Trade and Political Fragmentation on the Silk Roads: 
The Economic and Cultural Effects of Historical 
Exchange between China and the Muslim East

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Abstract
The Silk Roads stretched across Eurasia to connect East and West for centuries. At 
its height, the network of trade routes enabled merchants to travel from China to the 
Mediterranean Sea, carrying with them high-value commercial goods. Alongside inter-
regional trade came political, economic and cultural exchange that were crucial for urban 
growth and prosperity. In this paper, we examine the extent to which urban centers 
thrived or withered as a function of political shocks to trade routes, particularly the 
fragmentation of state and imperial control along natural travel paths across Eurasia. In 
doing so, we challenge a Eurocentric approach to world history through an examination of 
exchange between the two most developed regions during the medieval and early modern 
periods, China and the Muslim East. We also trace one effect of historical trade on the 
contemporary period — forms of cultural diffusion that may persist into the contemporary 
period.

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In 2013, Chinese President Xi Jinping officially launched the “One Belt, One Road” Initiative later re-branded as the “Belt and Road” Initiative. Hailed as a new Silk Road, the project invests billions of dollars in infrastructure development to promote economic integration of China with Western Asia, particularly countries of Central Asia and the Middle East. The desire to recreate aspects of commercial integration of China and the Middle East raises a series of important empirical questions — what impact has historical overland trade had on the economic development trajectories of China and Muslim East? And do those historical economic ties have legacies effects today?

Scholars focused on historical trade emphasize the dangers associated with overland exchange (e.g., Millward 2007; Frankopan 2016) as well as the ways in which distance impacted pre-modern encounters (e.g., Stasavage 2010). Scholarship in this vein suggests that political fragmentation may have been a hindrance to enjoying the gains from cross-cultural trade. These ideas contrast with research that has suggested political fragmentation — due to competing war-prone states (e.g., Tilly 1990), the effect of feudalism on executive constraint (e.g., Blaydes and Chaney 2013) or the existence of merchants’ exit options (e.g., Cox 2017) — has had positive effects on institutional development in Europe. In Asia, large and centralized states and empires were more common than in the European historical experience. Outside of Europe, political fragmentation — when it did occur — failed to generate forms of executive constraint and may have hindered the ability of societies to benefit from cross-cultural exchange. In other words, political fragmentation, while the norm in Europe, was much less common in Asia; and that Asian societies experienced the negative externalities associated with political fragmentation when it did occur. In order to empirically test these ideas, we limit our sample to Asia with the goal of understanding the effects of political fragmentation, particularly hindrances to security and jurisdictional authority which hurt trade and, by implication, economic prosperity.

Our paper makes a number of contributions. First, we seek to de-center our understanding of economic history away from the European experience by considering relations between the world’s economic powerhouses in the pre-modern period — China and the Middle East. In this vein, we show that Eurasia’s historical urban “center of gravity” was located in West-Central Asia, within the borders of contemporary Iran, for most of the last millennium. Merchants long sought to connect major urban centers in China and the Muslim East through luxury goods trade in silk, porcelain, spices and medicines.

Next, we home in on historical overland trade between China and the Middle East to show the economic effects of plausibly exogenous political shocks on city size. We find that greater political fragmentation on the road to Aleppo — a major Silk Road terminus — damaged gains from trade since merchants had to contend with uncertainty on their route. On the other hand, political fragmentation had no statistically significant effect on trade-related gains on the path to historical Chang’an (contemporary Xi’an). We find, however, that the Chinese tribute-system — which created commercial, diplomatic and security ties between imperial China and smaller, surrounding polities — had a positive effect on city size. These results suggest that political fragmentation damaged the gains from west-bound trade but that Chinese hegemony associated with the imperial tributary system may have facilitated commercial exchange and encouraged prosperity.
These results are consistent with scholars of hegemonic stability theory (e.g., Krasner 1976; Gilpin 1981, 1987) who have argued that a hegemonic distribution of power can have positive effects on trade openness. Because the location of trade routes and the timing associated with the creation of large empires were plausibly exogenous, we believe that our empirical specification — which includes both city and time fixed effects, among other control variables — provides a degree of causal leverage on the question of how political fragmentation reduced the gains from historical trade. Similarly, political consolidation associated with hegemonic authority may have facilitated the potential dividends from exchange.

Finally, we consider the long-term cultural legacy effects associated with these historical trade routes. We find that countries along the Silk Roads enjoy a higher degree of cultural affinity today, even after taking into account a variety of geographic and other variables. These results suggest that there are important legacies associated with historical exchange that have the potential to impact forms of political conflict and cooperation in the contemporary period. Existing scholarship has argued that there is an ideational mismatch between China and major world powers, limiting China’s ability to project power globally (Allan et al. 2018). Our results suggest that China may enjoy an outsized ability to project power in countries located along the historical Silk Roads as a result of shared cultural values transmitted via past exchange. And because these countries are important investment targets of the Belt and Road Initiative, growing trade integration within Asia raises important questions about the political implications of Chinese soft power projection efforts.

Our findings speak to a number of debates in the existing literature, including the political and cultural determinants of economic cooperation and prosperity. Although scholars have debated the extent to which the prevailing liberal economic order relies on shared values versus raw military and material power, few would argue with the contention that shared values among Western powers have facilitated cooperation. If culture ‘greases the wheels’ of alliance, our findings suggest that Chinese efforts at a counter-hegemonic project based on economic cooperation with Western Asia may present unique opportunities for Chinese efforts at global influence.

The historical empirical results we have presented speak to the question of how jurisdictional uncertainty impacts the gains from cooperation. Scholars have long argued that a well-ordered world is conducive to trade and communication across jurisdictions. According to Simmons (2005, 843), the question of “who is formally sovereign over what geographical space” is a first-order concern where ambiguity regarding rules and legal protections lead to fewer cross-border transactions. Beyond that, fragmentation also creates the potential for extraction by actors like the medieval “robber barons” (or “robber knights”) who imposed high taxes and tolls on rivers and roads that were located in their territory. Cox (2017, 726) defines the phenomenon more generally as intra-route fragmentation — the split in governing authority along a single shipping route, a situation which leads to over-taxation of the common pool of merchants.

Territorial disputes can also hinder economic exchange. Empirical evidence has suggested that conflict disrupts trade (Anderton and Carter 2001) and there are large and persistent negative impacts of war on economic welfare (Glick and Taylor 2010). More generally, hegemonic stability theory argues that economic openness is most likely in the presence of a single dominant state; the hegemon provides public goods — like peace and security — that encour-
ages commercial exchange and development (e.g., Krasner 1976; Gilpin 1981, 1987). Although there are different descriptions of hegemonic stability theory, in all versions, the hegemon takes the lead in supporting trade openness which encourages the development of all areas under the hegemon’s sphere of influence (Webb and Krasner 1989). Our results take up the challenge posed by Snidal (1985, 582) that a proper test of hegemonic stability theory requires an empirical assessment of welfare — in our case, historical city size — under different political conditions.

Finally, these findings have implications for understanding the economic impact of China’s imperial tribute system, which scholars have argued resembles a case of hegemonic stability. Kang (2010, 591) describes the East Asian tributary order as an “enduring, stable, and hierarchic system, with China clearly the hegemon” and a “viable and recognized international system with military, cultural, and economic dimensions that all intersected to create a very interesting and stable security system.” Shu (2012) argues that the stability induced by the Chinese imperial tribute system involved both an open trade order as well as stable inter-state relations. Our results provide empirical support for the idea that China acted as a regional hegemon, providing public goods that reduced the costs of trade.

The Global Economic Order before Western Hegemony

Europe’s Age of Exploration and, later, the Industrial Revolution ushered into existence new global patterns which reflected growing European economic power that disrupted long-standing trade and cultural ties. Existing scholarly work, however, suggests the lack of a global economic hegemony before the 18th century. Abu-Lughod (1989, 364-365) argues that the world economic system in the medieval period lacked a single hegemon but instead there existed multiple core powers in a non-hierarchical, interdependent world economic system. Frank (1998, 324) writes that until at least 1700, there was nothing “exceptional” about Europe other than its relative marginality and “correspondingly minor role in the world economy.” On the other hand, areas like Xinjiang — the current-day westernmost province in China — were locationally important as “roughly equidistant from population cores of China, India and the Mediterranean basin” (Millward 2010, 4). Indeed, historical commercial routes, like the Silk Road and Indian Ocean trade, connected economic interests in prosperous areas, like China and the Middle East, for centuries. At its height, the network of trade routes enabled merchants to exchange high-value goods across great distances, economic interactions that were crucial for urban growth and development.

Using data on comparative historical city size, this section provides empirical evidence regarding long-standing scholarly arguments about the multi-polar nature of the world economy before Europe’s economic rise. We also discuss the conditions under which trade routes connected different urban areas, including how political fragmentation along trade routes may have hindered the gains from exchange.
Eurasia’s Historical Urban “Center of Gravity”

One key challenge associated with identifying the historical global distribution of economic power relates to measurement. Economists have long argued that city size is a good proxy for economic development in the pre-industrial period. For example, De Long and Shleifer (1993, 675) suggest that the population of pre-industrial European cities serves as the best available indicator of economic prosperity, contending that urban areas were key nodes of information and economic exchange that relied on high levels of agricultural productivity and economic specialization. Acemoglu et al. (2002) present both cross-sectional and time-series evidence suggesting a close empirical association between urbanization and income per capita for cities around the world in the pre-industrial period.

In this section we examine city size across Eurasia. The city population estimates are from Africa and Europe to East Asia and come from Chandler and Fox (1974) who provide historical data on the size of cities around the world. We utilize population estimates from 1100 to 1800 CE, for which Chandler and Fox provide lists of the largest cities of the world. Our data contain all the cities which appear at least once in any of the lists for the world’s largest cities across these time periods. While actual population figures are often missing for cities on these lists, Chandler and Fox (1974) do provide rankings of cities in the order of their size.\footnote{Blaydes and Paik (2018) provide further discussion of this data, discuss previous works that have utilized Chandler and Fox (1974) for their studies, and advantages of using a single source for city populations over multiple continents. Blaydes and Paik (2018) focus their analysis primarily on the impact of Muslim trade routes and limit their scope of analysis to cities from North Africa to Central Asia. This paper extends the sample of cities to East Asia.}

Table 1 presents the longitude and latitude for Eurasia’s urban ‘center of gravity’ for much of the last millennium. The location of each urban center in every period is determined by the weighted mean longitude and latitude, drawing from the population estimates of 586 cities across Africa, Europe and Asia. We observe that the Eurasian center of urban gravity has remained highly consistent over time. The mean longitude hovers between 60 and 62 degrees and shows no discernible shifting pattern over the course of 700 years analyzed. The mean latitude is also highly stable between 1100 and 1500, although we do observe a mean which is about two degrees further north when comparing 1500 to 1800. This likely reflects the growing population centers of northern Europe.

Figure 1 corroborates these trends and shows that while the locations of some the world’s largest cities were consistently found in the far eastern edges of Asia, the relative rise of cities in Europe became increasing influential after 1600. In the periods before 1400, coastal cities in Western Europe were smaller in size than those in Eastern China. Cities along the middle longitudes remain relatively stable in their size during this time period. While some of these cities appear to become important in 1700, we observe a resurgence of cities on the edges of the landmass by 1800, especially those in Western Europe.

Between 1500 and 1700, we also observe a more diverse set of urban centers. They are spread across more areas including in Europe, South Asia, the Middle East and East Asia. By 1800, however, we again observe polarization of cities along the continent edges, with the cities of Northwestern Europe increasingly becoming large along with East Asian cities. The
cities of Western Asia, long favored as a result of their position as a “commercial and migratory turntable” (Frank 1998, 75), are less prominent than in previous periods; areas of Central Asia which used to be important crossroads “ceased to be so central to world history” as the “world historical center of gravity shifted outward, seaward, and westward” (Frank 1992, 44). Our results are also consistent with Kupchan (2012, 3) who argues that the world’s center of power shifted from Asia and the Mediterranean to Europe by the 18th century with important implications for the ability of the West to use “its power and purpose to anchor a globalized world.”

Trade, Fragmentation and Political Order

One reason that the Middle East and Central Asia thrived relates to the central location of the region with regard to trade routes. Among the most prominent of these routes were the Silk Roads. The term “Silk Road” refers to “all the different overland routes leading west out of China through Central Asia to Syria and beyond” (Hansen 2012, 235).\(^2\) Christian (2000, 3) defines the Silk Roads as “the long- and middle-distance land routes by which goods, ideas, and people were exchanged” between major regions of Eurasia. Commodities included on these trans-Eurasian trade routes included raw silk or yarn; finished silk fabrics; and other luxury goods like coral, pearls, glass, jade, gems, perfumes and incense (von Glahn 2016, 197). During the medieval and early modern periods, Chinese-Middle Eastern trade was both a reflection and driver of economic prosperity for both regions.

Yet trade ties could be disrupted. How did shocks to trade impact the growth of cities in China and the Muslim East? And how did the rise of the Western international order damage these historical trade ties? As one explanation in the case of the Middle East and Central Asia, Blaydes and Paik (2018) find that proximity to historical Muslim trade routes was positively associated with urbanization in 1200 but not in 1800. In other words, Middle Eastern and Central Asian cities — long beneficiaries of locational centrality between Europe and Asia — declined as Europeans found alternative routes to the East and opened new trade opportunities in the New World.\(^3\)

In this paper, we focus on another disruption to trade — political fragmentation — that likely damaged economic growth along major land routes connecting Western to Eastern Asia. Why focus on Asia? Beyond the need to de-center world historical studies away from a focus on Europe, there are theoretical and empirical benefits from such an approach. First, the results of the previous section suggest that the Eurasian urban center of gravity was located in historic Persia. The Middle East and China — despite important differences of religion and philosophy — shared historical parallels, including their vulnerability to external actors, like nomadic tribesmen (Harris 1993, 23). In addition, within Asia — despite its tremendous diversity — these exists an “underlying unity” associated with technologies, cultures and disease patterns (Christian 2000, 1). Park (2012, 191) writes that, “the history of contact and exchange between China and the Islamic world offers one of the most remarkable cases of pre-European encounter

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\(^2\)The term “Silk Road” did not exist before 1877 (Hansen 2012, 235).

\(^3\)This is not to say that mastery of long-distance seafaring was an accident. European navigational triumphs were “the result of deliberate processes of purposeful exploration” (Paine 2013).
because it involves tremendous wealth, transformative ideas, and great power.” While exchange continued, largely without interruption for eight centuries, changing political dynamics did create different phases and conditions associated with these interconnections (Park 2012, 191).

Second, we pick up on threads within the existing literature which suggest that China served as the global economic heavyweight with which other cultures sought to trade. Andre Gunder Frank is one of the most prominent proponents of this perspective. According to Frank (1998, 111), China was “unrivaled” in its production of luxury consumer goods like porcelain ceramics and silks. As parts of the Middle East and Europe become wealthier, there was a strong interest in acquiring Chinese products. China has been described as exhibiting “outstanding absolute and relative productivity in manufactures” (Frank 1998, 127). Europe was considered economically and geographically marginal (Frank 1998, 324). Frank (1998, 116-117) goes as far as to argue that “the entire world economic order was — literally — Sinocentric” until the 18th century.

Even if we take Frank’s position on these issues to be extreme, we may be interested in understanding the effects of political fragmentation outside of Europe. Much has been written about the benefits of political fragmentation in Europe where fragmentation is thought to have created conditions ripe for limited government and, eventually, economic development. While an influential literature has suggested that political fragmentation has been directly or indirectly good for economic development (e.g., Tilly 1990; Blaydes and Chaney 2013; Cox 2017), we may still want to understand how fragmentation influences prosperity independent of the institutions, particularly since they emerged exclusively within Western Europe. This is not to say that growth-promoting institutions, like parliaments, have not been important in development outcomes; rather, conditional on the absence of those institutions, we may still seek to understand the conditions which encouraged or discouraged economic exchange and development.

A key argument of this paper is that political fragmentation hindered the exchange of goods, hurting economic prosperity. The movement of merchants might be disrupted for a variety of reasons. Periods of incomplete or uncertain political control could be highly disruptive to trade. For example, tribal warfare posed a security threat (Abu-Lughod 1989, 158). According to Curtin (1984, 93-94), “to take a caravan through uncontrolled nomad country would have been dangerous in the best of circumstances.” Beyond that, traversing a number of different polities might also lead merchants to incur multiple tolls as a result of the political fragmentation. As a result, the importance and profitability of the Silk Roads “waxed and waned,” at least

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4India also produced important and valued goods. But given the predominance of sea trade opportunities — and our interest in overland trade — we are focused primarily on trade with China.

5Fragmentation is thought to have been a common feature of European history, to the point that scholars have argued that the emergence of the Roman Empire — Europe’s longest experience with imperial rule — was a historical anomaly (Schiedel 2019).

6At least three sets of arguments seek to link political fragmentation with European institutional development. Tilly (1990) focuses on the impact of competition between small, war-prone polities on the development of national states. Blaydes and Chaney (2013) argue that the decentralized forms of political control associated with feudal institutions had positive impacts on the emergence of executive constraint. Cox (2017) argues that political fragmentation — which provided exit options for merchants — combined with self-governing cities and parliaments to facilitate forms of executive liberty.
in part, as a function of the political stability on the edges of agrarian civilizations of China, India, Iran and Mesopotamia” (Christian 2000, 6). Christian (2000, 6) argues that “when the agrarian civilizations or pastoralists empires dominated large sections of the Silk Roads, merchants traveled more freely, protection costs were lower, and traffic was brisk.” According to Harris (1993, 22), “the emergence of small warring kingdoms...made the East-West highway more dangerous and difficult and populations along the route began to decline.”

One less direct factor involved the creation of forms of cultural continuity. Rogers (2007, 263) suggests that political stability and the expansion of imperial powers encouraged the “bridging of ethnic and linguistic diversity in the construction of order” (Rogers 2007, 263). There were also significant gains to be enjoyed from this trade. Christian (2000) describes the benefits from forms of trans-ecological exchange that were enjoyed due to the tremendous diversity of items exchange.

The causes of political fragmentation are many and complex. At some times, large imperial units would take control of large swaths of territory. The process by which this emerged often involved “initially consolidating groups into a single confederation” which might spread across the steppe to include new territories and peoples (Rogers 2007, 258). Rogers argues that there is no obvious explanation for when and why these successful polities emerge; polities “emerged, existed, and collapsed in ways that often defy conventional understandings” (Rogers 2012, 206). State formation and collapse, then, can be thought of as caused by a complex set of factors, with a large number of contingencies and, potentially, tied to cyclical patterns (Rogers 2007, 265).

One factor that worked against the negative effects of fragmentation was the Chinese system of tribute. Zhang (2013) describes the tribute system (chaogong tizhi) as embodying institutions and diplomatic norms that dominated China’s relations with the non-Chinese world until the late 19th century. Within the East Asian state system, there were multiple independent states but there existed important power asymmetries with Chinese power dominating over smaller states (Wang 2013, 213). Subordinate states provided tribute in the form of furs and horses to the Chinese in return for bestowals, like grain, honorific titles, luxury goods or even brides (Allsen 1994). In this setting, Confucianism served as a shared culture that helped to resolve conflicts between China and tributary states (Wang 2013, 213). For example, Kang (2010, 594) writes that “Chinese civilization provided a common intellectual, linguistic, and normative framework in which to interact and resolve differences.” In return for recognizing the legitimacy of Chinese preeminence in regional affairs, “China, as the economic, military, and cultural leader, was responsible for maintaining the political and security order in the region” (Wang 2013, 213). While the Chinese state took tribute from these vassal states, tribute did not replace foreign trade, which was also of interest to Chinese dynasties (Schottenhammer 2015).

Not all East Asian polities were tributes of the Chinese state. Indeed, Kang (2010) writes that the semi-nomadic peoples on China’s periphery often reluctant to accept Chinese authority. And states that did maintain tributary relations with China were still able to handle their own domestic and foreign policies, separate from China (Kang 2010). That said, Kang (2010) has argued that systemic stability was good for the political regimes in these Sinicized East Asian countries. Our empirical analysis provides evidence testing this claim through analysis
of the effects of changes in tribute status on urban growth, a widely used measure of economic prosperity in the pre-modern period.

**Trade Shocks and Economic Prosperity on the Silk Roads**

Between 200 BCE and the beginning of the Common Era, overland trade between China and the eastern Mediterranean polities became a regular occurrence (Curtin 1984, 90). The emergence of long-distance Eurasian trade was temporally linked to the Han Dynasty’s unification of China as well as Han extension of political control into the Xinjiang region. In Western Asia, the Roman Empire extended political control across the Mediterranean. The timing associated with the consolidation of these trade routes suggests a linkage between consolidation of political control in China and the Mediterranean basin. Thus while the location of the Silk Roads may have been determined by geographic features, like “mountain passes, valleys, and springs of water in the desert” (Hansen 2012, 235), the robustness of trade connecting urban areas may have been a function of political factors. In this section, we review some of the existing literature on how forms of political stability and imperial consolidation impacted cross-cultural exchange.

**Cross-cultural Trade from Late Antiquity to the Middle Ages**

The Tang Dynasty (618-907 CE) coincided with the Arab conquests and the first two centuries of Islam. Scholars of the early Islamic period have suggested that the advent of Islam was an important force for breaking the control of the agrarian gentry from “Nile to Oxus” as well as the growth in importance of interregional trade (Hodgsen 1974, 65). According to Hodgsen (1974, 65), it was during this period that trade became “increasingly determinative of the fate of any given region” and mercantile and bourgeoisie interests strengthened relative to agrarian classes. The Tang Dynasty maintained military and commercial connections with Central Asian polities as far west as Persia (Benite 2011).

During this time, trade linking the Middle East and China was economically significant with implications for the growth and development of major urban centers. Caravans of horses and Batican camels traveled from Mesopotamia to the Iranian plateau and then eastward toward the Oxus after which point there were multiple routes including those which passed through Kashgar and alternative routes that went through Kabul (Lombard 1975, 218). These trade routes not only provided the means by which goods were transmitted across huge distances but also involved the transmission of ideas, technologies and aesthetic traditions (Christians 2000, 1; Hansen 2012, 5).

Political stability associated with large empires created the security zones under which trade might prosper. Curtin (1984, 91) argues that the “Tang Dynasty in China and the Abbasid Caliphate of Baghdad...provided imperial umbrellas over most of the trade routes between China and Mediterranean.” These relatively favorable conditions, associated with the power of contemporaneously large empires, made it relatively easy for long-distance traders to move across vast areas (Curtin 1984, 105). Under the “long reach of Tang control to the west,” many Middle Eastern and European travelers were able to visit China (Curtin 1984,
Foreign merchants transformed small, oasis settlements across Central Asia into larger towns and cities (von Glahn 2016, 197). Merchants and agents, under the protection of local rulers, traveled with relative safety.

China’s Song Dynasty (960-1279 CE) was characterized by extensive development of trade, enterprise and finance as well as specialization of production and growth of markets (von Glahn 2016, 265). According to scholars, China was “significantly transformed by market development during the eleventh century” and a growing overall economy (Liu 2015, 8). Von Glahn (2016, 293) argues that the “commercial efflorescence” of the Song period “touched virtually all quarters of Chinese society.”

Economic growth in the Song was robust and associated with major population expansion, supportive of a robust urban culture (Chaffee 2015). The Song Dynasty in China was temporally concurrent with the Islamic Golden Age, a period of economic and cultural flourishing. The dissolution of the Abbasid Caliphate introduced increasing political fragmentation of the Muslim world during this time, however.

The Mongol Empire and its Effects on Trade

The Yuan Dynasty (1279-1368 CE), which followed the Song Dynasty, was founded by the Mongols, whose land conquests were a common shock to both the Eastern and Western parts of Asia. For the Mongols, the rich societies of China, Iran, Iraq and Anatolia were particularly appealing targets of attack while “little-known, fragmented Europe” was relatively peripheral (Sinor 1999, 40). While much has been written about the destructive aspects of Mongol rule, historians are increasingly painting a more complex picture of the overall economic impact of the Mongol invasions. While some cities never recovered from the destruction of their populations during the conquests, others saw relatively rapid rebounds in their population (Soucek 2000, 114). Manz (2011) describes both the destructive elements of the Mongol conquests as well as the new opportunities introduced for artisans and merchants.

One of the most important positive externalities associated with the creation of the Mongol Empire was the establishment of political order over regions that supported overland trade. Curtin (1984, 120) writes that “the new rulers united so much of Asia that travelers could move securely under a single authority from the shores of the Black Sea to China.” Anatolia became more connected to long-distance commercial relations coming from Central and East Asia (Meloy 2011). According to Abu-Lughod (1989, 154), the Mongols created “an environment that facilitated land transit with less risk and lower protective rent.” Benite (2011) argues that during this time period, larger numbers of merchants were coming to China compared to ever before, many of them from the Islamic world. One result of this increase in overland trade was that Chinese porcelain began to show up, to a greater extent, in the Middle East as well as in Europe (Meloy 2011).

During the 13th century China had very sophisticated agriculture (Abu-Lughod 1989, 319). While family farms produced stable food products, many other items of daily consumption were acquired through market exchange (von Glahn 2016, 289).

During the Song Dynasty, taxes were relatively light and there was a relatively efficacious bureaucracy and a stable currency (Golas 2015).
Although the Mongols were a nomadic people, scholars have argued that Mongol rulers “ordered and patronized” economic exchange (Allsen 2001, 191). Manz (2011) suggests that trade was of major interest to the Mongols and that Mongol leaders directly engaged in international trade through commercial partnerships. Caravaners were “prime beneficiaries of the Pax Mongolica” as the formation of a pan-Asian Mongol Empire strongly supported overland, East-West trade (von Glahn 2016, 283). Frankopan (2016, 176) goes as far as to claim that Mongol territorial successes of the 13th century reshaped the monetary system of Eurasia.

The break-up of the Mongol Empire may have also hindered forms of economic exchange. Genghis Khan’s efforts to divide the empire into parts to pass on to his sons planted the seeds of political instability (Millward 2007, 61). Subsequent internecine conflict among rival Mongol khanates encouraged a greater interest in maritime trade (von Glahn 2016, 283). This reflected a more generalized pattern that during times of political instability in Central Asia, merchants tended to turn to sea routes instead of overland trade (Schottenhammer 2015). This is not to say that the Mongol conquests were not long-term impactful; in the years after the Mongol invasions, China was able to project political power into Central Asia more effectively (Liu 2015, 99). That said, the lack of a large, overarching land empire covering the Silk Roads may have increased the cost of trade even if the Mongol conquests had important other legacies.

Cross-Regional Trade in Post-Mongol Asia

The Ming Dynasty (1368-1644), which followed the Yuan Dynasty, was more conservative about foreign contacts than its predecessor; but when economic benefits could be gained from trade, merchants engaged in cross-cultural commerce, even if this required evasion of existing regulations (Rossabi 1998). During the 15th century, cross-regional trade in exotic foods, aromatics, medicines, precious metals and jewels drove long-distance commerce (Reid 2011).

By the late 15th century, China was arguably the greatest economic power in the world with a population of more than 100 million, a productive agricultural sector and craft sectors superior to other parts of Eurasia (Atwell 1998). As European markets grew in importance, demand increased for Asian perfumes, spices and silks. Many of these luxury goods traveled through Persia and the Levant, eventually arriving in Aleppo. Extensive collections of Ming Dynasty porcelain, for example, are found in the Topkapi Museum in Istanbul, Tehran’s Archaeological Museum and across the Middle East and even East Africa (Atwell 1998).

Scholars disagree about how much the rise of seafaring damaged overland, Silk Roads trade (Millward 2007, 76). Millward (2007, 76-77) reflects on this disagreement, arguing that some see the early 16th century as a turning point for the Silk Roads while others not observing a decline until the late 16th century or later. Levi (2011) argues that while there were temporary traumas to long-distance trade, these disruptions were often followed by recoveries in commercial exchange. Central Asian trade routes continued to be active into the 17th century but that city prosperity was impacted by economic and political transitions (Levi 2011). Samarkand, for example, suffered deurbanization during this period; these declines were not universal, however, with other cities enjoying a vibrant commercial economy (Levi 2011).
Empirical Analysis

Thus far, we have discussed a number of factors which might impact the gains from cross-cultural, overland trade. Some of these factors might be specific to particular locations while others may be varying over time; still others may relate to the interaction of geographic factors with time. In this section, our goal is to understand how factors that were disruptive to trade — beyond city-specific or time-specific effects — may have impacted prosperity along the Silk Roads.9

Some of the most significant of these disruptions involved the rise and fall of land empires in Central Asia. Frank (1992, 44) describes Central Asia as the location where diverse peoples and their civilizations “connected and interacted with each other.” Yet the factors that could influence the political stability of Central Asia may be difficult to predict. For example, the sudden rise of Genghis Khan was totally unexpected according to historians (Soucek 2000, 103). Scientists specializing in climate change provide additional support for this perspective suggesting that the timing of Mongol rise was closely linked to climate anomalies (Pederson et al. 2014).

One challenge associated with measuring the economic impact of trade and shocks to trade is that sources describe the location of the Silk Roads in different ways. For example, a UNESCO report published in 2008 claims that there are over 70,000 extant manuscripts for the Chinese section of the Eastern Silk Roads alone, in historical written records from Buddhist monks, Persians and Turkic travellers, Marco Polo, and other 13th century European visitors.10 Despite the abundance of documents, however, information on the specific locations of travel paths connecting major cities remains underdeveloped and primarily descriptive.11

In this paper we do not attempt to introduce definitive Silk Road corridors or claim to add specific site locations that have hitherto not been described in the existing literature. Our aim is, instead, to establish a link between Silk Roads access and economic prosperity, as a function of opportunities and hindrances to trade. For this purpose, we find it useful to look for evidence of how natural travel paths may have been carved, and whether these paths correlate with subsequent development changes in the region. Building on existing work on geography (Frachetti et al. 2017), we suggest that these paths were not endogenous to the Silk Road trade; that is, the path of travel was not chosen with trade or commerce in mind. Rather, we rely on natural geographic features to determine the least-cost route using the strategies described in by Frachetti et al. (2017). In doing so, we extend their original study of a particular zone within Inner Asia to a broader Asian sample.

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9While a number of studies have looked at commerce in historical China, little work has sought to measure long-term changes in the impact of long-distance trade (Liu 2015, 20).

10“A Concept for the Serial Nomination of the Silk Roads in Central Asia and China to the World Heritage List” (updated text after the Consultation meeting in Xi’an (China), June 2008. Additional references include Moore and Wendelken (2010) and Hill (2009)).

11See Park (2012, 31) for example about depictions of the route from Guangzhou to foreign countries as envisioned by Jia Dan c. 800, in which places of importance are simply marked as dots, and the travel paths as lines connecting them with some information on coastline locations and duration of journey, but little else.
In particular, Frachetti et al. (2017) design a GIS algorithm to simulate and identify routes taken by nomads for seasonal travel. This exercise in finding the nomads’ travel paths are set in the highlands, in the elevation range of 750 meters to 4000 meters. According to the authors, these high elevation pathways became an essential part of Silk Road networks, but were developed differently from those in lowland zones, the latter being predicted by terrain-based “least cost” travel algorithms on the basis of “ease of travel” and “connecting dots” between known Silk Road locations. In contrast, variables used to predict the Silk Road corridors in the highlands are associated with nomadic adaptive strategies. Pastoralists migrated with their animals to highland pastures in the summer and travelled back to the lowlands during the winter to maximize food available for their herds.

Using seasonal pasture quality and simulating annual herding “flow accumulations” across highlands in Asia, Frachetti et al. (2017) look at a potential causal relationship between nomadic mobility and Silk Road pathways. Importantly, when generating the flow model, the authors do not include Silk Road routes or locations as part of the algorithmic input. As a result, the herding paths that predict subsequent Silk Road routes plausibly circumvent endogeneity concerns since existing patterns of urbanization did not impact pastoralists as they sought the best available land for animal grazing. The herding routes were, thus, not intended to connect population settlements, at least initially. They were pathways to secluded, rich grasslands that subsequently became corridors of commerce and travel.

The pastoralist model in Frachetti et al. (2017) employs the same flow accumulation algorithm used to simulate flow of water sources through a watershed. Just as water is pulled to a lower elevation by gravity, the model replaces the grass quality for gravity and animal herds for water, and uses the flow accumulation algorithm to calculate how the pasture quality directs flows of seasonally nomadic herders across the highlands. What results from the analysis is a network of short-distance herding corridors, on which about 75 percent of the 258 Silk Road locations in the authors’ list are located. This result gives us confidence that the nomadic migration corridors are good proxies for the historical Silk Road passages. Using the same approach, we extend the scope of analysis to all of the highlands (750-4,000 meter range) in Asia, as shown in the bottom panel of Figure 2.

For the highlands (shaded in grey) in the bottom panel of Figure 2, we are able to assess whether the Silk Roads, proxied by the nomadic migration corridors, can explain subsequent

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12 Frachetti et al. (2017) describe this range of elevation to categorize the highlands as different from the lowlands (below 750 meters), which have productive pasture lands that are destroyed by summer heat and aridity, and the upper highlands (above 4000 meters) that have limited pasture due to permafrost and poor soil quality.

13 If anything, each herder had an incentive to seek untouched, uninhabited spots away from other groups of herders.

14 For further details, see Frachetti et al. (2017).

15 Furthermore, the time reference in Frachetti et al. (2017) for the pastoralist model goes back to the third and second millennium BC, when mobile pastoralists thrived across the highland in the region and preceded beginning of the Silk Roads.

16 Specifically, the geographical extent of our exercise spans from 25 to 135 degrees in longitude, and 5 to 56 degrees in latitude. Frachetti et al. (2017) focuses on the inner Asian mountain corridors of Central Asia, those areas mainly connecting present-day Tajikistan, Kyrgyzstan, Kazakhstan and China.
development. For this exercise we obtain simulated pathways between each city in our data sample and the two opposite ends of the Silk Roads: Aleppo and Chang’an.\textsuperscript{17} Chang’an represented a major terminus of overland trade routes in the East (Allsen 2001, 13); Aleppo was an “emporium” for Asian goods in the West (Inalcik 1994, 57), a long-standing destination of overland caravans.

Figure 3 provides a stylized illustration of our argument and empirical strategy. Merchants from City A seek trade opportunities that allow them to deliver goods to Aleppo and Chang’an. In order for those merchants to engage in commerce, they may need to traverse a number of polities in order to arrive at their destination. In this illustration, the solid lines represent independent polities while dotted lines represent independent polities that fall under the Chinese imperial tribute system, or more generally under a regional hegemon.

We operationalize economic growth and trade-related prosperity with city size. Commercial markets created dense networks of exchange which reflected forms of product specialization (Wong 1997, 20). Trade was supported by merchants who settled in regions of Central Asia (Lary 2012, 51). Christian (2000, 9) writes that “the urban geography of the Silk Roads...points to the importance of the trans-ecological routes;” with important cities, like Kashgar and Bukhara, located on major trade paths. For our analysis, we utilize city population estimates for localities across Asia, again draw from the lists of the world’s largest cities in Chandler and Fox (1974). Using the data estimation approach as described above, we obtain population interval data for 209 cities across Central and East Asia for every 50 years from 1100 to 1800, drawing from the ranked list of largest cities provided by the authors over this time period.

In Figure 4 we combine the nomadic migration pathways, which are our proxies for the Silk Roads, and the cities in our sample. The lines connecting each city with Aleppo and Chang’an are also represented on the map. In order to assess whether traders encountered different states and unclaimed territories along their travel paths, we utilize a set of maps from GeaCron, which provides state boundaries around the globe across different time periods.\textsuperscript{18} Based on these maps we obtain our main variable of interest: the number of times that each path crosses different states to Chang’an and to Aleppo. These variables measure the extent of political fragmentation that one would have witnessed when travelling on the Silk Roads towards the East and the West. In addition, we code for whether the polities traveled through were tributary states of imperial China; this variable varies by time as states might move in or out of the imperial tribute system. We also gather information on whether the departure city was part of a polity identified in GeaCron as well as whether it served as a capital city.\textsuperscript{19}

\textsuperscript{17}The calculation is based on a combination of both the paths along the nomadic migration corridors, as well as the least-cost path calculated from the city location to the nearest corridor.

\textsuperscript{18}See geacron.com for details on how these data were collected.

\textsuperscript{19}For coding whether the cities in our data were capital cities or not, we utilize city data from Pierskall et al. (2017) and match our city-year observations to theirs. We also check the coding on Chinese cities with a number of sources written in Chinese.
Using the interval data with population estimates for each city, we then utilize a generalized maximum log likelihood interval model to obtain coefficient value estimates. The following equation follows a simple panel regression approach, and can be specified as follows:

\[
\text{Pop}_{it} = \beta_0 + \beta_1 \text{Path2Changan}_i + \beta_2 \text{Path2Aleppo}_i + \sum_{j=1800}^{j=1150} Z_i^j \Theta_j + \sum_{c} \gamma c I^c_i + \sum_{j=1800}^{j=1150} \rho_j I^j_t + \varepsilon_{it}
\]

where \( \text{Pop}_{it} \) is the natural log of city population of city \( i \) in year \( t \), \( \text{Path2Changan}_i \) and \( \text{Path2Aleppo}_i \) are our political fragmentation variables, and \( X \) is a vector of time-varying control variables including the number of tributary states and unclaimed territories crossed on route to Chang’an and Aleppo, the capital status of city \( i \) as well as tributary status and existence of state rule. \( \sum_{j=1800}^{j=1150} Z_i^j \Theta_j \) are the city-specific geographic characteristics interacted with time-period fixed effects. Given that city location and their surroundings are paramount to trade and city sizes, these are meant to capture any time-differential effects of geographic variables that determine both the city’s access to the Silk Roads and urbanization. They include the distance to the nearest natural migration corridor in the highlands (as simulated in our analysis described above), distance to the nearest coast, longitude and latitude as well as the elevation mean and standard deviation. Finally, \( \sum_{c} \gamma c I^c_i \) and \( \sum_{j=1800}^{j=1150} \rho_j I^j_t \) are the city and time-period fixed effects, respectively.

On average a trader’s path intersects about seven polities to get to Aleppo and about five on the path to Chang’an. There exists a great deal of variation across cities, however. For example, in this sample the maximum number of polities crossed is 15 on the path to Aleppo and 16 to Chang’an. Table 2 shows that the number of polities crossed to get to Aleppo (i.e., political fragmentation in the western direction) has a consistently negative effect on city size. This is true after controlling for geography interacted with time dummies, city and time fixed effects (Column 1) as well as after including a variable for whether the city was a polity capital (Column 2). From a substantive perspective, every additional polity crossed is associated with about a seven-percent decrease in city population. For the case of crossing 15 states, the maximum in our dataset, the result is a complete collapse of city population.

When we consider the effect of polities crossed to Chang’an, we find that this variable is not statistically significant in Columns 1 and 2. These results are consistent with the literature suggesting the relative trade benefits of the security umbrella established by the tributary system under the Chinese dynasties. Importantly, however, a larger number of tributary states on the road to Chang’an was associated with a larger city size (Columns 3 and 4). This suggests that tributary status may have been more important than political fragmentation when considering trade routes to the East. The coefficient values in these columns suggest that an additional tributary state-crossing to Chang’an leads to about 30-percent increase in city size. This again suggests that the tribute system may have spurred positive effects for those

\footnote{The coefficient estimates from the interval model can be interpreted in the same way as the OLS estimation; see Blaydes and Paik (2018) for more details on specifying the log likelihood function.}
travelling towards Chang’an. It is notable that after controlling for tributary state status, the number of polities to Chang’an is now negatively associated with city size, consistent with our arguments regarding political fragmentation. This effect is not statistically significant, however.

Columns 5 and 6 consider the effects of crossing through non-state territories. We find that while being a capital city consistently has a positive impact on city size, being located in a non-state territory is negatively associated with population. Importantly, the effects of political fragmentation, as measured by the number of polities crossed to Aleppo and Chang’an, respectively, continue to be negative; crossing tributary states to Chang’an is associated with larger city population, a result that is consistently statistically significant.

Measuring Cultural Affinity on the Historic Silk Roads

Thus far, we have shown that the Silk Roads affected economic prosperity in Asia; the benefits of trade were enjoyed, to the greatest extent, when levels of political fragmentation were relatively low. The negative effects of political fragmentation, however, could be lessened by the security umbrella created by China’s external relations with tributary states. But how can we understand the effects of cross-cultural, long-distance in Asia more broadly? Trade routes existed to move goods across huge distances but “ideas, technologies, and artistic motifs” were also exchanged in addition to commercial products (Hansen 2012, 5). Historians have argued, for example, that political, commercial and cultural contacts between China and Iran represent the “longest sustained example of intercultural communication in world history” (Allsen 2001, 8).

What was exchanged? Findlay and O’Rourke (2007, 26) describe Central Asia as “a crossroads traversed by the flow of goods, technical inventions, art forms, and religions between the widely separated settled regions.” For example, Indo-European languages diffused “from somewhere north of the Pontic steppes to Xinjiang” (Christian 2000, 11). Eurasian merchants, including those from Safavid Iran and Uzbek Turan, were seen as coming from a “broadly similar commercial and linguistic environment” which meant that they had the ability to carry out trade within a shared and understood legal and cultural circumstance (Dale 1994, 10). One empirical implication of historical trade and exchange is that cultural affinity should be higher for societies along the Silk Roads relative to other regions, even those located in geographically closer regions.

In the contemporary period, these affinities could matter for policy initiatives. China’s economic growth over the last forty years has positioned it to project power across the world.\footnote{Indeed, China’s impact on economic growth in Africa is well documented in a series of influential studies (e.g., Brautigam 2011; French 2015).} In 2013, China introduced a set of new initiatives to increase trade ties and economic cooperation between Eurasian countries. While the “Silk Road Economic Belt” will link China to Central Asia, Iran, Turkey, and the Balkans, the “21st Century Maritime Silk Road” will connect China with South and Southeast Asia as well as the Persian Gulf. Together, these projects have come to be known as the “Belt and Road” Initiative (BRI). According to one report, the Chinese government has already spent $250 billion on these projects and will spend up to $1 trillion

\textsuperscript{21}Indeed, China’s impact on economic growth in Africa is well documented in a series of influential studies (e.g., Brautigam 2011; French 2015).
more on out-of-state projects in the next decade. Many of these prospective economic partners are Muslim societies of the Greater Middle East. Existing and planned BRI projects parallel historical Silk Road trade routes to a great extent (see Figure 5).

Yet the economic influence of China on the Middle East is not well understood. While existing scholarship suggests that China’s economic rise provides conditions conducive to the emergence of China as a new global hegemon, Allan et al. (2018) argue that there is an ideational identity mismatch between China and the world’s great powers, blocking the ability of China to challenge the current Western neoliberal order. In their account, hegemonic orders rely on legitimating ideologies that need to be consistent with the identity preferences of major world powers, both at the mass and elite levels (Allan et al. 2018).

Because counterhegemonic coalitions are only likely to be successful if other states find that alternative order ideologically appealing, Allan et al. (2018) argue that China’s “national identity” is inconsistent with the identities of nine great powers — Brazil, China, France, Germany, India, Japan, Russia, the United Kingdom and the United States. They conclude, as a result, that these identity differences constitute a “system-level barrier to a Chinese hegemonic succession” (Allan et al. 2018). Allan et al. (2018) measure national identity using discourse analysis of texts including political speeches, newspapers, high school history textbooks, novels and movies. This constitutes only one of a number of strategies for examining ideational affinity and perhaps not the most effective approach for measuring the core concept of interest. Blaydes and Grimmer (2019), for example, measure variation in political cultures both within and across societies around the world, operationalizing political culture as a constellation of shared societal values as expressed in response to survey questions.

Which countries around the world tend to share China’s basic cultural values based on the Blaydes and Grimmer (2019) metric of political culture? About 40 percent of China’s population holds a set of cultural values which predominate in countries like Iran, Indonesia and Turkey, with a strong sense of nationalism, believing that work and technology are important and caring a great deal about maintaining order and being relatively intolerant toward groups that do not conform with societal expectations, including religious minorities, homosexuals and unmarried couples. Countries like Iran, Indonesia and Turkey are all key players in the BRI.

In addition to identifying the distribution of cultural types, Blaydes and Grimmer (2019) also empirically estimate the distance between the cultural groups they identify. Using the Blaydes and Grimmer (2019) metric of the distribution of cultural types along with the distances between types, we calculate the cultural “distance” between China and other countries in the

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22 This perspective echoes Kupchan (2012) who argues that Chinese efforts to cultivate support for its hegemonic project rely on the distribution of ideas among the other world powers.

23 Another reason why values consensus may be a better measure of ideational affinity is that it is unclear how to think about the significance and interpretation of discourse in authoritarian regimes, like China. Authoritarian regimes tend to be highly propagandistic and citizens in such regimes often realize that available media content is censored, often reflecting the doctrine of the regime.
world based on data from the World Values Survey. We calculate the weighted cultural distance.

The weighted cultural distance between country X and China \( d_{wpc} \) is

\[
d_{wpc} = \sum_{i=1}^{7} \sum_{j=1}^{7} (s_{Xi} \times s_{Chinaj} \times d_{ij})
\]

where the \( s_{Xi} \) is the share of type \( i \) in country X, \( s_{Chinaj} \) is the share of type \( j \) in China, and \( d_{ij} \) is the cultural distance between groups \( i \) and \( j \).

Table 3 provides details about the cultural distance between China and countries around the world — both those associated with the BRI and the major world powers identified in Allan et al. (2018). Given that China has welcomed all countries to participate in the BRI, there is no official list of “BRI countries,” and different versions of unofficial lists exist (Boffa 2018). The latest policy reports from the World Bank list 66 countries as BRI participants (Boffa 2018; Bastos 2018), while the Hong Kong Trade Development Council (HKTDC) has 79 countries on its list. Since we expect them to change over time, we note the group of participants as tentative and varying across different sources. For countries that might be thought of as major world powers today, the cultural distance is large. For example, China’s weighted distance to Britain is 0.568; to France it is 0.543; and to the US it is 0.553.

China’s cultural distance to important BRI countries is much lower, however. For example, weighted distance to Turkey is 0.447; Vietnam is 0.433; Indonesia is 0.434; and Iran is 0.419. Indeed, China’s weighted cultural distance is closer to Iran’s than any other country included in the sample. This analysis suggests that China’s national identity may not be as idiosyncratic as it first appears; rather, the counterhegemonic block of relevance may be a different set than that explored by Allan et al. (2018). In addition, by using the Blaydes and Grimmer (2019) measurement strategy for political culture, it is possible to extend analysis to cases not considered in the Allan et al. (2018) study.

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\(^{24}\)To calculate the distance between types, Blaydes and Grimmer (2019) compare the question-specific expected distributions for each type.

\(^{25}\)We follow closely the existing works that have used similar measures of cultural distances but using other measures of culture, including linguistic (Laitin 2000), ethnic and religious (Alesina et al. 2002; Fearon 2003) and genetic composition (Spolaore and Wacziarg 2009).

\(^{26}\)The additional group of countries included are extensive in their geographic scope and economy. They include countries in the Caribbean and South America (Antigua and Barbuda, Panama, Trinidad and Tobago, Bolivia), Africa (Ethiopia, Libya, Madagascar, Morocco, Senegal, South Africa), Asia-Pacific (South Korea, New Zealand, Papua New Guinea) and Europe (Austria). The only country listed in the World Bank reports that is missing from HKTDC is Greece. Both appear to discount ongoing regional tensions that likely jeopardize the BRI and question the positions of some of the countries that are currently listed as BRI participants (i.e., India’s concern with the China-Pakistan Economic Corridor, which passes through Pakistan-occupied Kashmir).

\(^{27}\)Examining the plurality group distance measure, which is the distance between the plurality types of each country in a pair, suggests a similar pattern. The countries which share a plurality cultural group with China include Ghana, Indonesia, Iran, Morocco, Romania, Turkey and Vietnam. A number of these countries are associated with the Belt and Road Initiative.

\(^{28}\)It is also worth pointing out that it is not inconsistent for countries to share basic values with China but to still have negative attitudes toward China. It is very possible that citizens do not have good information about the extent to which they share values with other societies.
Next, in order to see whether cultural distance can be explained by the legacy of the Silk Roads, we regress the weighted political culture distance between each country in our sample and China on the country’s distance to the nearest Silk Road route, proxied by the combination of nomadic migration routes and least-cost paths as described above. Table 4 shows results with a set of bilateral controls. We find that a country’s distance to the Silk Roads is positively associated with its cultural distance to China. Each column adds additional control variables, including ones related to geography as well as genetic, linguistic and religious difference. In Table 4 Column 6, the coefficient estimate shows 0.864, suggesting that a one-standard deviation increase in the distance to the Silk Roads is associated with an increase of 0.61 standard deviations in the weighted cultural distance (3.6 units, or about 7 percent change from the mean). These results suggest that even after controlling for a variety of dyad-level characteristics, Silk Road connections may have a lasting cultural legacy which could magnify Chinese soft power projection in Western Asia.

How does the distance between China and other countries compare to the countries which have formed the core of the current liberal international order? There is no single obvious way to operationalize the prevailing alliance structure so we provide results with alternative operationalizations. Out of 56 countries in our sample, 10 countries that are directly connected by overland Silk Roads other than China (Georgia, India, Iran, Iraq, Russia, South Korea, Thailand, Turkey, Ukraine, Vietnam) have the mean weighted cultural distance of 0.46 to China, compared to 0.51 on average between China and the countries in our sample. The mean weighted cultural distance between the United States and the founding members of NATO is 0.35; and 0.33 for the distance between Britain and those same countries.29 The mean weighted cultural distance between current NATO members represented in our data and USA is 0.41. The mean weighted cultural distance between US and the G-8 countries is 0.39. To provide a benchmark measure, the mean cultural distance between the US and 56 other countries in our sample is 0.46.

These measures indicate several things: countries in our sample have, on average, greater cultural distance to China (0.51) than the USA (0.46). While, on average, the countries connected by the overland Silk Roads have closer distances to China (0.46) than the others, the distance is still significantly larger than between USA and NATO founding countries (0.35), current NATO members (0.41), and G-8 countries (0.39). Overall these suggest that China may be closer to those connected by the Silk Roads than others, but it is still culturally further away from them than the US is from its partners in maintaining the current liberal economic order.30

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29 The founding nations included in our sample data are Britain, Canada, France, Netherlands, Norway, USA; Belgium, Denmark, Iceland, Luxembourg, and Portugal — the other five original founders — are missing in our data.

30 These results are very similar if we replace the US with Britain in our analyses.
Conclusions

While some of the most prominent works on historical development have focused on the origins of states, scholars have increasingly drawn attention to the importance of transnational and global dynamics (Go and Lawson 2017, 8), including forms of pre-modern, proto-globalization. Historical, cross-cultural trade routes, like the Silk Roads, connected economic interests between important and developed regions for centuries. We take a long view with regard to the global economic order in the spirit of international relations scholars who are focused on longue durée trends in power and influence (e.g., Kupchan 2012; Acharya 2014). Our results draw attention to where the economic centers of gravity existed in the world before the rise of Western hegemony. The evidence that we provide suggests that economic multipolarity was the norm in the international system prior to 1800. To the extent that economic hegemons existed, they were found in Asia.

The benefits of cross-cultural exchange might be diminished as a result of difficult-to-anticipate shocks to political stability on well-established trade routes. We find that intra-route fragmentation makes trade difficult, suggesting the costs of jurisdictional uncertainty (Simmons 2005) and taxation on the common pool of merchants (Cox 2017). We find that plausibly exogenous shocks to political stability along the Silk Roads lead to smaller city size, conditional on city and time fixed effects. This effect is robust on the road to Aleppo but diminishes in size and statistical significance on the road to Chang’an. We find, however, that political consolidation associated with the Chinese imperial tribute system increased was city size. Our results suggest that imperial China may have served as a stabilizing hegemon, reducing uncertainty and facilitating long-distance trade.

We also find that there are longer-term implications of historical trade. In particular, cultural distance today is lower for countries along the historic Silk Roads, even after controlling for a variety of first-order geographic and cultural variables. These findings have important implications for China’s ability to project political power in Western Asia. China is already the top trading partner for most Asian countries and is actively pursuing policies that mimic its role as the predominant economic and military power in Asia before the nineteenth century (Lind 2018). While China may face difficulties in attempts to create counter-hegemonic coalitions with the “great powers” of the current liberal economic order (Allan et al. 2018), cultural affinity based on shared values may create new opportunities for Chinese soft power in the Muslim East.

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Table 1: *Eurasian Urban Center of Gravity, 1100-1800 CE*

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Table 2: Effect of Fragmented Polities on City Size

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<th>Std. Error</th>
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<td>(0.029)</td>
<td>-0.073***</td>
<td>(0.030)</td>
<td>-0.052*</td>
<td>(0.031)</td>
<td>-0.055*</td>
<td>(0.031)</td>
<td>-0.052*</td>
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<td>(0.030)</td>
<td>0.013</td>
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<td>0.543***</td>
<td>(0.076)</td>
<td>0.543***</td>
<td>(0.076)</td>
<td>0.538***</td>
<td>(0.076)</td>
<td>0.528***</td>
<td>(0.076)</td>
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<td>(0.118)</td>
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<tr>
<td>Tributary states to Chang’an</td>
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<td>(0.088)</td>
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N = 3,090 for all models. Geography X Year and City FE are included in all regressions. Robust standard errors reported in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.
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Robust standard errors reported in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.
Figure 1: *Largest Eurasian Cities, 1100-1800; “X” indicates Eurasia’s urban “center of gravity”*
Figure 2: Silk Roads Mapped (Top); Highlands and Nomadic Corridors (Bottom)
Figure 3: Stylized illustration of the argument regarding the effects of crossing jurisdictions on the costs of trade. The solid lines represent divisions between independent polities. The dotted lines represent independent polities that fall under the Chinese imperial tribute system.
Figure 4: *Nomadic Pathways as a Proxy for Silk Roads*
Figure 5: Belt and Road Initiative Routes