation[35].

**The Khedivial Railway (The Daira Khassa Railway)**

The inaugural International Scientific Congress was convened in Paris in 1851, coinciding with a period of rapid technological advancements in transportation and communication. This era witnessed the advent of steamships, railways, and the establishment of the cable telegraph, which collectively resulted in a remarkable reduction in both time and space. The European industrial powers, particularly Britain and France, capitalized on this newfound speed, utilizing it to facilitate their colonial expansion into North Africa and the eastern Ottoman territories[36].

Egyptian contingents accessed the canal area through a complementary canal and railway network. Drafted laborers transported to excavation sites via the newly constructed Cairo-Suez railroad, expediting the canal project. Completion of the Cairo-Suez Tract in 1858 extended the 1851-1856 Alexandria-Cairo railway, significantly enhancing travel efficiency. Workers were dispatched to either Suez or Zagazig, depending on their specific assignments. Company agents directed laborers to worksites, while camels transported their belongings. The Company requested a small railroad line from Zagazig to store goods. During the 1860s, a three-hour journey between Timsah-Ismailia and Suez necessitated a train stop in Serapeum and Chalouf for the Company. Despite the 1862 completion of a sweetwater canal between Zagazig and Timsah-Ismailia, travelers continued using both rail and water transportation. Initially arriving in Zagazig by train, they boarded a barge bound for Timsah-Ismailia for the daily evening service. The journey spanned approximately one to one and a half days, contingent upon the direction of travel. However, the Suez Canal posed a

33 FO., 407/106, 1891, N: 64, 57.

34 FO., 881/7158, 1898, Inclosure in N: 28, 118.

35 FO., 633/70, 1901, N: 1, 11-12.

36 Chircop 2018, 201.

significant threat to British interests in the Alexandria-Suez railroad. Both river steamboats and the Egyptian State Railway relied on the canals and Nile, leading to direct competition between them. Previously, man-made canals and railways had clashed due to the latter's speed and punctuality[37].

Algiers's southward expansion facilitated the development of its harbour infrastructure, and the port quickly became one of the city's central economic assets. Expanded in 1857 in response to the colony's emerging railway network, the harbour functioned as a key conduit linking the Algerian interior to metropolitan France. By the 1870s, mounting fiscal pressures were also reshaping power relations across the wider Mediterranean, as infrastructure and finance increasingly structured imperial leverage[38]. In Egypt, for example, the Delta's railway network was particularly dense: alongside the State Railways, three light railways (constructed largely with German materials) were operated by private companies and were reasonably profitable, while cotton constituted the principal agricultural commodity in railway freight[39].

Prior to the advent of colonial rule in 1881, the establishment of railways and other modern services had already commenced. Before the Protectorate, the following railway lines were constructed: the Tunis-Bardo line (1872), connecting the capital to the fortified city of Bardo, which served as the residence and administrative center of the Husseinite Beys since the eighteenth century; the Tunis-La Goulette and La Marsa line (1871-1876), traversing the northern shoreline of the lake and reaching the English (later Italian) station located north of Promenade de la Marine; and the Tunis-Algiers line (1876-1880), traversing the Manoubia Tunnel to the south, followed by the Hammam Lif Line (1882), reaching the 'French' station south of the Promenade, also branching towards the Port. Among the significant developments were: the new French Consulate on the Promenade de la Marine, whose construction began in 1862 and was executed by engineer Colin to a design by architect Caillat; the Central Market in the southern quadrant adjacent to the old city; the gasworks for public street lighting, owned by an English company (1874) and built in the southern quadrant toward *Lac de Tunis;* and the Port of Tunis, designed and completed in 1893 by the Batignolles firm to facilitate the navigation and docking of ships arriving from the Mediterranean via La Goulette and the Tunis Canal[40].

During the colonial era, Southern Europe, North Africa, and the Middle East became ever more tightly interlinked through railways, steamship routes, telegraph cables, and the circulation of goods, news, and people (an entanglement reinforced by mutually constitutive discourses about the Mediterranean). These connections, too often treated in isolation, call for systematic reintegration: analyzing the overlapping institutional and discursive structures that tied Mediterranean region- and nation-building to colonization and decolonization helps move beyond methodological nationalism and Eurocentrism, and supports a simultaneous globalization and "Mediterraneanization" of European history[41]. In this context, newly industrializing powers, notably Germany and Italy, entered Levantine markets amid a late nineteenth-century construction

37 Carminati 2023, 38.

38 Priest 2021, 135.

39 Schanz 1912, 86.

40 Kenzari 2004, 117.

41 Borutta & Gekas 2012, 8.

boom: between 1895 and 1907 Syrian railway projects expanded rapidly (Damascus–Hauran 1894; Damascus–Beirut 1895; links to Aleppo 1906; and the Hejaz connection to Haifa 1906), often financed by Levantine companies through legal and arguably quasi-legal arrangements. In the early twentieth century, steamship firms such as the Khedivial Mail Steamship & Graving Dock Co. maintained frequent sailings from Liverpool to Alexandria and onward to Haifa and other Syrian ports trade continued to expand, with metals, minerals, and hydrocarbons registering marked increases in value[42].

The region situated between western Alexandria and Tripoli was largely unfamiliar to travelers and was commonly depicted as an expansive desert characterized by a few oases. It was believed that traversing this area by camel would necessitate a journey of approximately twenty to thirty days. However, in actuality, it functioned as a bustling corridor: substantial caravans traversed these oases or originated from Tripoli, transporting a diverse array of goods to the markets of Alexandria[43]. At the same time along Egypt's western Mediterranean littoral, contraband hashish was smuggled from Tripoli by illicit traffickers[44]. A railway line connecting Tripoli to the markets of Alexandria and Cairo was under construction; upon its completion, it was anticipated to facilitate regular commercial exchange among these locations[45]. Alexandria served as a significant commercial center, housing prominent export companies, the customs administration, the General Producers' Association, and six national chambers of commerce: French, British, Italian, Austrian, Greek, and Russian[46].

In a memorandum written by Grand Vizier Ferid Pasha, it is stated that the Khedive was to be notified in writing that he was expected to take the necessary measures to extend his privately owned railway line to the frontier of Benghazi, with all expenses to be borne by himself and from his private estate. It is further indicated that preparations for the construction of the guard posts to be built along the Benghazi border had been communicated to and instructed within the relevant departments, and that reporting subsequent developments and outcomes on these matters to the Sultan, in accordance with his command, was deemed the responsibility of the Grand Vizier[47]. In his report to Sir Edward Grey, Viscount Kitchener recorded that Khedive Abbas Hilmi II had signed an option transferring to Mr Aldon Ambron (an Italian engineer in Alexandria acting on behalf of the Italian "North Africa Railway" syndicate) rights associated with the so-called Mariout Railway (constituted by private act on 6 May 1910). Kitchener further noted that, under this arrangement, the syndicate was granted authority to extend the line as far as Sollum together with whatever rights the Khedive purported to hold; the papers cited in the report also stated that the Italian Government had conferred upon the syndicate a concession to construct a railway through Cyrenaica to Sollum, with one quarter of the syndicate's profits to be remitted to the Khedive. He added that a second option, dated the following July, had reportedly been prepared with German interests represented by the Dresdner Bank, but that the Khedive was dissuaded from signing it. It was anticipated that the German party might seek to associate itself with the already-

42 Alff 2018, 170.

43 De Guerville 1906, 112.

44 Steevens 1899, 160.

45 De Guerville 1906, 130.

46 Schanz 1912, 101.

47 BOA., Y.EE., 117/9.

signed option; Kitchener reported that the view was expressed that such a development should be prevented and, if possible, that the original instruments executed by the Khedive should be obtained via the Italian Government. Finally, Kitchener recorded that the Khedive's legal competence to confer these rights was described as highly doubtful, and that an official communication was sent instructing him to suspend any further extension of the railway toward Sollum, with a fuller account to follow by dispatch[48].

The Daira Khassa Railway was constructed and owned by His Highness the Khedive, with its Wardian station situated on the western outskirts of Alexandria. The railhead was continuing to advance toward Mersa Matruh, approximately 288 km west of Alexandria. The permanent track was laid to the standard gauge (4 ft 8½ in) and was preceded by a metre-gauge construction line that was lifted and relaid ahead as the permanent works progressed. By the time of reporting, the permanent line extended from Wardian to Dabaa (about 160 km), while the construction line ran from km 160 to km 227 near Abu el-Hagar (and had, by February, reached km 242). The undertaking was connected with the Egyptian State Railways at Moasla Junction, near Wardian. It was observed that the rails (approximately 50 lb per yard) were largely second-hand purchases from the State Railways. For a considerable distance west of Alexandria, double-headed rails in chairs were employed; elsewhere, flat-footed rails on bearing plates were spiked to creosoted pine sleepers. The track was generally unballasted, though the earth formation compacted and held well. Overall condition was judged "very fair" for a second-class line. Major structures were few: a lattice-girder bridge of roughly 100 feet spanning the intake canal to the Lake Mariut pumping station near km 1, and three culverts between km 217 and 222 (the first a timber trestle, the other two rolled-steel joists) each about 12 feet in span. A low embankment about 5 km long and 22 feet wide carried the line across Lake Mariut; the lake's north side reportedly dried in summer, forming a salt pan[49].

In an audience with Khedive Abbas Hilmi II, it was stated that construction of the line had already begun and that the results were more than satisfactory. By that point, roughly sixty miles had been laid; in freight alone the first year had carried about 1,000 tons, and the current year was expected to reach 6,000 tons or more. It was acknowledged that the project had initially adopted a narrow-gauge track (an error subsequently corrected to standard gauge). As the line advanced toward the oases, traffic was anticipated to grow steadily. The Khedive also described a large market he had attended at the railhead, supplied by caravans arriving even from Tripoli; according to his account, no fewer than 22,000 sheep were present. Transactions there reportedly relied largely on barter, with little coin in circulation, and a horse could be obtained for approximately forty francs. He further indicated an intention to encourage the establishment of village markets and fairs on fixed dates along the route[50]. Agriculture in Egypt depended almost entirely on irrigation, rather than on the meagre atmospheric precipitation. This regime enabled the cultivation of valuable crops from both warm- and cool-climate zones within a desert environment. Only the northern littoral between Alexandria and Tripoli received rainfall sufficient for Bedouin communities to raise a barley crop[51].

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48 WO., 106/217, 1913, N: 23.

49 WO., 106/217, 1911, 1.

50 De Guerville 1906, 113-114.

51 Schanz 1912, 17.


Fig. 1. The Khedivial Line (WO., 106-217, Map Sheet 1)

Three mixed trains reportedly operated each day between Wardian and the interior, though only one continued to the railhead. An additional express was said to originate at the State Railways' Bab-el-Gedid terminus; it bypassed Wardian, departed with a State Railways locomotive and crew, changed over at Moasla Junction, ran through to El Amaied in approximately 1 hour 50 minutes, and returned the same evening. The metre-gauge service was described as daylight-only and running on alternate days. The morning train left for Tabardi at about 06:00; passengers transferring from the broad gauge either used the overnight "water train" or walked the intervening 4 km from Dabaa before dawn. It reached the railhead around 09:30, shunted for roughly thirty minutes, and then returned, arriving back at Tabardi at approximately 12:30. On the broad gauge, traffic reportedly operated under a block system with electric-tablet apparatus, with distant signals positioned about 400 yards in advance of the points. Station buildings were characterized as well-constructed stone structures with adequate accommodation and separate staff quarters. Telegraph offices existed only at principal stations on the broad-gauge line, whereas telephone offices were maintained at all stations on both lines[52].

Although, as a general rule, stations possessed buildings adequate to accommodate a reasonable number of passengers, washing and sanitary facilities were insufficient. Except at the larger stations and a few recently constructed ones, lavatories were absent; improvement in this respect was needed. Many platforms required the construction of ramps. The lack of such ramps had resulted in numerous accidents. Veranda areas (waiting arcades) were placed too close to the platform edge; as this posed a hazard, the practice should be avoided at all new stations. At many stations, fencing was inadequate, leading to excessive crowding on platforms and necessitating more guards than would otherwise have been required[53].

The Khedivial Railway comprised two lines, one broad-gauge and one narrow-gauge, with a substantial number of stations constructed along the route. From east to west, the broad-gauge stations were Wardian, Mex Junction, Mughob, Abd el-Kader, Amria, 2nd Mariut, Hawaria, Behig, Gherbaneyet, Hammam (Roncasato), Rueisa, El Amaied,

52 WO., 106/217, 1911, 3.

53 FO., 881/5503, 1887, 3.

Alamein, and Abd el-Rahman; the narrow-gauge stations, again from east to west, were Foka, Tabardi, Abd el-Hagag, Galal, and Rail Road[54]. The broad-gauge line had reached a length of 2 km, and that beyond the railhead arrangements were in place to facilitate the unloading of goods. An additional 5 km of broad-gauge track had been purchased from the Egyptian State Railways and were expected to be laid within roughly six weeks. All stations were said to have platforms adequately equipped for the unloading of horses. The operating staff consisted exclusively of Ottoman and Egyptian personnel, while three German or Austrian engineers had been engaged to construct the new sections. The Aulad Ali Arabs resident in the district were described as a small, nomadic community primarily dependent on herding and agriculture, and construction labour had traditionally been recruited from the Siwa Oasis[55]. The appointments of railway personnel were made by the Egyptian Railway Board, which consisted of one British, one French, and one Egyptian member. The number of Europeans employed in the department was steadily increasing; Italians, Austrians, Greeks, and Germans, among others, were increasingly assigned to positions on the railways[56].

According to contemporaneous inspection, no substantial cuttings or embankments were encountered before km 222. Between km 222 and km 227, cuttings reportedly reached about 3.7 m (12 ft), while embankments rose to roughly 6–9 m (20–30 ft). Near Foka, the alignment was said to traverse gently undulating ground lying on average 6.4 km (4 miles) from the sea; the stony surface, with low vegetation and sparse shrubs after the rains, was deemed sufficient for barley cultivation (the line's principal traffic). Beyond km 222, the route was described as crossing an almost mountainous plateau where construction progressed slowly; the terminal station, Abu al-Hagar, lay at the plateau's western edge. From that point, the track descended steeply for approximately 4 km, then continued for about 10 km over flatter though still undulating terrain to the maritime plain leading toward Mersa Matruh. It was further noted that a well-constructed motor road had been established from the railhead to the coast. Water suitable for locomotive boilers was reportedly unavailable west of Alexandria: local wells contained excessive soda which (though drinkable) caused severe boiler priming. Accordingly, supplies were hauled by train from Alexandria to replenish stocks and to serve the metre-gauge engines and tank wagons, which were piped into the system. Operations were said to run in parallel, the broad-gauge consist working on a purpose-built embankment to secure gravitational head. An emergency purification plant at Hamman Station, with an estimated capacity of roughly 20,000 gallons per day (75,700 L/day), was in service; water was raised by steam pumps, and water columns were provided for engine watering[57]. It was noted that good barracks for employees engaged on the extension works existed at Dabaa. The El Amaied lighthouse was visible from El Amaied Station. From roughly km 227 to Mersa Matruh, the sea was reported to be continuously visible. A previous report further recorded that a good motor road extended from Foka to El Garawla Well (50 km) and onward to Mersa Matruh (an additional 20 km), making 70 km in total; and that from Garawla south to El Qattara (about 150 km) there was a serviceable motor-car road[58].

54 WO., 106/217, 1911, 4.

55 WO., 106/217, 1912.

56 FO., 881/5365, 1886, Inclosure in N: 162, 134.

57 WO., 106/217, 1911, 2.

58 WO., 106/217, 1911, 5.

The private railway of His Highness the Khedive, running westward from Wardian Station (Alexandria), had not yet been completed; construction was proceeding only slowly. Valuation was to proceed on an engineering cost basis and a commercial basis (capitalizing net receipts at 4%), assuming a 4% target yield. It was acknowledged that questions of general policy might override commercial or engineering considerations and that strategic issues would have to be addressed, though these lay beyond the scope of the assessment. Even so, the traffic then in operation was judged capable of augmentation. A cattle trade could have been developed, as large numbers of sheep and cattle had formerly arrived from Tripoli via the "March Route" before the Italian War. Efforts might likewise have been directed toward fostering suburban traffic west of Alexandria. The possibility of routing the Indian mail had previously been examined but was abandoned owing to the marginal time savings. Moreover, forwarding mail by this route entailed considerable labor and would have required the creation of a port at the railway's western terminus, which did not, in the conventional sense, yet exist; if the line were extended to Derna, it might be converted into a port. As to relative timings, the passage from Brindisi by steam took approximately twenty-eight hours, whereas the corresponding rail journey from Suez required about twenty-one hours[59].

When asked about the ultimate extent of the project, Khedive Abbas Hilmi II stated that the line was, in due course, to reach the Tripolitan frontier. He envisaged that sufficiently "intelligent and enterprising" private actors would then construct a complementary railway from Tripoli to join his. He emphasized the anticipated time savings: a Messina–Tripoli sea passage of roughly fifteen hours would replace the three days from Brindisi to Alexandria or the five from Marseilles. He further imagined trains de luxe from Paris and Berlin to Messina, with connecting expresses from Tripoli to Cairo, operating two or three times weekly (and even daily during the high season)[60]. British archival records noted that, as construction of H. H. the Khedive's railway reached approximately the 220th km, the Ottoman garrison in Tripoli was reported to have taken control of Port Sollum (an area administered by Egypt but within the wider Ottoman imperial framework) and to have shown an inclination to advance further east[61].

The line was unballasted and that no reliable water supply existed west of Alexandria. Workshops were virtually absent, with Egyptian State Railways carrying out most maintenance. Rail sections of mixed weights (approximately 60 lb and 74 lb on the broad gauge) were in use. There was only one sizable bridge, near Alexandria; both abutments were cracked, and the structure was of very light design. The rolling stock was old and poorly maintained, and equipment from Egyptian State Railways was extensively used. As of 15 February 1912, the system comprised roughly 160 km of 4 ft 8½ in gauge track and 67 km of metre-gauge construction line. It was stated that Mersa Matruh was intended to be the terminus of the line, at a distance of 288 km from Alexandria. The 160 km of 4 ft 8½ in (standard-gauge) track were estimated to have cost about £200,000, from which £75,000 should be deducted for depreciation; moreover, expenditures in excess of £75,000 would likely have been required to restore the line to optimal condition, since much of the original material had not been new. The

59 WO., 106/217, 1911, 1.

60 De Guerville 1906, 114.

61 FO., 407/374, 1910, 2.

67 km of metre-gauge track were put at £70,000, with an allowance of £40,000 for depreciation on rolling stock and permanent-way materials, yielding a present value of £30,000. Wardian Station and the adjoining land at Alexandria were valued at £20,000. On this basis, the total value of the system was estimated at £175,000. From a commercial standpoint, however, the valuation was considered substantially lower, as the system did not show a profit and its future profitability appeared doubtful[62].

It was reported that the prevailing tariffs were comparable to those of the State Railway, but recent revenue returns had not been supplied, raising concerns about transparency. The last reliable figures dated to 1905, when annual receipts were under £7,000. On the stated service level (about 220,000 train-kilometres per year), operating 160 km of track would have cost at least £30,000 annually, implying an annual deficit of roughly £23,000 on the 1905 figures. Although conditions had likely improved since then, the extent of any improvement remained uncertain. It was further indicated that, for several years, funds would probably need to be allocated to relay about 20 km of track annually (over and above routine maintenance) until the older rails were replaced. On these assumptions, and holding train-kilometre output constant, the working expenses over the next few years were estimated to total approximately £475,000. It was further noted that an additional 128 km would have to be laid and maintained to reach Mersa Matrun. The cost of completing this section (on the most economical basis and with only bare necessities) was estimated at £245,000 (£2,000 per km), compared with about £1,250 per km for the first 160 km. The higher unit cost was attributed to the use of new (rather than second-hand) rails, together with allowances for rolling stock (£164 per km), earthworks necessitated by rougher terrain (£100 per km), and better sleepers (£70 per km), yielding an incremental £750 per km[63].

From the British Agency in Cairo (17 February 1912), it was conveyed to "Scottie" that the sender was forwarding the fullest available information on the Khedive's Railway. An accompanying map (said to surpass the railway's own in detail) was enclosed, though not yet fully consolidated since the line had not been inspected in person and a comprehensive report had not been completed. The principal enclosure was Bishop's survey from the previous October, supplemented by extracts from other reports and notes taken after questioning Watson Pasha, the Khedive's aide-de-camp, who had travelled the route the month before. It was further indicated that a complete report would follow in the coming months, together with a gazetteer of routes in Egypt and Sinai and a revision of the Military Report on Egypt; thanks were also offered for assistance with the landing schemes[64].

Italy's Mediterranean understandings with France and Britain (coupled with improving Franco-Italian relations and a long-standing cordiality with Britain) were said to have given Rome a distinctive position in international politics. Italy's special ties with the Triple Entente, above all with Britain, reportedly helped prevent the six Great Powers from hardening into three opposing camps. These enduring friendships, notwithstanding formal alliance structures, shaped the European equilibrium. The subsequent recalibration of Italy's relations with Britain and France coincided with the

62 WO., 106/217, 1911, 2.

63 WO., 106/217, 1911, 3.

64 WO., 106/217, 1912.

practical fulfillment of the 1902 accords. In the absence of binding commitments, however, Italy's alignments remained fluid, thereby contributing to shifts in the continental balance of power[65].

In 1910, the Italian Government, acting through Artom, encouraged the formation of small syndicates in Cyrenaica as part of a policy of "peaceful penetration". These syndicates included representatives of an undeciphered group, Maggyar (an Alexandria contractor), the Bank of Rome, and the Khedive (to allay Ottoman suspicions). They were to operate at Constantinople through Said Halim to secure concessions for a coastal railway in Cyrenaica. However, the initiative yielded no results after the Tripoli War[66] broke out. The Italian Government continued to view the contractor and the Bank of Rome as holding preferential claims to any future concession for the Cyrenaica Railway. The Foreign Office had no recent options concerning the sale of the Khedivial Railway and would seek information from the Minister of the Colonies. The railways' primary strategic purpose was to facilitate the rapid concentration and redeployment of Ottoman troops, which would be most effectively secured by constructing a line across Asia Minor (archival terminology) linking Constantinople with the principal military centers[67].

Prior to 1914, nine of the initial twenty municipalities established in the Nile Delta were interconnected by a railway network. Most of these municipalities had served as railway nodes since the reign of Khedive Ismail. Notably, seven of these municipalities established a direct line between Zagazig and Alexandria, despite the absence of any pre-existing through route between the two cities. In contrast, the Cairo–Alexandria trunk railway route traversed Tanta, Kafr al-Zayyāt, and Damanhūr, with Zagazig connected to it by a separate branch line[68].

In conclusion, the Khedivial railway west of Alexandria constituted far more than a minor appendage of the Egyptian network: it was a purpose-built frontier infrastructure that re-scaled commerce, mobility, and authority along Egypt's western littoral on the eve of the First World War. Its distinctive ownership, technical profile, and operational regime set it apart from the State Railways and render it less a routine public works extension than a political–economic project situated at the intersection of imperial rivalry, border governance, and market formation. The line's property regime mattered. Built and operated under the Khedive's private domain and connected into the national grid at Wardian/Moasla, the railway sat at arm's length from the more bureaucratized State system. That institutional distance tightened the link between investment decisions and princely priorities, allowing the project to advance with unusual flexibility but also exposing it to the political hazards of internal politics and external diplomacy.

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65 McClure 1913, 318-319. For discussions of the Ottoman Empire's earliest railways and the role of railways in the Europe-centred standardization of Anatolia, Mesopotamia, and the Middle East, see Bilmez 2000, 41-69.

De Vecchi argued that Italy's title to Tripoli and Cyrenaica paralleled France's claims to its African colonies and could be justified by both ancient rights inherited from Rome and later precedents associated with the Genoese and Venetian republics. He further maintained that Italy's occupation of Tripolitania and Cyrenaica returned the long-unresolved "Eastern Question" to the center of diplomatic debate. For further details, see De Vecchi 1912, 1-15.

67 FO., 881/5548, 1897, Inclosure 2 in No: 2.

68 Reimer 1999, 316.

The technical and operational solutions were obviously pragmatic. The permanent way was laid to standard gauge while construction pushed ahead with a light metre-gauge, much of the rail was second-hand, stretches remained unballasted on an earth formation, and the Lake Mariout crossing relied on low embankment rather than heavy works. Yet the line was not a paper project: block working with tablet instruments, scheduled mixed trains, staffed stations with telegraph/telephone, and elementary lineside housing all point to an actually functioning transport system rather than a speculative concession. Logistics constraints (most notably the lack of suitable locomotive water west of Alexandria) were met with serviceable solutions such as train-hauled water, and an emergency purification plant, underscoring a rational calculus under desert conditions. The railway re-animated an existing caravan corridor. Contemporary descriptions of large periodic markets at the railhead (fed by caravans from Tripoli and by pastoral flocks in the coastal steppe) indicate that the line tapped into, concentrated, and regularized pre-existing flows. The emergent traffic mix and the station architecture reveal a design oriented to transshipment between itinerant caravans, local road traffic, and the port complex of Alexandria-backed, crucially, by Khedivial steamship services in the Mediterranean. In this sense, the project pioneered a sea–rail–caravan intermodality that both densified Egypt's coastal economy and extended Alexandria's commercial reach into what had often been dismissed in metropolitan imaginations as an empty desert.

The line was inseparable from border and security politics. The western coast's porous frontier (marked by contraband and intermittent frictions around the Sollum/Sallum sector) made a rail-served corridor attractive to any authority seeking to project administrative presence, police mobility, and shape taxation at the edge of the Nile Valley. The Khedivial line thus functioned as a state-building instrument as much as a carrier of goods and people, mapping onto a wider late-Ottoman and Anglo-Egyptian repertoire in which transportation corridors doubled as levers of security and sovereignty. Decisively, the project's trajectory was conditioned by great-power competition. Between 1910 and 1913, Italian corporate options to extend toward Sollum linked to Rome's designs in Cyrenaica and exploratory German financial interest via Dresdner Bank collided with British strategic preferences in Egypt. Efforts to halt or renegotiate westward extension reflected overlapping legal ambiguities, imperial anxieties about a continuous Italian or German sphere along the North African shore, and the perennial British objective of managing Egyptian infrastructure to suit imperial communications and defense. The result was a classic pre-war stalemate: a line "good enough" to carry traffic and stage markets, yet politically too exposed to be allowed to harden into a continuous international corridor.

Consequently, these features place the Daira Khassa railway squarely within the politics of late-imperial infrastructures. As with contemporary sanitary regimes in the Eastern Mediterranean and Red Sea, technical systems here were never merely technical: gauge choices, sourcing of rails, operating practices, and station layouts were embedded in contests over jurisdiction, surveillance, and commercial orientation. The railway's very ordinariness (its second-hand metals, modest bridges, improvised water regime) was precisely what made it effective as a flexible border instrument while keeping capital outlays tolerable in a fiscally constrained polity. Despite its ordinary nature, that same ordinariness constrained its resilience when confronted with international pressures. As the First World War loomed, diplomatic vetoes and strategic

prudence curtailed the transition from Dabaa–Abu el-Hagar to a fully realized Sollum/Tripoli connection. Historiographically, the line invites a shift of vantage point. Narratives of Egyptian railways have often privileged the valley trunk and metropolitan finance; this study shows that the western frontier corridor (owned privately but knitted into the national grid, commercially modest yet strategically salient) was a key site where local market ecologies, imperial strategy, and infrastructural pragmatics met. In doing so, it recovers an overlooked strand of Egypt's pre-war political economy and offers a textured model for reading late-Ottoman/Anglo-Egyptian infrastructures as instruments of rule, negotiation, and adaptation at the desert's edge.

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