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Keywords: market integration, Near east, Colonial linkages, Interwar era

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From a common empire to colonial rule: commodity market disintegration in the Near East

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April 24, 2023

Abstract

This paper investigates the impact of the disruption of the Ottoman Empire on the integration of regional and colonial commodity markets in the Near East. Exploiting a novel dataset on commodity prices in Syria, Egypt, Turkey, France and the UK covering the 1787-1939 period, it assesses the extent of price dispersion across markets before and after the end of the Ottoman Empire and investigates the causes behind the change in market integration. The results indicate that while regional markets disintegrated during 1923-1939, reflecting the anti-global environment of the interwar era, colonial market linkages strengthened. The empirical findings also highlight that border effects, rather the rise of protection per se, were the main drivers behind the increase of regional price dispersion.

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The ancestors of the London bankers were still roaming the wilds with clubs in their hands, when the Phoenician sails were plying a prosperous trade between Syria and Egypt. The Phoenician sails have long since gone beyond the horizon but the Syro-Egyptian trade continues. Twenty-five centuries of commercial relations bind the two countries together.

Burns (1933, p.82)

Le marché syrien ne peut plus compter, comme par le passé, sur les marchés voisins [. . .] Peu d'exportations sur les pays limitrophes, Irak, Turquie, Egypte, dont les récents tarifs douaniers ne permettent aux produits syriens de n'en franchir que difficilement les frontières.[1]

Bulletin Économique Trimestriel (1930, p. 802)

1 Motivation

The break up of empires, and more generally of political unions, is often accompanied by a worsening of economic ties among successor states, driven by the creation of new institutions, the introduction of new currencies, and new barriers to trade. One of the key negative repercussions of political disintegrations is the deterioration of trade linkages and the related worsening of market integration among newly formed political entities.[2] At the same time, the dissolution of political unions is not always associated with trade destruction: well established economic linkages can persist in new institutional settings.[3] Indeed, countries with a strong history of trading with one another often tend to continue doing so (Eichengreen and Irwin, 1998). Hence, whether the influence of historical trade ties persists in a new institutional environment is an empirical question.

This paper contributes to this debate by investigating the impact of the collapse of the Ottoman

[1]The Syrian market can no longer count, as in the past, on neighbouring markets. There are only few exports to neighbouring countries, Iraq, Turkey, Egypt, whose recent tariffs make it difficult for Syrian products to cross the borders.

[2]Some examples of studies documenting the negative effect of the end of economic/political unions are: Djankov and Freund (2002), on the countries belonging to the former Soviet Union; Fidrmuc and Fidrmuc (2003), on the dissolution of Yugoslavia, Czechoslovakia and the Soviet Union; Head et al. (2010), on the end of colonial ties; and Glick and Rose (2002): on countries leaving currency unions.

[3]The persistence of economic linkages after a political dissolution are documented, among others, by: De Ménil and Maurel (1994), on Austria, Czechoslovakia and Hungary after the end of the Austro-Hungarian Empire; and Wolf (2005), on Poland after WWI.

Empire on the integration of a set of commodity markets in three of its largest economic regions, Egypt, Turkey, and Syria (comprising of modern-day Syria and Lebanon) during the interwar years (1923-1939).[4] This historical period coincides not only with the end of political and institutional unity in the Near East (Turkey was part of the Ottoman Empire since the 14th century, while Syria and Egypt since 1516-7), but also with the worldwide spread of protectionist practices, which contributed to lowering international trade flows and led to the disintegration of the global market (Hynes et al., 2012).[5] Furthermore, while Turkey gained independence post-WWI, Egypt and Syria did not, but were incorporated into two different empires: in accordance with the so called Mandate system, established by the League of Nations, Britain retained control over Egypt, which was declared a protectorate; and Syria became administered by France.[6]

How did the abrupt end of centuries of shared economic relations under a single imperial authority impact Near Eastern markets? Did Syria and Egypt become increasingly involved in colonial markets, or did old ties persist? Did short-distance trade suffer more or less than long-distance during this period of de-globalisation? Answering such questions is not straight forward, since two opposing forces impacted the integration of Near Eastern markets after they exited the custom union that united them under the aegis of the Ottoman Empire: one reducing trade costs (fostering integration), via improvements in infrastructure and in commercial institutions, and the other acting in the opposite direction, the product of increased protectionism and other forms of inter-imperial rivalries. In other words, exiting the Ottoman Empire exposed Near Eastern markets to: i] increases in trade costs associated with changes to trade policy and break-up of common economic, financial and legal institutions; ii] decreases in trade costs associated with efficiency gains in the transportation network and the banking system; and iii] the creation of new imperial

[4]When using the term Syria, I refer to the Ottoman areas comprising of the Syria, Aleppo, and Beirut Vilayets (provinces).

[5]The extent to which trade policy mattered in the fall of global trade during the interwar years is still debated: while some downplay its role, others consider it a major contributor to the dramatic drop in trade, see De Bromhead et al. (2019).

[6]After WWI, the former unification of the Middle East under a single imperial authority was substituted by nine separate states with their own custom regulations and currencies: Egypt, Syria, Lebanon, Transjordan, Iraq, Palestine, Turkey, Saudi Arabia and Yemen. Only the latter three exercised full sovereignty. The League of Nations granted Britain the right to administer Transjordan, Palestine and Iraq and France the right to administer Lebanon and Syria (Cleveland, 2004). While the Khedivate of Egypt was occupied by British forces in 1882, it remained an autonomous province of the Ottoman Empire until 1914, and was not part of the British Empire.

connections with France and Britain for Syria and Egypt.

The empirical analysis used to answer these questions has two components: the paper starts by measuring the process of market integration among Near Eastern markets and between Near Eastern and European markets (Great Britain and France) from the long 19th century to the outbreak of WWII. This involves testing two separate conditions the Law of One Price (LOP): price convergence and market efficiency. The former estimates the existence of a long-run relationship between markets (or lack thereof); the latter computes how quickly short-run price differences correct themselves if their long-run equilibrium is disturbed.[7] Specifically, I test the LOP first by illustrating trends in commodity price ratios, and then by measuring the extent of price transmission by computing error correction models in a panel setting, following Razzaque et al. (2007). While such approach is widely used in the literature as attested by a large body of theoretical and empirical studies, the results from the efficiency analysis should be interpreted with caution due to the nature of the historical data used, whose temporal aggregation and infrequent sampling may lead to non negligible biases in the convergence estimates (Taylor, 2001).[8] Given that trade costs were not constant throughout the period of study, the market integration analysis is performed at intervals, identified with Bai and Perron (1998) structural break tests.

After illustrating a decline in integration between regional markets following the end of the Ottoman Empire and an increase in price convergence between colonial markets (Syria and Egypt with their respective metropoles), the paper investigates the main causes behind these processes, using a fixed effects panel regression analysis at the city-pair year level (1787-1939). The two key variables tested are a set of post-WWI border dummies, capturing border effects, and average tariff rates imposed by the importing countries, proxying the rise of protectionism.

The data used in the analysis have been hand collected from a combination of archival and primary sources. For the interwar period, they comprise of quarterly wholesale commodity prices for a set of traded goods in Syria (Aleppo and Beirut), Egypt (Cairo and Alexandria), Turkey (Is-

[7]See Federico (2012) for a formal discussion on market integration and the fulfilment of these two separate conditions: price convergence and market efficiency.

[8]See for example, Coleman (2009); Fackler and Tastan (2008); Federico (2011); Ghosh (2011); Marks (2010); Özmucur et al. (2007); Studer (2008); Bateman (2011). Federico (2012) provides a thorough literature review of market integration within the field of economic history.

tanbul and Eskişehir), France (Paris) and Great Britain (London) between 1923 and 1939.[9] These are complemented with data on yearly Ottoman prices in Syria (Damascus), Egypt (Cairo), Turkey (Istanbul), Great Britain (London) and France (Paris) in the 19th century (until 1912-3). The disruptions caused by WWI, data availability constraints, and different levels of data frequency (quarterly for the interwar, yearly for the 19th century) make the construction of a continuous price time series linking the pre- and post-Ottoman periods challenging: for this reason the main econometric analysis in undertaken at the yearly level, focusing on three commodities whose prices are available both during and after the Ottoman era: wheat, sugar and olive oil. Specifically, I create a yearly series during 1923-1939 by averaging quarterly prices, which are then linked to the yearly pre-WWI prices, thus generating an unbalanced panel (there are no data between 1914 and 1923). The additional quarterly commodities prices available only during the interwar era are used in a robustness exercise to corroborate the baseline results on market (dis)integration.

The empirical findings indicate that while the rise in tariff rates during the interwar era did not have a significant effect on price gaps, borders were the main cause behind the worsening of integration between Syria, Turkey and Egypt post-WWI. The magnitude of the border effect is found to be relatively high, contributing to up to 20% increase in price differentials. These results are in line with the border puzzle literature, which finds that border effects are still very large today.[10] On the other hand, becoming part of the French and British empires contributed in maintaining Syrian and Egyptian markets relatively integrated with the respective metropoles.

Why did borders matter above and beyond the rise of protectionist trade policies? While it is difficult to pinpoint the exact mechanisms behind the importance of border effects, they are likely to be related both to the new legal and regulatory institutions established with the birth of new nation states, and more broadly to the spread of nationalism as an ideology.[11] This went beyond the implementation of economic policies favouring domestic markets, and may have also re-oriented

[9]The Turkish prices available for the interwar sample (1923-1939) are only barley and wheat, while coffee, flour, rice, oil and sugar data start in 1926.

[10]For instance, de Sousa, Mayer, and Zignago (2012) report that, on average, a country traded 493 times more intranationally than internationally in 1990.

[11]There is no consensus in the literature on an explanation for border effects; for example, see the discussion in Nitsch and Wolf (2013).

business and consumer networks, whose preferences became increasingly more directed towards domestically-made products. Nevertheless, it is important to point out that these results need to be interpreted with caution, given that protectionism is measured using average importer tariff rates, rather than product-specific ones, due to data limitations.

Overall, the results provide two novel insights: first, neither sharing a long commercial and institutional history, nor the investments in trade cost-reducing infrastructure and banking during the interwar period were enough to offset other non-observable border impediments which segmented previously integrated markets. Second, while the Near East shared the same anti-global developments of the international economy in terms of regional disintegration, its colonial markets experienced the opposite trend, reinforcing their linkages, a process facilitated by pegged currencies and preferential trade agreements. This process of trade diversion may have partially mitigated the welfare loss generated by forgone regional trade.

This paper speaks to various strands of the literature. First, it makes a distinctive contribution to the topic of regional integration: it brings new insights to the growing market integration literature by focusing on a period that has strikingly received very little attention, the interwar era, and on a relatively unexplored region, the Near East. Over the past decades, economists have made a concerted effort in examining the dramatic changes that affected national economies worldwide in the interwar years, but, as recently highlighted by O'Rourke (2019), only very few works have explored empirically the disruption of commodity market integration and hence the deterioration of the process of international price transmission, which brought to a halt the globalising trends of the previous decades.[12] Furthermore, most empirical work focuses on developed nations, with studies on the so called "periphery" being scarce. In particular, the Middle Eastern region has yet to be fully incorporated into this research agenda, with most of the existing literature being predominantly of qualitative nature (Issawi, 1982; Tignor, 1989; Quataert, 1994; Owen and Pamuk, 1998).[13] To my knowledge this is the first empirical study on regional and international integration

[12]Important exceptions are Arthi et al. (2020); De Bromhead et al. (2019); Hynes et al. (2012); Trenkler and Wolf (2005); Estevadeordal et al. (2003).

[13]Notable exceptions are Hansen (1991); Yousef (2002); Karakoç (2018).

of the Near East during this period.[14] Second, by analysing the development of market linkages between Syria and Egypt in their transition from one common empire to two rival ones, this paper relates to the large literature studying the trade implications of the break up of political unions and colonial ties (Libman and Vinokurov, 2012; Head et al., 2010; Redding and Sturm, 2008; Grafe et al., 2008; De Sousa and Lamotte, 2007; Fidrmuc and Fidrmuc, 2003). Similar to Head et al. (2010), this paper shows that the end of an empire is associated with a worsening of imperial ties among former members, but it also points out that (regional) trade disruption was complemented by (colonial) trade creation. This strengthening of colonial linkages in consistent with the process of decreasing multilateralism and increasing intra-Imperial trade that characterised the interwar years, as recently documented by De Bromhead et al. (2019) and Arthi et al. (2020).

Third, my findings contribute to the border puzzle literature, by comparing short-distance with long-distance integration (regional versus colonial), and highlighting that border effects are important dimensions influencing trade and integration in the context of political dissolutions (Anderson and Van Wincoop, 2003; Broda and Weinstein, 2008; Disdier and Head, 2008; Berthelon and Freund, 2008; Schulze and Wolf, 2009; Versailles, 2012; Aker et al., 2014; Brenton et al., 2014; Bergstrand et al., 2015).[15]

The paper is structured as follows: I first provide background information on historical trade patterns in the Middle East before the disruption of the Ottoman Empire (Section 2.1) and during the interwar (Section 2.2), drawing attention on the commercial ties between Syria, Egypt and Turkey. I then analyse the factors which impacted on the degree of market integration, focusing on the role of trade policy, transport networks and commercial institutions (Section 3). After presenting the dataset (Section 4.1) and describing the methodology used in the empirical analysis (Section 4.2), I discuss the empirical findings (Section 5). Section 6 concludes.

[14]The only study on integration in the Middle East during the interwar era is Yousef (2000), who focuses on Egypt's internal markets only.

[15]The border puzzle refers to the fact that national borders create obstacles to trade above and beyond the existence of explicit trade restrictions, see McCallum (1995).

2 Historical trade patterns in the Near East

2.1 Trade during the Ottoman Empire

The Near East became progressively more integrated with the international economy during the first wave of globalisation (first half of the 19th century-1914), thus following the same path of many other regions of the world.[16] Declining trade costs from the mid-19th century lead to a spectacular increase in trade flows in most Ottoman provinces (Harlaftis and Kardasis, 2000).[17] Such changes were particularly dramatic in Egypt, whose openness and integration with the world economy were the highest in the whole Ottoman realm.[18] Moreover, Egypt's linkages with Great Britain were strengthened after colonisation in 1882, when it withdrew from the Ottoman custom union and signed a separate trade treaty with the Empire.[19] While trade with Europe grew also in the other parts of the Empire, intra-Ottoman commerce continued to represent a larger portion of trade of most Middle Eastern regions during the 19th and early 20th centuries, facilitated by the de facto absence of internal trade barriers (İnalcık and Quataert, 1996).[20] For example, in 1862 the value of Ottoman imports in the province of Damascus was five times greater than that of non-Ottoman goods (İnalcık and Quataert, 1996, p.836).[21] In 1892, 80% of all Damascus exports were directed to the Empire (Peter, 2004, p.418).[22] While Egypt's trade with Europe started growing much earlier than the rest of the Empire, Egyptian regional trade figures were not negligible: for instance,

[16] See Issawi (1966); Owen (1981); Islamogu-Inan (1987); Kasaba (1988); Pamuk (1987, 2004); Panza (2013); İnalcık and Quataert (1996). For a discussion on the timing of the first wave of globalisation, see Federico and Tena-Junguito (2017).

[17] Trade rose from 9 million Turkish Lira in 1830 to 45.9 million in 1910-13 (Owen and Pamuk, 1998, p.4).

[18] See Panza (2013) for a study of market integration comparing the Egyptian and the western Anatolian cotton markets. Egypt's trade with Europe was conspicuous, with about two-thirds of Egypt's exports going to Britain and over one-third of its imports coming from there at the turn of the century (Musrey, 1969, p.200, footnote 9).

[19] The trade treaty imposed a reciprocal 8% *ad valorem* import tax. This continued to hold after the Ottoman imperial tariff increase to 11% in 1907.

[20] Ottoman international exports formed around 25% of Ottoman agricultural production, so that the remaining 75% stayed within the Empire (İnalcık and Quataert, 1996).

[21] See İnalcık and Quataert (1996, pp.836-7) for a detailed account of intra-Ottoman trade flows.

[22] These exports included primary commodities such as barley, millet, livestock, legumes, wine, but also manufactures such as silk and cotton textiles.

imports from other parts of the Ottoman Empire covered about 20% of Egyptian average annual imports in 1884 (Musrey, 1969, p.200).

This descriptive evidence on internal Ottoman trade is validated empirically by Li et al. (2019), who establish the existence of strong market integration within the Ottoman Empire during 1586-1914, using a variety of commodities across major cities. Section 5.1 further corroborates these findings by providing quantitative evidence on the degree of integration between Egypt, Syria and Turkey during the 19th century.

2.2 Trade during the the interwar era

The First World War led to the political and economic dismantlement of the Empire, marking the end of its large free trade area and the beginning of significant economic divisions within the Middle East. The dissolution of the Ottoman Empire gave origin to a set of countries with separate customs and distinct currencies. The Republic of Turkey was established as an independent country in 1923, after a three-year War of Independence; the ensuing Peace Treaty of Lausanne constrained the country's ability to pursue independent commercial and tariff policies until 1929.[23] France obtained a mandate over Syria, comprising the states of Syria, Greater Lebanon, Jabal al-Duruz, Latakia and the Sandjak of Alexandretta. The official currency became the Syrian pound, tied to the French franc.[24] Egypt became a British protectorate in 1914, and while it was unilaterally declared independent by Britain in 1922, this was only a nominal independence, and full independence was achieved in 1952 (Armbrust, 2009). In fact, the economic and political ties between the two countries remained very strong during the whole interwar period: the British High Commissioner held powers with a strong potential for intervention in Egyptian economic matters since London reserved rights over four areas: defence, imperial communications, the Sudan and the protection of foreign interests (Tignor, 1989).[25] Furthermore, the Egyptian pound remained pegged to the

[23] Ad valorem duties on imports were kept at the 1916 Ottoman rate of 11% until May 1929 (Hansen, 1991, p.311).

[24] On April 1, 1920 the French High Commissioner emitted a decree for the establishment of a new Syrian paper currency based on the French franc. Thus, the Syrian pound, equivalent to 20 francs and divisible in 100 piasters, became the unit of currency, replacing the Turkish gold pound (Himadeh, 1936, p.264).

[25] In Egypt, a Department of Foreign Affairs was created in the Ministry of Interior to safeguard foreign interests, which benefitted from a series of tax exemptions allowed by the so called capitulations (Tignor, 1989, p.47). Moreover, British officials continued to play a fundamental role in the upper strata of the bureaucracy.

Sterling.

For Syria and Egypt trade with the mandatory powers (France and Great Britain) became increasingly more important after the dissolution of the Empire: it was facilitated by tied currencies, preferential commercial agreements, foreign investments and foreign political control. During the late 1920s over one third of Egypt's exports went to and around one fifth of its imports came from Great Britain (Musrey, 1969). France was one of Syria's leading trade partners, accounting for about one-sixth of Syrian imports and exports (Méouchy and Sluglett, 2004).

Despite economic and political fragmentation, inter-Arab trade still constituted a substantial share of the total trade of most countries during the 1920s, aided by moderate tariff rates. Over one third of Syrian exports went to and around one tenth of its imports came from the region, with Egypt and Palestine being its most important partners.[26] Until the late 1920s there was still a semblance of a regional market in the Near East, which constituted an important outlet for foodstuffs and other agricultural commodities, as well as for a small number of manufactured goods produced in the region (Musrey, 1969). In the 1930s this market shrank, owing to a series of intertwined global and domestic factors, namely the Great Depression, tariff escalation and monetary policy developments. In fact, the international economy experienced a reversal of the trade-creating forces which shaped it since the early 19th century Uebele (2011).[27] The dramatic reduction in prices and output after the Great Depression led to an intensification of protectionist trade policies worldwide, which remained a widespread practice throughout the interwar. On the one hand, economic nationalism, which had not previously been a significant factor in inter-Arab trade relations, began to assert itself, mirroring a global trend. Furthermore, the deterioration of economic relations in the Near East was a manifestation of the rivalry between the French and the British Empire. The division of the world in currency blocs (dollar, sterling, franc) had repercussions on the Near East, weakening trade linkages among countries belonging to different blocs.

[26] See Table A1 for evidence of bilateral trade between Egypt, Syria and Turkey for selected commodities in 1923, 1924 and 1930.

[27] One of the major causes for such environment has been identified with the failure to dismantle the system of protectionist trade policies put in place during the Great War (see e.g. Eichengreen, 1992; Estevadeordal et al., 2003).

3 Analytical framework

In order to assess the impact of the end of the Ottoman empire on regional and colonial markets, this paper proceeds in two steps: it first measures the degree of price dispersion between markets before and after the establishment of new borders, drawing from the classic paradigm of the Law of One Price (LOP), as specified by the standard spatial price determination model of Takayama and Judge (1972). Second, it investigates the causes behind the change in the extent of market integration. Policies that impede the transmission of price signals, such as government-induced distortions (tariffs, quotas, subsidies, etc.), restrictions to firms' entry due to imperfectly competitive market structures or asymmetric access to information, weaken the linkages between two trading economies, hindering, or *in extremis* preventing, markets from integrating. Conversely, policies that reduce trade or transactions costs across locations, facilitate the process of price transmission.

I identify two opposing forces that influenced arbitrage opportunities between Near Eastern markets. One the one hand, a series of factors may have acted against market integration, such as rising protectionism, particularly tariff escalation in the 1930s, as highlighted in section 2.2. These were reinforced by the practice of competitive devaluations, first of the Egyptian pound (1931) and successively of the Syrian pound (1936), which contributed to increased price fluctuations in both markets, and triggered further beggar-thy-neighbour policies.[28] The establishment of Egypt/Britain and Syria/France preferential trade agreements may have further weakened regional ties to the gain of colonial ones. All these forces were linked to an increase in the price differentials between trading markets, potentially leading to their disintegration.

At the same time, other factors may have favoured integration: the relative low rates of protection in Turkey until 1929 and Egypt until the early 1930s; the expansion and improvements of infrastructure in all three countries and the development of better commercial institutions which lowered transport costs and transaction costs, respectively. Sections 3.1 and 3.2 have a closer look at these two opposing factors.

[28]Currency pegs to the franc and the sterling implied a renewed commitment to the gold standard. Countries of the sterling bloc like Egypt had an overvalued exchange rate, as the British pound fixed its value at the pre-war gold parity, despite the considerable change in financial strength and competitiveness. On the other hand, the French franc's devaluation at one fifth of its per-war parity gave Syria an initial competitive advantage over other countries in the region. Turkey had initially pegged it currency to the British Pound (1930), then pegged it to the French Franc in 1931 when Britain left the gold standard, concerned about exchange rate fluctuations. In 1936 the Turkish government continued to maintain the same implicit gold parity policy, linking the lira to the Reichsmark (Hansen, 1991).

3.1 Factors disrupting integration

After WWI Syria's duties were raised progressively from the old Ottoman rate of 11% *ad valorem*: in 1926 they ranged between between 25% and 50%. On the other hand, Turkey kept the old Ottoman rate until 1929, and Egypt continued to apply a uniform 8% *ad valorem* tariff on most imports until 1930. From the 1930s all three countries started raising their levels of protection. Both Turkey and Egypt introduced new tariffs to encourage industry and to protect agricultural interests (Hansen and Nashashibi, 1975). In Egypt, a new general duty of 15% was put in place together with specific duties applicable to a series of goods, reaching 25%: duties rose particularly on fruit, cereals and vegetables, which represented most of Syrian and Turkish exports to Egypt, and continued to grow over time. Despite the devaluation of the Egyptian pound in 1931, due to British abandonment of the gold standard, duties kept rising throughout the 1930s (Musrey, 1969; Burns, 1933). In Syria, too, import duties were raised substantially during the early 1930s, including the tariff rate on rice, the main import from Egypt, as retaliatory measure. In 1930, Syria's ten main exports to Egypt were subjected to an average weighted duty of 21.1%, whereas the ten main Syrian imports from Egypt bore an average weighted duty of 14.6% (see Table A2). Syria raised her tariffs also with Turkey in 1930, and the latter lost the preferential treatment status it enjoyed relative to other League of Nations' members. This was a retaliatory measure against Turkey's application of the maximum tariff rates to Syrian products since 1929, defined as prohibitive by the Aleppo Chamber of Commerce (Burns, 1933).[29]

After adopting a new tariff policy in June 1929, Turkey's average *ad valorem* equivalent tariff increased from 13% to 46% in 1930, and to more than 60% by the second half of the 1930s (Pamuk, 2001). Consumption goods were taxed ever more heavily than raw materials and intermediate goods (Karakoç, 2014).The use of aggressive tariff barriers led to a reduction of regional trade, affecting particularly the major traded goods with Syria and Egypt, such as wheat, barley, soap and olive oil (Ibrahim, 1951; Burns, 1933).

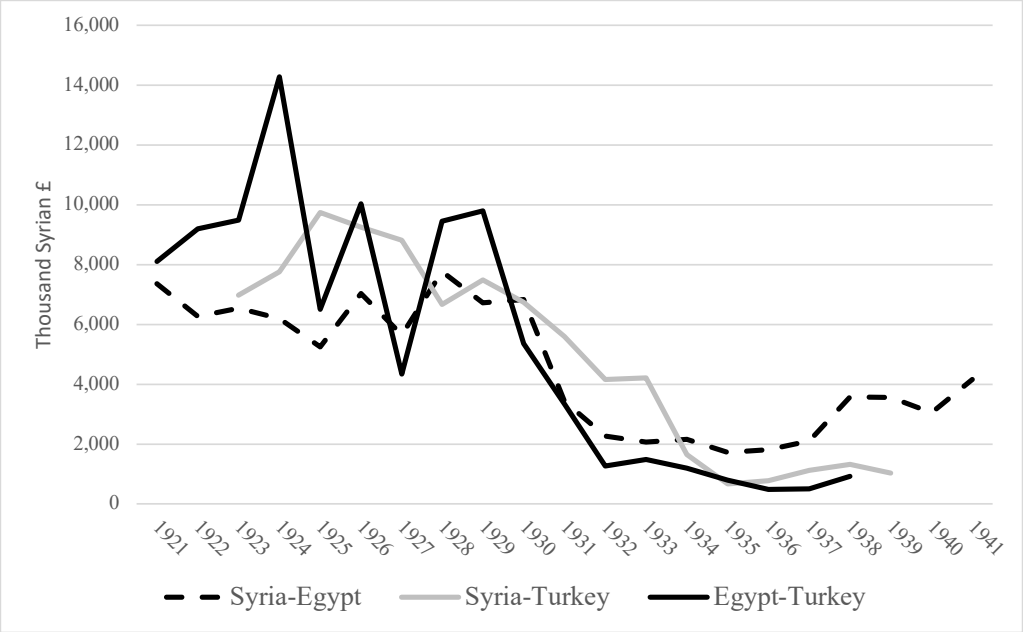
The escalation of protectionism continued during the 1930s.[30] The Syrian pound was devalued

[29] Both Turkish and Syrian commercial groups complained over the harmful effects of the reciprocal rise in tariffs.

[30] In April 1933 Egypt imposed a surtax of 100% on Syrian imports and on August 1933 Syria subjected Egyptian imports to its maximum duties, which were twice the normal rate. While a formal provisional most-favoured-nation agreement was signed in 1934, Egypt's tariff increase at the end of the 1930s and Syria's multiple devaluations did not

in 1936, and again during 1937, so that it depreciated by around 50%. Duties were further raised by 15% in 1936, followed by an additional 20% in 1938. Turkey's exchange rate policies resulted in the appreciation of the lira: in order to improve the current account the government supplemented tariffs with import quotas in 1931, which led to a severe 60% reduction in imports between 1929 and 1933 (Hansen, 1991).[31] By the second half of the decade, more than 80% of the country's foreign trade was being conducted under clearing and reciprocal quota systems (Pamuk, 2001).

Figure 1: Trade between Syria, Egypt and Turkey, 1921-1941, in thousand Syrian £



Sources: Syria-Egypt: 1921–4: Haut Commissariat de la République Française en Syrie et au Liban (1927); 1925–33: Himadeh (1936); 1934: Bulletin Économique Trimestriel (1934); 1935–1941: Saade (1942). Syria-Turkey: 1923, 1934-1938: Bulletin Économique Trimestriel; 1924-1933: Himadeh (1936). Egypt-Turkey: Turkish Statistical Institute (2012).

Consequently, trade relationships between the three countries deteriorated remarkably, as shown in Figure 1, which is illustrative of the timing of the onset of protectionism in each country; for instance, Syria's exports to Egypt experienced an 85% decline between 1930 and 1933, when

aid a reinstatement of pre-depression trade relations.

[31]Most quantitative trade restrictions were abolished in July 1937 (Karakoç, 2014).

the latter adopted a policy of tariff escalation.[32] Similar patterns can be observed in Egypt-Turkey and Syria-Turkey bilateral trade.[33]

3.2 Factors facilitating integration

Syria, Turkey and Egypt underwent a process of infrastructure development during the interwar, which is associated with a reduction of transport costs domestically, regionally and internationally. While such improvements in infrastructure were not explicitly directed at reducing regional trade costs, but were part of broader colonial efforts at improving transport networks in Syria and Egypt, and of a state-led modernisation effort in Turkey, regional trade indirectly benefitted from these trade-cost-reducing innovations. In Egypt, shipping costs dropped due to a series of improvements of the transport system (Issawi, 1963). The railway network expanded and cost of rail transport declined constantly, in response to an increase in motor competition.[34] A further downward pressure on railway rates was the result of a government policy aimed at encouraging both exports and local production. Also international transport costs were reduced, through a series of subsidies granted to Egyptian shipping companies, which expanded their merchant fleet.

In Syria, the French administration embarked on an extensive program of transport development.[35] Road building was expanded systematically, based on the construction of three longitudinal trunk lines, each traversing one of the plains running parallel to the coast, and a series of transverse lines joining the plains by connecting them across the mountain ranges (Himadeh, 1936). Rail tracks expanded considerably between 1914 and 1938 (Grunwald and Ronall, 1960) and, like in Egypt, rail rates experienced a sharp decline since 1928, due to increased competition from motor

[32] In fact, while during the 1920s Syria had exported to Egypt a substantial amount of different agricultural commodities, as well as various types of textiles, by 1939 Egypt imported only a limited range of Syrian goods (Musrey, 1969).

[33] The deterioration of the Egypt-Syria-Turkey trade relation was paralleled by an analogous worsening of the whole Middle Eastern regional commerce. Similar policies of protectionism coupled with competitive devaluations were adopted by most countries of the region.

[34] Railways length increased from 1,900 miles in 1914 to 2,268 miles in 1939 (Hansen, 1991). While water transportation along the Nile represented another source of competition, most commodities were transported by train due to the quicker delivery time and to the fact that river transport was not much available in Lower Egypt (Fahmy, 1931).

[35] French policymakers became particularly active from 1933/4 with the appointment of Count Damien de Martel as new High Commissioner, who established a six-year plan to promote the development of roads, railways, ports and irrigation (Gates, 1998, p.31).

vehicles.[36] Shipping facilities improved, too: in particular, the port of Beirut expanded, doubling in size, and was endowed with larger warehouses. Postal and telegraphic services experienced considerable progress, strengthening regional communications. Moreover, the first telephone lines were installed both within the Syrian territory and in connection with Palestine, Transjordan and Egypt.

In Turkey the extension of state-sector activities in the economy involved the expansion of infrastructure: almost half of all public sector investments during the 1930s went to railway construction and other forms of transportation, with the aim of creating a politically and economically cohesive state within the new boundaries (Pamuk, 2001). The rail network almost doubled between 1925 and 1940 (growing from 3,800 km to 7,381 km). Postal, telegraphic and phone services expanded considerably, too (Turkish Statistical Institute, 2012).

Furthermore, the interwar period saw the consolidation and expansion of a series of institutions focusing on trade, particularly commercial banks. In Egypt, some of the gaps of the credit system were filled by the creation of specialised, government-sponsored banks which facilitated trade transactions (Issawi, 1963, p.33). The foundation of the Egyptian Chamber of Commerce in Cairo was followed by the formation of other commercial banks in the 1920s easing both domestic and international trade. A particularly important role was played by Bank Misr, the first purely Egyptian owned and managed institution, mirroring the rise of the Egyptian merchant and business community. The increase in the capital base of the bank facilitated the availability of credit for import-export activities (Tignor, 1989). Its special linkages with Syria consolidated trade relations between the two countries. Moreover, new multinational bank branches dealing with domestic and international trade were opened: British and French banks, already widespread before WWI, were joined by Italian and Belgian ones.

In Syria both foreign and domestic banks expanded the scope of their operation in the 1920s and 1930s, with commercial banking representing a major component of their activities. French banks opened new branches in different Syrian cities, all dealing with foreign trade.[37] Another

[36] Himadeh (1936, pp.184-5) reports that from 1928 railway rates were modified from week to week to meet this competition and that the freight rate dropped from 5.62-8.10 Syrian piasters per ton in the late 1920s to 1-2 piasters per ton in the mid-1930s.

[37] Examples are the Banque Française de Syrie; the Crédit Foncier d'Algérie et de la Tunisie opened its first branches

chief banking establishment contributed to improve commercial operations, particularly between Syria and Egypt: the Banque Misr-Syrie-Liban. It was founded by the Bank Misr in collaboration with a group of Syrian financiers with the aim of improving trade and economic relations between the two countries (Himadeh, 1936, p.290).

In Turkey the government promoted the expansion of credit both through the state-owned and private banking.[38] This was part of a broader policy aimed at increasing the economy's monetisation and commercialisation, a process which involved also foreign banking: between 1923 and 1932 more than five foreign banks opened branches (Gormez, 2008).

The development of national transport systems and better shipping facilities are associated with a general reduction in transaction costs. Furthermore, the improvement of commercial bank networks facilitated access to information and may have improved the process of price transmission both between the three countries and between the Near East and the international market.

4 Data and empirical strategy

4.1 Data

One of the key contributions of this paper stems from the creation of a new dataset of Syrian, Turkish and Egyptian prices for the interwar era and the Ottoman period. The interwar era data have been compiled using the following primary sources: the *Bulletin Économique Trimestriel des pays sous Mandat Français* for Syria; *Annuaire Statistique de l'Egypte* for Egypt; and a combination of primary sources, as detailed in the Data Appendix, for Turkey. Specifically, I collected quarterly wholesale prices for seven commodities commonly used by Egyptian and Syrian consumers in Alexandria, Cairo, Beirut, Aleppo, Istanbul and Eskişehir: barley, coffee, flour, olive oil, rice, sugar and wheat. All prices have been converted in £GB per kg and are presented in Figures A1 and A2 (see details in the Data Appendix). British price data (barley, rice, sugar, wheat) for London are

in Syria in the 1920s; the Compagnie Algérienne expanded to Beirut (1931) and Tripoli (1932); the Banco di Roma established three branches in Beirut, Aleppo and Damascus after WWI (Himadeh, 1936, pp.287-8).

[38] For instance, the first commercial bank founded by the Turkish Republic, Turkiye Is Bankası, was established in 1924 through a mix of state-owned and private capital; the agricultural bank Ziraat Bank promoted agricultural mechanisation and commercialisation. Denizbank was created to give incentives to maritime development (Gormez, 2008).

from the *London Gazette*, French price data (barley, flour, rice, wheat) for Paris are from the *Annuaire Statistique de la France*.

Ottoman yearly price data for wheat, olive oil and sugar in Syria (Damascus), Egypt (Cairo) and Turkey (Istanbul) have been collected from the *Diplomatic and Consular Reports on Trade and Finance*, combined with a set of secondary sources, as outlined in the Data Appendix. 19th century French and British wholesale wheat price data are from Federico et al. (2021).[39]

The baseline econometric analysis focuses on the three commodities for which there are data both before and after the dissolution of the Ottoman Empire, wheat, olive oil and sugar and is conducted at the yearly level. The yearly price series for the interwar period has been created by averaging quarterly data, then linked to pre-WWI price data. While this is the best price series I can create given data availability, it is important to highlight that both data aggregation and linking two price series which were likely sampled in different ways may generate possible biases in the LOP analysis (Taylor, 2001). Specifically, time averaging and low frequency temporal aggregation are problematic because they bias the findings towards a long half-life (slow convergence). The upward bias arises from the fact that price data are not observed at regular intervals (say, end of the month or quarter), but rather at irregular point in time and then averaged. This sampling issue affects both datasets.[40]

The data on tariff rates used in the panel regressions are from İnalcık and Quataert (1996) for the Ottoman Empire; for the interwar era they are from: *Bulletin Économique Trimestriel des pays sous Mandat Français* for Syria; Hansen (1991) for Egypt; Hansen (1991) and Karakoç (2014) for Turkey.

4.2 Empirical strategy

As introduced in section 3, market integration is analysed drawing from the so-called weak form of the LOP, identifying the following relationship between prices:

[39]Sugar and olive oil prices in London and Paris are not available for the same years as Ottoman ones.

[40]The primary and secondary sources consulted to collect the data have scarce documentation on how the price data have been aggregated, and simply refer to the series as being "annual averages" or "quarterly averages". This is unfortunately a very common problem in historical data, and often overlooked by researchers. Taylor (2001) points out that even the IMF International Financial Statistics, one of the most widely used international dataset to test for the LOP, is plagued by the same problem: infrequent sampling and lack of transparency on how the data has been averaged.

$$y^{B}_{i.t} - y^{A}_{i.t} = c^{BA}_{i.t}, \tag{1}$$

where subscript i stands for different commodities, t denotes a year, A and B refer to two locations and $c^{BA}_{i.t}$ to the cost of trading i from B to A. Such relationship constitutes an equilibrium condition, since spatial arbitrage will ensure that $y^{B}_{i.t} - y^{A}_{i.t}$ will move towards $c^{BA}_{i.t}$.

In the empirical analysis I first focus on the fulfilment of equation (1), which represents the existence of price convergence (or low dispersion) between locations. This will be illustrated analysing trends of price ratios between pairs of markets, following a well established tradition in economic history which defines a market as integrated if the price ratio between two *trading* locations shrinks over time, thus embodying a process of price convergence (Metzer, 1974; O'Rourke and Williamson, 1994; Federico, 2021). While available data from primary and secondary sources document that the commodities included in my dataset were traded throughout the Near East, such evidence is not systematic;[41] hence, due to the lack of comprehensive information on product-specific bilateral trade flows covering the entirety of the historical period analysed, I use the absolute log price difference paid for the same good in each city-pair as a direct measure of deviations from the law of one price: as a result, the full set of cities is included in the analysis.[42]

Next, I focus on a second aspect of the LOP, market efficiency, and estimate the extent and speed of price convergence across locations. Specifically, the rate of convergence and the half-lives are computed using the following regression set up à la Razzaque et al. (2007):

$$\Delta|lnPrice\ \ ratio_t| = \alpha + \beta T + \psi|lnPrice\ \ ratio_{t-1}| + \gamma\Delta|lnPrice\ \ ratio_{t-1}| + \epsilon_t \tag{2}$$

where $|lnPrice\ ratio_t|$ represents the absolute value of the log price ratio between two cities. T is a yearly time trend. ψ represents the error correction model coefficient: having a statistically significant ψ and $-1 < \psi < 0$, implies that the lagged price ratio is negatively related to its current level. In this case, short-run deviations from equilibrium will return to a steady state long-run

[41] See Table A1 for the interwar era.

[42] An essential condition for markets to be integrated is that such markets are actually trading. In the absence of such evidence it is common practice to include as many city-pairs as possible in the price dispersion analysis (Federico, 2007; Broda and Weinstein, 2008; Grafe et al., 2008; Brenton et al., 2014).

trend path. The rate of convergence in equation 2 is computed as $-(\beta/\psi)$, and the null hypothesis of zero convergence is tested with a non-linear Wald test. $\Delta|lnPrice\ ratio_{t-1}|$ is included to address possible serial correlation. While this type of estimation is widely used in the literature, issues of data quality and aggregation may bias the results towards finding a slow convergence rate, as highlighted in section 4.1.

Equation 2 is computed for each commodity in a city-pair panel setting. In order to distinguish periods of converge from those of divergence, I test for structural breaks for each commodity using Bai and Perron (1998) tests in a panel set up, allowing both the constant and the slope to vary. Both the trend analysis and the efficiency analysis are estimated for each sub-period identified by such breaks.

Finally, I investigate the effect that border changes, trade costs and protectionism had on the process of integration, using the complete panel of price ratios between all possible city pairs in the sample, drawing on more than 2,400 observations.[43]

I estimate the following empirical specification:

$$|lnPriceratio^{c}_{ij,t}| = \alpha+\beta_1 border_{ij,t}+\beta_2 lndist_{ij}+\beta_3 tariff_{ij,t}+\delta_i+\delta_j+\theta_t+\gamma_c+\lambda_1 TIME_i+\lambda_2 TIME_j+\epsilon^{c}_{ij,t} \quad (3)$$

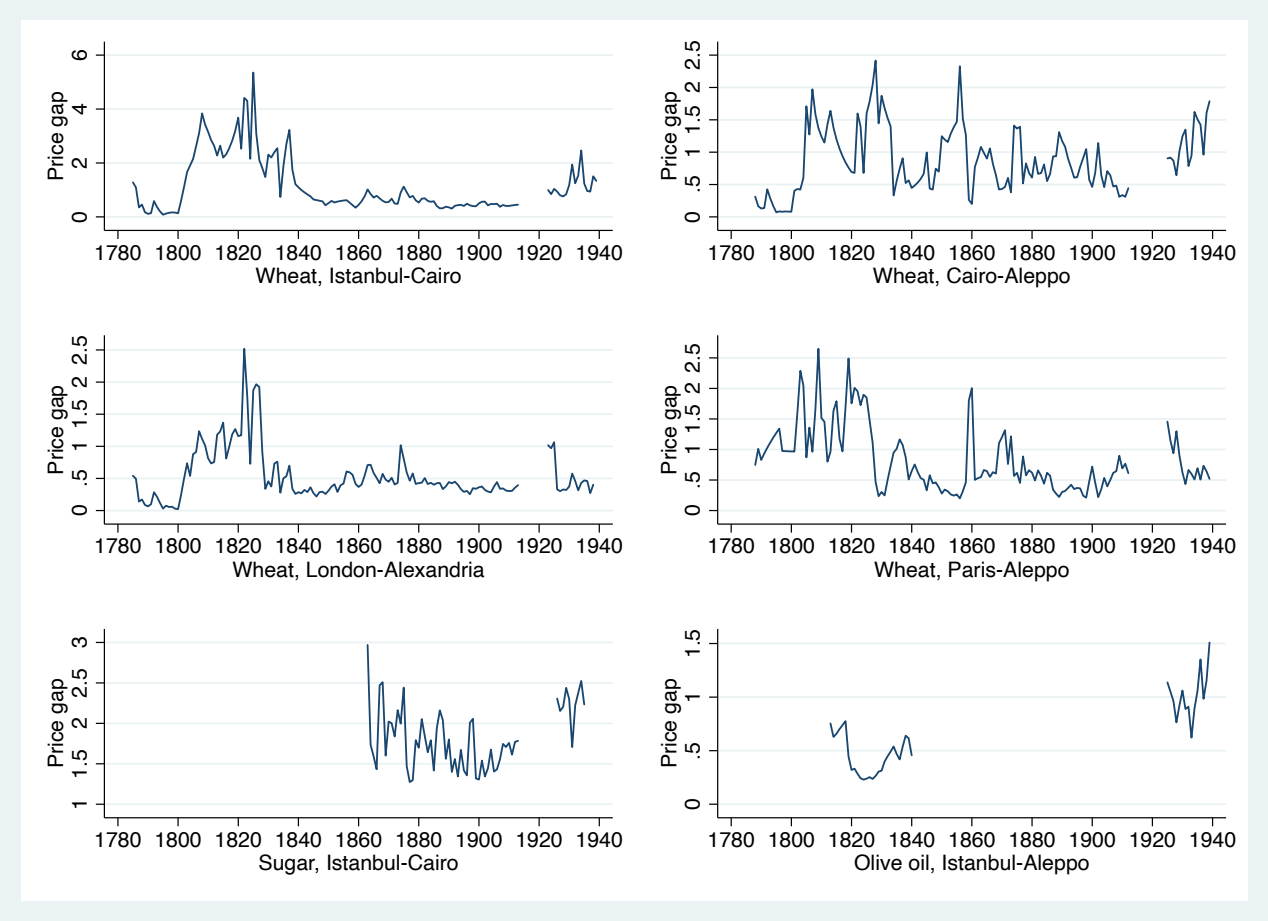
where $lnPrice\ ratio^{c}_{ij,t}$ is the log price ratio for commodity c in city-pair ij at year t; *border* is an exogenous dummy variable taking the value of 1 for city-pairs belonging to different Near Eastern countries after the dissolution of the Ottoman Empire. The lack of comprehensive data on transportation costs such as freight rates, railways, or paved roads length prevents me from having a direct measure of transport costs; instead, they are proxied by the great circle distance between i and j ($ln\ dist_{ij}$) and by city-specific time trends ($\lambda_1 TIME_i, \lambda_2 TIME_j$), accounting for changes in transaction costs, such as improvements in road quality, investments in infrastructure and in the overall efficiency of the market.[44] $tariff$ represents the *ad valorem* tariff rate imposed by

[43]Since all city-pairs are included in the analysis, equation 3 has a difference-in-difference set-up where city-pairs in the same country/empire represent the control group.

[44]Both distance and time trends are commonly used in the literature as proxies for trade costs, see, for instance Federico (2007); Broda and Weinstein (2008); Schulze and Wolf (2009).

the importing city; δ_i and δ_j include a set of city dummies to capture unobservable factors varying at the city level. θ_t is a vector of time fixed effects and γ_c is a full set of dummies to capture unobservables at the commodity level, while $\epsilon^c_{ij,t}$ is an i.i.d. error component. Standard errors are clustered at the city-pair level, given that this is the level of treatment (Cunningham, 2021; Abadie et al., 2023).

Figure 2: Price ratios, selected markets.



Notes: Absolute log price ratio, selected goods and city-pairs.
Sources: See Section 4.1 and the Data Appendix.

5 Empirical findings

5.1 *Market integration*

Figure 2 illustrates the price ratios of some representative series: they point to an initial decrease in dispersion across Near-Eastern city-pairs at the end of the 18th century, followed by a rapid increase in price gaps until the early 1820s, then by a narrowing of price differentials in 19th century. We can also observe that while colonial markets continued to experience declining price gaps during the interwar period, price ratios in regional markets underwent the opposite trend and started widening.

Table 1 reports the results of the trend analysis based on the breaks identified with the Bai-Perron tests in the constant and the slope. To be clear, the dependent variable in each regression is $|lnPrice\ ratio_t|$ and the only independent variable is the time trend. Cols. 1 and 2 provide information about the number of city pairs and the total number of observations, by commodity and time period;[45] Col. 3 reports the coefficient of the time trend, whereby a negative (positive) and significant coefficient symbolises price convergence (divergence). Col 4 estimates the total change for each period/commodity, computed as $\frac{(\widehat{Price\ ratio}_t - \widehat{Price\ ratio}_0)}{\widehat{Price\ ratio}_0}$, where $\widehat{Price\ ratio}_t$ and $\widehat{Price\ ratio}_0$ denote the fitted values at the end and beginning of the period, respectively.

The results of Table 1 are in line with the descriptive evidence of Figure 2: overall, they indicate that markets were integrated both within the Ottoman Empire and between Ottoman and European markets during the 19th century, and that intra-Ottoman price gaps started declining before Ottoman-European ones, as early as the late 18th century for the wheat market. On the other hand, regional markets disintegrated after WWI, while price differentials in colonial markets (Egypt-Great Britain, Syria-France) narrowed at a pace that was faster relative to the previous century. The Great Depression was detected as a shock (a break in the constant) only for the olive oil market, where it marked the start of the process of disintegration. The sugar market behaved sightly differently as regional integration started late (1874-1913) and no significant trend was detected in the interwar period. This may be due to the fact that sugar is a less homogeneous product than wheat and olive oil, so that price gaps might reflect quality differentials.

[45] Note that the trend analysis excludes price ratios of markets in the same country; for instance the wheat price differential between Cairo and Alexandria is not included.

Table 1: Trend analysis of price ratios: wheat, sugar, olive oil

	N. pairs	N	Trends	Total change (%)
Wheat, Near East				
1788-1799	12	156	-0.062***	-0.610
			(0.023)	
1800-1846	12	564	-0.006**	-0.517
			(0.003)	
1847-1913	12	796	-0.004***	-1.015
			(0.001)	
1923-1939	12	186	0.054**	2.450
			(0.009)	
Wheat, Near East-Europe				
1788-1799	4	54	-0.039	-0.596
			(0.042)	
1800-1826	4	108	0.042***	2.631
			(0.011)	
1827-1913	4	346	-0.003***	-0.367
			(0.001)	
1923-1939	4	64	-0.018**	-3.547
			(0.007)	
Sugar, Near East				
1863-1873	2	20	-0.011	-0.133
			(0.018)	
1874-1913	2	82	-0.003**	-0.243
			(0.002)	
1923-1939	5	76	-0.015	1.538
			(0.014)	
Olive oil, Near East				
1813-1840	2	24	-0.023**	-0.841
			(0.011)	
1923-1929	5	29	-0.088***	-1.804
			(0.028)	
1930-1939	5	50	0.044*	0.376
			(0.025)	

Notes: The dependent variable in each regression is yearly city-pair absolute log price-ratio; the only independent variable is the time trend. The total change for each period/commodity is computed as $\frac{(\widehat{Price\ ratio}_t - \widehat{Price\ ratio}_0)}{\widehat{Price\ ratio}_0}$, where $\widehat{Price\ ratio}_t$ and $\widehat{Price\ ratio}_0$ denote the fitted values at the end and beginning of the period, respectively. ***, **, * indicate significance at the 1%, 5% or 10% level

In order to further explore the patterns of (dis)integration in the Near East during the interwar period, I repeat the trend analysis using additional commodity price at the quarterly level for

barley, flour, coffee, and rice. The results, reported in Table A3 confirm the patterns observed using yearly data: namely they illustrate that regional price gaps increased, particularly in the 1930s (coffee and barley), while colonial price gaps underwent the opposite trend. Finding that markets disintegrated after the Great Depression is in line with existing empirical evidence in other contexts (Federico, 2012; Hynes et al., 2012).

Table 2: Long-run convergence

Period	N pairs	Half life in months	Convergence rate
		Wheat, Near East	
1788-1799	12	7	-0.049***
1800-1846	12	26	-0.024***
1847-1913	12	16	-0.004***
1923-1939	12	7	0.055***
		Wheat, Near East-Europe	
1788-1799	4	6	-0.067**
1800-1826	4	14	0.029***
1827-1913	4	18	-0.001
1923-1939	4	12	-0.051**
		Sugar, Near East	
1863-1873	2	-	-0.010
1874-1913	2	6	-0.003*
1923-1939	5	36	-0.222
		Olive oil, Near East	
1813-1840	2	5	0.002
1923-1929	5	-	-0.115***
1930-1939	5	-	0.040***

Notes: Estimation results based on eq. 2.The convergence rate is computed as $-(\beta/\psi)$, and the null hypothesis of zero convergence is tested with a non-linear Wald test. The half life is calculated as $ln(0.5)/ln(1+\psi)$, hence it is not reported if $\psi < -1$. ***, **, * indicate significance at the 1%, 5% or 10% level.

Table 2 reports the price convergence estimates based on equation 2 as a fixed effects panel for each commodity, following the same breaks as Table 1. The results further corroborate the earlier findings: markets within the Near East became more integrated throughout the 19^{th} century and disintegrated thereafter; on the other hand, wheat market integration strengthened in the interwar between the Near East and their colonisers. Table 2 brings also new insights: the rates

of convergence are small, both regionally and internationally, relative to those computed for other parts of the world during the same time period (Chilosi and Federico, 2015). Furthermore, the half-lives of shocks are quite high in the majority of the sub-periods, pointing to the fact that overall markets were relatively inefficient. However, such results are likely to have an upward bias and need to be considered with caution; indeed slow convergence and large half-lives may be the results of data aggregation (Taylor, 2001; Brunt and Cannon, 2014).

To summarise, the empirical findings provide robust evidence on the lack of cross-border market integration between Egypt, Syria and Turkey during 1923-1939, reversing the trend of price pass-through established when these markets operated under the aegis of the Ottoman Empire. Moreover, the results highlight that the incorporation of Egypt and Syria into the British and French empires reinforced pre-existing market integration patterns.

5.2 *The drivers of market (dis)integration*

In order to assess the extent to which this process of regional market disintegration was determined by the establishment of new national borders during the interwar period, I use the empirical setup described in equation 3 and estimate panel regressions at the city-pair year level. The results are reported in Table 3. I start with a parsimonious specification in col. I, testing for border effects using only year and city fixed effects, then commodity fixed effects are added in col. II; cols. III and IV include transport cost proxies: log distance between i and j, and city-specific time trends, respectively. After including average tariff rates in col.V, two further controls are introduced: Great Depression dummy variables for years 1929-1933 (cols. VI-VIII), the period with the most negative repercussions for Middle Eastern economies, and a dummy variable equal to one if both countries were colonies (i.e. capturing Syria-Egypt effects) in cols. VII-VIII. Finally, col. VIII presents the results using only wheat, being the commodity whose quality is most homogeneous and whose price series is most comprehensive (16 city-pairs across 154 years).

The results show that the border dummy is consistently positive and significant across specifications, indicating that the end of the Ottoman Empire contributed to an increase in price dispersion. In terms of magnitude, the estimated coefficients indicate that towns separated by a border had

Table 3: The causes of market disintegration in regional markets

	I	II	III	IV	V	VI	VII	VIII
				Full Sample				Wheat
Border	0.160***	0.155***	0.153***	0.165***	0.138**	0.138**	0.185**	0.163**
	(0.050)	(0.050)	(0.047)	(0.036)	(0.063)	(0.063)	(0.070)	(0.077)
Distance			0.021	0.017	0.025	0.025	0.023	0.027
			(0.013)	(0.013)	(0.017)	(0.017)	(0.016)	(0.020)
Tariff					0.135	0.135	0.036	0.203
					(0.263)	(0.263)	(0.263)	(0.281)
Great Depression						0.192	0.159	0.221
						(0.115)	(0.106)	(0.132)
Colonised							-0.088**	-0.079*
							(0.040)	(0.041)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
City FE	Y	Y	Y	Y	Y	Y	Y	Y
Commodity FE	N	Y	Y	Y	Y	Y	Y	N
City-Year trend	N	N	N	Y	Y	Y	Y	Y
N	2,439	2,439	2,439	2,439	2,439	2,439	2,439	2,272

Notes: The dependent variable is the yearly city-pair absolute log price-ratio in Syria, Turkey and Egypt, for the olive oil, sugar, and wheat markets during 1786-1939. Col.VIII restricts the sample to wheat only. Standard errors are clustered at the city-pair level. ***, **, * indicate significance at the 1%, 5% or 10% level.

price differentials between 15 and 20% higher than those which did not.[46] Such effects are very large relative to those previously estimated in the literature using a specification similar to equation 3.[47]

Neither increases in tariffs, nor the Great Depression years, which saw a rise in beggar-thy-neighbour policies, played a significant role in the process of market disintegration, despite having the expected positive sign. It is puzzling that tariffs did not significantly contribute to an increase in price dispersion; this may be explained by the imprecise nature of the data utilised as proxy, namely the average tariff rate imposed by the importing city, instead of product-specific tariff

[46]The magnitude of the border effect is calculated as $exp(\beta_1) - 1$, where β_1 is the border coefficient, see equation 3.

[47]Estimated border effects typically range between 3% and 5% and are usually lower than 10%. See, for instance Broda and Weinstein (2008); Schulze and Wolf (2009); Versailles (2012); Aker et al. (2014); Brenton et al. (2014). I find that the sign on distance between cities is positive as expected, albeit not precisely estimated.

rates; such choice is likely to lead to an attenuation bias and large standard errors, given that the tariffs varied substantially across commodities.[48] Furthermore, price gaps between Syria and Egypt became smaller relative to those with Turkey.

Overall, these findings, which are robust to restricting the sample to wheat only (col.VIII), have two implications. First, they show that historical commercial links did not persist and that cost-reducing investments in banking and infrastructure were not enough to counter the deterioration of economic relations among Near Eastern nations. Second, they suggest that borders segmented markets more than would be expected on the basis of increased trade costs generated by the rise of protectionism per se, and that these effects were rather large; nevertheless, the results on the absence of tariff effects need to be interpreted with caution given the data limitations indicated above.

Finally, I investigate whether becoming part of the French and British empires contributed to the integration of each colony with its metropole. The sample is thus restricted to Syria-France and Egypt-UK and the variable *border* of eq. 3 is replaced with the indicator *empire*, set equal to 1 for post-WWI years, proxying for empire effects.[49] These include having pegged currencies and preferential free trade agreements between colonies and metropoles. Table 4 reports the results: the coefficient on empire is positive and significant across specifications, indicating that being part of the same empire had a positive effect on integration, thus reducing price gaps. The empire effect in the full sample varies between 3 and 8% (cols. I-III). In the last two columns, the sample is split in two along colonised-coloniser lines: col. IV restricts the analysis to Egypt-UK and col. V to Syria-France. The positive empire effects are confirmed in both cases, but the magnitude is much larger for Syria-France, where being part of the same empire is associated with a 28% reduction in price differentials.

One of the limitations of this paper lies in the inability to identify empirically the exact mechanisms behind border effects. It can be argued that two of the plausible channels driving the results are likely to be linked to the creation of nation-specific laws and regulatory institutions which

[48] It is worth noting that also other studies have found duties not to contribute significantly to price dispersion, even when using product-specific tariff rates, see for instance Table 6, cols 3, 5, 6, 8, 9 in Chilosi and Federico (2015).

[49] The absolute log price ratio in cities within Egypt and within Syria represent the control group.

Table 4: The causes of market integration with colonial markets

	Full sample			Egypt-UK	Syria-France
	I	II	III	IV	V
Empire	-0.028*	-0.038**	-0.077**	-0.086*	-0.246**
	(0.012)	(0.015)	(0.026)	(0.033)	(0.031)
Distance	0.061***	0.094	0.234	0.351	0.099**
	(0.011)	(0.212)	(0.222)	(0.226)	(0.016)
Great			0.145	0.170	-0.705**
Depression			(0.174)	(0.094)	(0.102)
Year FE	Y	Y	Y	Y	Y
City FE	Y	Y	Y	Y	Y
City-Year					
trend	N	Y	Y	Y	Y
N	858	858	858	466	392

Notes: The dependent variable is the yearly city-pair absolute log price-ratio in Syria-France and UK-Egypt for the wheat market during 1800-1938. Col. III restricts the sample to Syria-France and col. IV to UK-Egypt. Standard errors are clustered at the city-pair level. ***, **, * indicate significance at the 1%, 5% or 10% level.

increased the cost of trade between newly established countries, as well as the spread of nationalism across businesses and consumers. Both factors are difficult to quantify. Available historical evidence points to the spread of nationalist economic campaigns across the Near East: for instance, in interwar Turkey the Kemalist èlites sought to boost the consumption of locally made goods and in order to reach out to the masses they used a broad range of policies, including mobilising children in daytime parades, extracurricular activities and patriotic displays (Gökatalay, 2022). Similar approaches were adopted also by the Egyptian and Syrian governments (Tignor, 1977; Burns, 1933).

6 Conclusion

After the collapse of the Ottoman Empire and the incorporation of Syria and Egypt into the French and British spheres of influence, trade linkages in the Near East deteriorated considerably, mirroring a global trend of advancing economic nationalism. The empirical analysis on market integration provided robust evidence of an increase in price dispersion between Egypt, Turkey and Syria: the findings suggest that the improvements in infrastructure and commercial institutions

experienced during the interwar period were not enough to outweigh the negative impact of border effects which led to the dismantlement of economic unity under the same empire. The increase in price wedges between the three economies inhibited regional price transmission, thus leading to the absence of cross-border price convergence.

This paper reveals that post-Ottoman bilateral commercial links in Egypt, Syria and Turkey mirrored two broad patterns: first, they were reflective of the global trend of reversal of market integration that took place during the interwar period. Second, they highlight that the break up of empires can lead to the dissolution of strong historical economic ties. However, regional commodity market disintegration was accompanied by one of trade diversion for Syria and Egypt, a process driven by new institutional environments: the disruption of historical regional trade was countered by the strengthening of colonial linkages, facilitated by monetary integration (via pegged currencies) and the establishment of preferential trade agreements. Hence, the welfare-reducing effects of regional market disruption may have been partially offset by increasing colonial integration. Taken together these findings provide evidence that borders can sharply reduce trade between countries: indeed, the weakening of trade relations between Syria, Egypt and Turkey represent another instance of the distance puzzle phenomenon, as short distance trade integration suffered more than long distance integration during the interwar years of de-globalisation.

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Appendix

Table A1: Average monthly bilateral trade between Egypt, Syria and Turkey, selected commodities, 1923, 1924, 1930 (in tons)

Commodity	Trade direction	1923	1924	1930
Barley	from Syria to Egypt	98,023	54,250	
	from Syria to Turkey		897,816	
	from Turkey to Syria	128,700		
Oil	from Syria to Egypt	4,512	3,812	7,686
	from Syria to Turkey		720	
Wheat	from Syria to Egypt	28,550	81,616	198,307
	from Syria to Turkey	53,900	274,825	96,178
Sugar	from Syria to Egypt	6,278		
Rice	from Egypt to Syria	67,500	67,500	96,717

Source: Bulletin Économique (1923, 1924, 1930); Zilkha (1937)

Table A2: The burden of the Syrian and the Egyptian tariff, 1930

Syrian exports to Egypt			**Syrian imports from Egypt**		
Commodity	Value SYR £	Egyptian tariff [%]	Commodity	Value SYR £	Syrian tariff [%]
Ovine animals	811,997	7	Rice	1,238,325	15
Butter	402,096	12.4	Asphalt	160,176	11
Fruit paste	369,828	23.7	Raw hides	64,131	exempt
Olive oil	166,657	18.8	Box cartons	58,465	10
Dried legumes	148,309	62	Leaf tobacco	39,666	31
Cotton cloth	124,204	16	Sole leather	27,742	15
Oranges	103,265	65.1	Cotton cloth	26,516	20
Wheat	98,281	14	Cigarette paper	24,138	35
Dried apricots	92,216	12	Jute sacks	22,479	exempt
Grapes	72,306	9.4	Beer	21,375	25

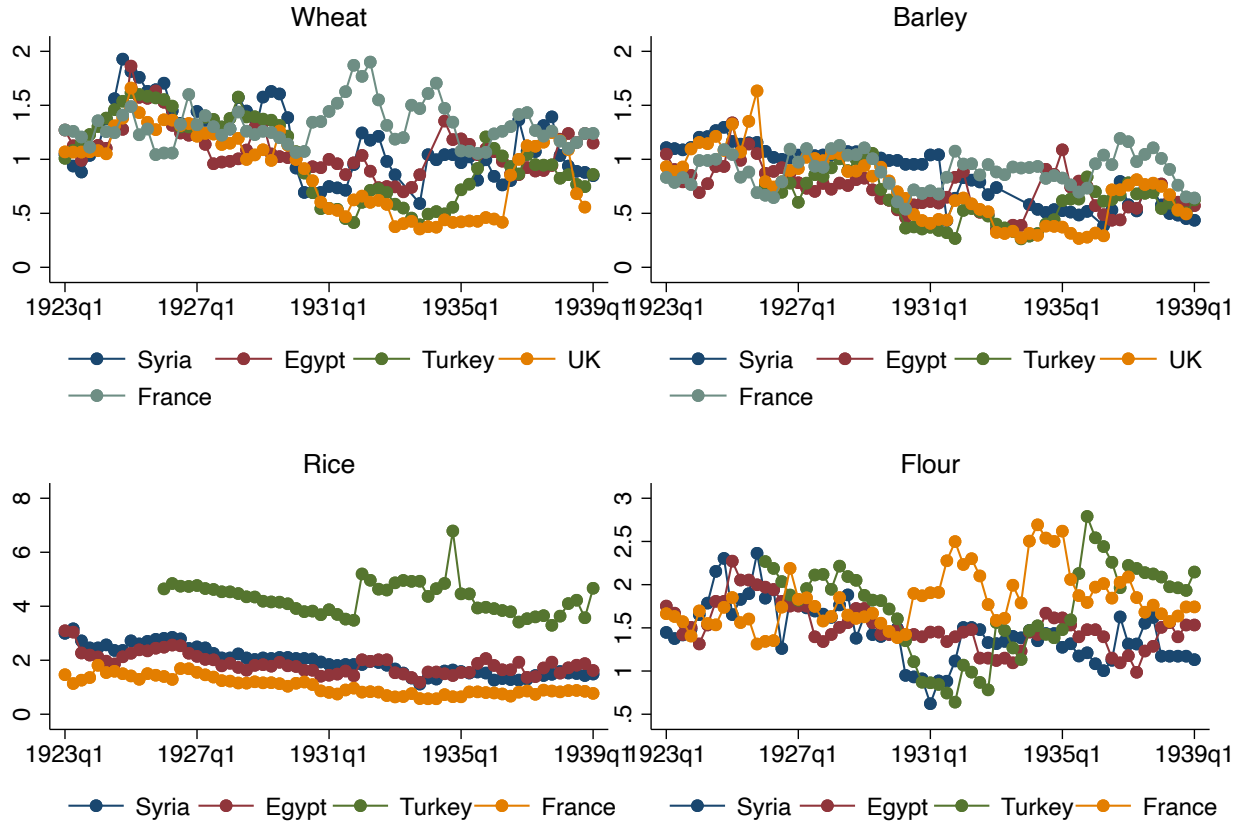
Source: Burns (1933).

Table A3: Trend analysis of price ratios: barley, coffee, flour, rice, quarterly data

	N. pairs	N	Trends	Total change (%)
Barley, Near East				
1926q1-1930q4	12	240	-0.001	-0.148
			(0.011)	
1931q1-1938q4	12	384	0.015*	1.462
			(0.007)	
Barley, Near East-Europe				
1924q1-1938q4	4	240	-0.006**	-23.761
			(0.001)	
Coffee, Near East				
1926q1-1935q4	5	210	-0.0004	-4.533
			(0.0019)	
1936q3-1938q4	5	50	0.017*	1.905
			(0.006)	
Flour, Near East				
1926q1-1938q4	5	223	0.030**	6.140
			(0.007)	
Flour, Near East-Europe				
1924q1-1930q1	1	29	-0.023	-1.791
			(0.036)	
1930q2-1939q1	1	36	-0.054**	-0.458
			(0.019)	

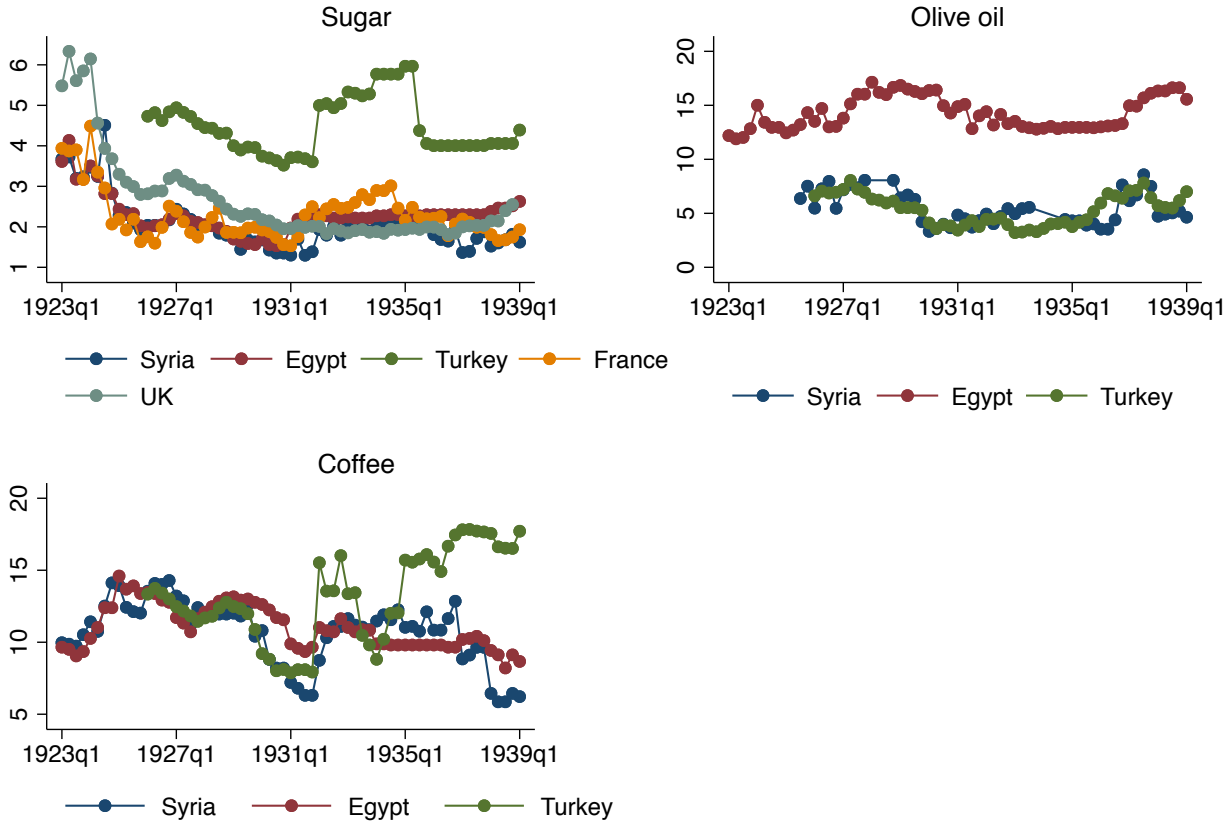
Notes: The dependent variable in each regression is yearly city-pair absolute log price-ratio; the only independent variable is the time trend. The total change for each period/commodity is computed as $\frac{(\widehat{Price\ ratio}_t - \widehat{Price\ ratio}_0)}{\widehat{Price\ ratio}_0}$, where $\widehat{Price\ ratio}_t$ and $\widehat{Price\ ratio}_0$ denote the fitted values at the end and beginning of the period, respectively. ***, **, * indicate significance at the 1%, 5% or 10% level

Figure A1: Quarterly wholesale prices of barley, flour, wheat, rice in Syria, Egypt, Turkey, UK and France, £GB per kg.



Sources: Syria (prices in Beirut): *Bulletin Économique Trimestriel des pays sous Mandat Français*; Egypt (prices in Cairo) *Annuaire Statistique de l'Egypte*; Turkey (prices in Istanbul): *Statistical yearbook of Turkey, Türk ticaret salnamesi, Sicil ve ticaret haberleri gazetesi*; France (prices in Paris): *Annuaire Statistique de la France*; UK (prices in London): *London Gazette*

Figure A2: Quarterly wholesale prices of coffee, olive oil and sugar in Syria, Egypt, Turkey, UK and France £GB per kg.



Sources: Syria (prices in Beirut for coffee and sugar, in Aleppo for olive oil): *Bulletin Économique Trimestriel des pays sous Mandat Français*; Egypt (prices in Cairo) *Annuaire Statistique de l'Egypte*; Turkey (prices in Istanbul): *Statistical yearbook of Turkey, Türk ticaret salnamesi, Sicil ve ticaret haberleri gazetesi*; France (prices in Paris): *Annuaire Statistique de la France*; UK (prices in London): *London Gazette*.

Data Appendix

Egyptian, Syrian and Turkish prices in the interwar era

All prices are reported at the quarterly level by the original sources.

All Egyptian goods were expressed in Egyptian piasters (100 piasters equal to 1E£) and were converted in £GB using the following exchange rate: 1£E= 1.025 £GB (El Imam 1962). Prices were reported in the following units: wheat (type Zawati) in *ardeb* of 150kg; barley (type baladi Beheri) in *ardeb* of 120 kg; rice (type de Damiette, mahsous) in *kadah* of 1.835 kg; olive oil (type de Candie) and flour in *oke* of 1.248 kg; sugar in *rotl* of 0,449 kg.

Syrian goods were originally either in Turkish or Syrian piasters and converted in £GB using the quarterly exchange rates published in the various issues of the *Bulletin Économique* (1923-1939). The following units were used for prices in Beirut: *kantar* of 256 kg for wheat and barley; *rotol* of 2.564 kg for sugar and flour; kg for rice. Prices in Aleppo were reported in kg or quintals.

Turkish prices are from *The Statistical yearbook of Turkey* (1926-1934); *Türk ticaret salnamesi* (1935-37); *Sicil ve ticaret haberleri gazetesi* (1938-39).

Sources for Ottoman prices

To complement the *Diplomatic and Consular Reports on Trade and Finance*, the following secondary sources have been utilised to construct the price series for the 19th century: Bowring (1840a); Bowring (1840b); Issawi (1988); Raymond (2015); Owen (1969, 1981); Amici (1876); Sir Baring et al. (1884); Pamuk (2000a). All prices have been converted into Ottoman piasters using the exchange rate reported in Pamuk (2000b).