

THE IMPACT OF THE SYRIAN REFUGEE INFLUX
ON TURKISH CAPITAL MOVEMENT

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THE IMPACT OF THE SYRIAN REFUGEE INFLUX
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DECLARATION OF ORIGINALITY

I, Mustafa Runyun, certify that

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Signature.....

Date 14.09.2020.....

Dedication

To my grandfather whose name and dreams I share...

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All error is mine while all perfection belongs to them...

ABSTRACT

The Impact of the Syrian the Refugee Influx on Turkish Capital Movement

This research aims to understand the impact of Syrian migration influx on the capital flow in Turkey through the Turkish banking indicators. Specifically, we try to estimate the change in monetary stocks in saving deposit accounts and the usage of various loans and credits between 2013 and 2018. For that reason, we use a canonical difference-in-difference estimation strategy with the instrumental variable approach, relaxing common trend assumption of this setting. This study suggests that Syrian refugees affect capital flow positively in terms of accumulation and credit usage. Our findings propose that Syrian refugees have a positive impact on the usage of aggregate personal loans through, mostly, consumer credits, and on the commercial credits in the textile and the construction sectors in non-cash and cash credits, respectively. This findings may imply unconventional financing current investments, mostly, in the informal sector, sectoral shifts in the construction sector, and increase in export level of the textile sector. Additionally, we can observe positive effects on the foreign currencies in the saving deposit accounts while estimating a decrease in native currency savings. Our results are consistent with the current migration literature and show local varieties of consumer reactions in credit market and capital flow in the host country.

ÖZET

Suriyeli Mülteci Akınının Türkiye Sermaye Hareketlerine Etkileri

Bu çalışma, Suriyeli mülteci akımının Türkiye’deki sermaye hareketlerine olan etkilerini Türkiye’deki bankacılık göstergeleri üzerinden anlamayı amaçlamaktadır. Bilhassa, biz bu çalışmada, 2013 ile 2018 arasında, tasarruf mevduatlarındaki değişim ve farklı türden kredilerin kullanımlarını hesaplamaya çalışıyoruz. Bunun için, temel farkların farkı hesaplama stratejisi araç değişken metoduyla birlikte ortak trend varsayımını gevşeterek kullanıyoruz. Bu çalışmanın önerdiği sonuçlara göre, Suriyeli mülteciler sermaye hareketlerini birikim ve kredi kullanımı anlamında olumlu biçimde etkilemektedirler. Bulgularımız Suriyeli göçmenler özellikle tüketici kredileri üzerinden toplam bireysel kredilerin ve sırasıyla nakdi ve gayri-nakdi inşaat ve tekstil sektöründeki ticari kredilerin kullanımına olumlu etkilere haizdirler. Bu bulgular, halihazırda, özellikle enformal sektörde, yapılmakta olan yatırımların konvansiyonel olmayan yöntemlerle finanse edildiklerini, inşaat sektöründeki sektörel kaymayı ve tekstil sektöründeki ihracat artışını ima ediyor olabilir. Ek olarak, döviz tevdiat hesaplarındaki yabancı para miktarlarında da artışlar gözlemleyebilmekteyiz. Sonuçlarımız halihazırda cari olan göçmen literatürü ile uyum göstermekte ve ev sahibi ülkedeki sermaye hareketlerini ve kredi piyasasındaki tüketici reaksiyonlarının yerel farklılıklarını ortaya koymaktadır.

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CHAPTER 1

INTRODUCTION

The migration of people from one place to the other is as old as the history of humanity. However, the underlying reasons for these types of movements have varied throughout history. Not only underlying reasons but also their length, composition, and motivations have differed in the historical context. Among various types of migration of groups or persons, forced migration has drawn most attention. Even though natural disasters, famine, human rights violation, and persecution can be included in a variety of external causes which lead to forced migration, conflicts and persecution are the other critical factors that have triggered this type of movement and displacement. Today, approximately 65.6 million people have been forcibly displaced from where they dwelt due to armed conflict, political or economic reasons, or persecution. Roughly, 20 people are forced to move away from their homes every minute because of conflict or oppression in the world (UNHRC, 2017).

When we think of the reasons which cause forced migration and displacement, refugees, asylum seekers, irregular migrants, and those who are displaced from their homeland are concomitant with these notions. Historical environment and geographical features have affected migration routes. In this regard, some countries have been historically exposed to the mass influx of migrants. Among these, the geopolitical position of Turkey, which makes it a bridge between East and West, has turned the country into a safe place for people who flee from oppression and conflict, especially from the Middle East and Central Asia or who want to cross over into European countries. Therefore, throughout its history, millions of immigrants have been hosted by Turkey. It can be seen that the attitudes of different administrations of the Turkish government towards immigrants, who flee from various occurrences, has been welcoming, although their strategies against these occurrences have varied since the establishment of Turkish Republic. To put in a nutshell, Turkey, as a host

country, has held great attraction center for those who flee from political instability, oppression, and social conflict.

In spite of the historical experience of Turkey with the immigration of different ethnic groups and minorities, the Syrian Civil War is a humanitarian crisis unprecedented in the history of the modern Turkish Republic, which has led to millions of people escaping from Syria. According to UNHRC figures, at the end of 2019 there were more than 6 million Syrian registered refugees hosted by Syria's neighboring countries: Turkey, Egypt, Iraq, Jordan, and Lebanon. And 3,684,982 of these migrants dwell in Turkey (UNHRC, 2019). As the UNHCR statistics show, Turkey is the country that hosts most of the Syrian refugee diaspora since the beginning of the Syrian Civil War. Although the presumptively positive and negative consequences of the tremendous amount of refugee population in Turkey have been discussed among a large variety of groups in bureaucracy, academia and civil society, most of the citizens in Turkey think that this occurrence brings about social and economic problems.

In all aspects, the consequences of the migration have been a highly debated issue among economists. Some economists posit that immigrants as newcomers compete with natives in the same labor market. This situation leads to be labor market opportunities being absorbed by foreign immigrants (Hanson, Scheve, and Slaughter, 2007; Facchini and Mayda, 2009). On the other hand, there are lots of scholars who think that immigrants have adverse effects on housing prices, rents, crime rates, and general price levels. However, there is plenty of research that shows the contrary of these claims. For example, Balkan, Tok, Torun, and Tumen (2015) show that the change in housing prices after coming of Syrian refugees to Turkey derives from the location choice of natives for a high level of region and segregation after a rise in the number of immigrants in a specific area. In this regard, we can understand that Syrian refugees do not increase the general rent levels but natives do not live with immigrants together. In terms of labor market outcome, Card (1990) finds no significant effects of Marielitos immigrants on either wages or unemployment rates in the Miami labor market. Moreover, Aydemir and Kirdar (2013) design

quasi-experimental research which examines the employment effects of the exodus of ethnic Turks from Bulgaria to Turkey in 1989. This exogenous change shows a positive impact of repatriates on the unemployment of non-repatriates. Regarding the price levels, Balkan and Tumen (2016) find that there is a reducing effect of Syrian refugees on general price levels and inflations due to their subsequent positive effects on costs in the informal market. Furthermore, immigration can also increase crime rates by reducing the labor market opportunities of natives, which may result in an increase in criminal activity among natives. However, these effects stem from indirect channels (Borjas, Grogger, and Hanson, 2010)).

There are some momentous and distinct features of recent migration experiences of Turkey in terms of near history. The number of people who came to Turkey is incomparable with the other examples where countries have experienced influxes. In this regard, we have to see the unprecedented nature of this occurrence when analyzing the past and possible outcomes. A small but significant literature has accumulated on the effect of the Syrian refugee influx on the Turkish economy and socio-economic conditions. Ceritoglu et al. (2015) utilize a quasi-experimental design to measure the effect of the influx on the labor market. Their results show a significant increase in unemployment rates and remarkable decreases in labor force participation, informal employment, and job-finding rates of natives with no effect on wages. Del Carpio and Wagner (2015) apply a canonical difference-in-difference (DID) design with an instrumental variable approach. Their IV estimates imply the broad-scale exclusion of native workers in the informal sector. However, they declare increases in formal employment for natives as well. Apart from these, there is a variety of credible research on the effect of the Syrian refugees on education (Tumen, 2018; Tumen 2019), rental prices and segregation (Balkan et al., 2018), voting behavior (Altindag and Kaushal, 2017), general price levels and inflation (Balkan and Tumen, 2016), and firm performance and entry level (Akgunduz, van den Berg, and Hassink, 2018).

In recent years, Aksu, Erzan, and Kirdar (2018) conduct one of the most compact and detailed research regarding migration impact on the Turkish labor market in terms of wage outcomes, employment rates, and informality. They

differentiate the channels of the effect, and show that the Syrian refugees hurt the informal market in terms of employment and wage opportunities of the native male workforce. However, wages in the formal sector benefit from the Syrian population and reflect increases in the males' wages. They also demonstrate labor mobilization from the informal sector to the formal sector and self-employment.

When we look at the related literature mentioned above, the literature generally concentrates on the effects of migration influx on labor market outcomes and socio-economic dynamics like general and rental price level and crime, etc. Likewise, we can conclude that the research of the Syrian effect on the Turkish economy mostly focuses on short-run impacts. However, some results may not appear in the short-run but emerge in the long-run since immigrants have a noticeable potential to affect the consumption and movements of human and financial capitals between host and home countries, whether they are forced to migrate or not. In this regard, analyzing the movements in financial and monetary (capital) markets can yield fruitful results to grasp the middle and long-run effects of immigrants on host countries' economies. Besides this, we can observe changes in the attitudes of natives towards a shift in labor market outcomes through movements in different types of capital markets.

The motivation of this research is to track the positive and negative effects of mass migration on the Turkish economy since the beginning of the Syrian Civil War. In this regard, the findings of this article can offer the first corroboration for the outcome of previous studies that find an increase in wage in the formal market and labor mobilization between informal and self-employment. Likewise, we can pursue the long-run effects of these changes in the labor market, employment structure, and consumption-saving decisions by controlling savings accounts and the usage of credits by natives and immigrants. Therefore, the article tries to contribute the literature with a broader perspective on the effect of migration through direct and indirect channels. The study is carried out using various specification, weighted and unweighted estimations, and OLS and IV approaches to control different time trends and endogeneity in the system if the Syrian refugees choose their dwelling location

after coming to Turkey, or whether commonality between provinces in terms of Turkish banking indicators are various to each other or not.

This research is an attempt to understand the effect of the Syrian refugee influx on the Turkish financial market and capital movement through the Turkish banking indicators by filling the gap in the literature in the scope mentioned above. Of course, findings and estimation strategies of this research cannot be separated from the literature concentrated on the effects on the labor market outcomes. However, there are two essential originalities of this research: Firstly, this study is one of the rare studies to determine the long-run effects of Syrian immigrants on the Turkish economy through savings and loaning channels with difference-in-difference methodology and instrumental variable approach. Although the usage of impact evaluation methods with macro-finance and savings account data is rarely encountered, there is some fruitful research like Kara and Yook (2019) that have utilized this approach. Secondly, this research employs an original –quarterly dataset, which is constructed using various sources from 2009 to 2018 at the provincial level. It utilizes information from the Turkish Statistical Institute (TURKSTAT), the Ministry of Interior Directorate General of Migration Management, and the "FinTürk Geographical Distribution" tables reported by the Turkish Banking and Regulation and Supervision Agency which reflects aggregate level credits, deposit accounts of legal entities at the province level. Turkish Banking Indicators refer to our dependent variables when we investigate the impact of the Syrian refugee population in Turkey. These variables are housing credits, automobile loans, credit advanced, credit cards and consumer credits, which constitute the personal loans; and commercial credits in the selected sectors of food and tobacco, construction, metal and mining, financial, brokerage, tourism, textile, agriculture and fishing, energy, and navigate; deposit savings, which are held in native currency (Turkish liras), and those which are held in foreign currency (Dollar, Euro, etc.), and deposit accounts that belong to legal institutions, in both foreign and native currencies.

According to the estimation results, the mass migration of the Syrian population has had a significant positive impact on consumer credits, credit advances,

commercial credits in construction and the textile sectors, and in saving deposit accounts held as foreign currency while there are no plausible effects on total commercial credits, savings held in Turkish currency, and other types of sectoral commercial credits. These findings are compatible with related literature and shed light on local features in Turkey. Because newcomers mostly do not have a legal permission for working, the legal environment has forced Syrian refugees to work only in the informal sector since they have come to Turkey. As the related literature shows, Syrian refugees are significantly substituting for native worker in the informal market because of the willingness to accept for a lower wage than native workers. This situation leads to a fall in wages in the informal sector, and allows employers in this sector to make more investments due to decreasing production costs. Construction and textile sectors have a high level of informality in Turkey, and they are most affected by this positive shock. Additionally, recent research demonstrates that there has been an increase in self-employment and wage levels in the formal sector for employees. This research supports initial evidence, which implies that additional investments are financed through consumer credits after the refugee shock and that employees in the formal sector increase their savings and the usage of consumer credits due to the increases in the formal wages.

The remainder of the paper continues as follows. In Section 2, I compile detailed information on the Syrian refugee crisis and migration inflow into Turkey and present a relevant literature review on the effect of refugee influx on the various markets and consumer behavior. I present the data and descriptive statistics in Section 3. In Section 4, it will be discussed the empirical strategy in terms of panel data approach and endogeneity. In Section 5, we try to demonstrate and interpret the results with the related literature. Lastly, the article concludes with in Section 6.

CHAPTER 2

LITERATURE REVIEW

When we investigate the current literature which analyzes the relationship between mass migration and credits, saving, and capital movement, we can realize that there is a deficiency of studies that focus on the effect of migration and refugee influx on credits and savings in terms of direct and indirect channels. In this regard, we can split the literature into two main parts: the effect of refugees and forced migration and of volunteer immigrants for seeking economic opportunity. The branches of the literature for each main part can be extended to the examination of differences between temporal and permanent migrants in the host country. In this part, we try to recapitulate the literature on the effect of any type of immigration on the savings and credit market and, specifically, the effect of Syrian refugees on the Turkish economy.

The effect of immigrants, independent of their reasons for migration, on the credit market and savings is not apparent. Although immigrants change the consumption and public debt balance, naturally, they have various effects on natives, which trigger indirect channels on the capital inflow and outflows. On the other hand, because of the natural inclination to fleeing from the conflict and oppression, an immigrant can transfer their monetary/financial and physical capital from home country to the host country and incorporate into the local financial and economic system. This situation may increase the loaning opportunity of native banks and institutions. In this regard, the literature which focuses on the relation between migration and capital movement circles around some major topics. Some scholars assert that immigrants have positive impacts on entrepreneurship and social investment in the host country (Wahba and Zenou, 2012). Likewise, Some research underscores the positive impacts of remittances and savings which are sent by immigrants in host countries to their families on the economy of home countries (Taylor, 2006; Dustmann and Mestres, 2010; Niimi, Pham, Reilly, 2009). They are

some studies which measure the fiscal burden of host countries after migrations and impact of immigration on fiscal balances (Collado, Iturbe-Ormaetxe, and Valera, 2004; Auerbach and Oreopoulos, 1999; Rowthorn, 2008).

Immigrants, at the same time, have other general equilibrium effects on consumption and saving decisions and various paths and habits for these kinds of decisions in the host country. At this point, we can claim plenty of literature on the saving and consumption decisions of the migrant population in the host country with time and probability of the migration process. In this regard, migrants' saving and the probability of return migration (Galor and Stark, 1990; Djajic and Milbourne, 1988), the relationship between earnings and the extent of assimilation, cohort quality change, and return migration (Borjas, 1989), the local effect of refugees in terms of business entrepreneurship (Lyon, Sepulveda, and Syrett, 2007), immigrants' duration abroad and precautionary saving decision (Dustman, 1997), skill differences and cohort effects on earnings and economic performances of immigrants (Chiswick, 1978; Cobb-Clark and Hildebrand, 2006) have been prevailing topics which take a turn to the literature.

To track the aggregate effects on the capital market and capital transfers, check and deposit accounts in the banking system may be fruitful indicators. In this regard, Paulson and Rhine (2008) exploit the usage of checks and savings accounts and currency exchange of Hmong refugees in Minneapolis/St. Paul, Minnesota who come from Laos, Vietnam, Thailand, Burma, and China in order to show the determinants of financial market participation and economic assimilation of the immigrants. They find that the Hmong are less likely to have a savings account, to have a credit card, and are more likely to use check-cashing outlets using probit model estimation. However, as time passes in the USA, the use of financial services by the Hmong converges to their native neighbors. Additionally, Bauer and Sinning (2011) examine the differences in saving rates between native, temporal, and permanent immigrant in Germany through German Socio-economic Panel and remittances as saving account which is sent to the home country. They find that temporal immigrants save significantly more than comparable natives while immigrants save significantly

less than natives. Likewise, Piracha and Zhu (2011) analyze the differences in saving rates between natives and immigrants in Germany. They focus on the importance of precautionary savings using the Difference-in-Difference approach and a change in the nationality law in Germany as a natural experiment environment. They suggest that the imposition of this change decreases the gap in marginal propensity to save between immigrants and natives significantly due to decreasing uncertainties about future income and legal status. Shamsuddin and DeVoretz (1998) argue that the differences in saving rates between these two groups stem from institutional settings in which immigrants may have constrained access to social welfare programs, leading to rising in the savings propensity.

In the current literature, Johson (1999) focuses on saving patterns of Asian-origin refugee groups who were settled in Canada between 1979–81 and finds fundamental reasons for the saving of refugees as emergencies and education of children. He asserts that these refugee groups have been culturally assimilated by Western society, so they begin to use their way of saving in nontraditional financial saving methods as time passes. Additionally, a higher level of education, satisfaction with income, and employment are significant factors that increase the saving level of refugees. For the consumption effects, Alix-Garcia and Saah (2010) demonstrate the effect of the refugee influx from Burundi and Rwanda in 1993 and 1994 on host populations in western Tanzania. They present that the refugee inflows into western Tanzania from 1993 to 1998 resulted in increases in the prices of agricultural goods that are consumed and produced by local populations in Tanzania while prices in the same markets showed less impact from refugee crises from Burundi than from those from Rwanda due to some varieties in the nutrition diet preferences.

In the context of Syrian refugees in Turkey, research mostly has accumulated on earnings and employment in the local market. Although there are lots of valuable contributions to the literature on the effect of Syrian refugee influx in Turkey on the labor market consequences and wage earnings (Ceritoglu et al., 2015; Del Carpio and Wagner, 2015; Aksu et al., 2018; Cengiz and Tekgüç, 2018), on education outcome (Tümen, 2018; Tümen, 2019), on voting preferences of the natives (Altındağ and Kaushal, 2020), housing, rents and segregation (Balkan et al., 2018), general price levels and inflation (Balkan and Tumen, 2016), and firm performances and decisions (Akgündüz et al., 2018), there is no complete work on the long-run indicators of the overall economic wealth, development, capital movement, savings, and credit usage in the case of Turkey. This paper attempts to fill this void in the literature focusing on the long-run effects which are related to wealth, development, capital movements, and capital markets. The other advantage of this research is the dataset which is exploited in the analysis. We use a quarterly dataset that covers 2009-2018 terms in Turkey for banking indicators and 2013-2018 terms for the Syrian refugee population dwelled in Turkey. In this regard, the data becomes one of the valuable examples which include detailed information on the refugee influx in near history.

To underscore the contribution of the finding of the paper, our results support the direct and indirect effects of the Syrian refugee influx in Turkey in terms of labor market outcomes, capital movements, and natives' economic well-being. We can observe an increase in total and foreign currency saving deposits and credit usages in terms of individual and commercial credits. We claim that the influx has a positive impact on the usage of individual credits especially through consumer credit channels, on the total saving deposits through foreign currency channels, and on the commercial credit through cash credits in construction and non-cash credits in the textile sector. The significant negative effect of the Syrian refugees is in the non-cash credits of the construction sector. The increase in individual credits may imply the increase in wages in the formal sector (Aksu et al., 2018), and the main source of this increase stems from the consumer credit side empower this interpretation. However, we make another claim based on the anecdotal evidence that the Syrian refugee influx

increases the labor supply, especially, in the informal market. This supply boost decreases wage earnings (Cerioğlu, et al., 2015; del Carpio and Wagner, 2016; Aksu et al., 2018), leading a fall in the production costs in this sector. This can create an incentive for employers in the informal sector to invest more through exogenous financial sources. As can be seen in D1, the difference between credit interests of individual and commercial credits and easiness of access to consumer credit can direct employers to individual credits. Additionally, we find an increase in saving deposits holding in foreign currency (mostly dollar term). This increase can be interpreted with an increase in wage earnings of the formal sector, and also with the capital inflow of Syrian refugees. In essence, these results are momentous beginnings in order to take into attention to the effect of the refugee influx on saving decisions and rates of natives' and refugees and their credit usage. If we assume that the effects should be limited on the saving decision of natives', the capital inflow of refugees and permanent increase of wage-earning in the formal sector turn into a more plausible alternative.

Last but not least, we come across with significant impacts on the commercial credits in selected sectors. Especially, significant effects are concentrated on the textile and construction sector which are dominant sectors in the economic activities of Turkey. However, these effects should be interpreted, considering the local economic environment. We observe an increase in cash credit in the construction sector while encountering a decrease in the non-cash counterpart of it. We claim that contractors, especially in the East side of Turkey, who mostly focus on broad construction works of the state that requires a letter of indemnity supported by banks through non-cash credit shift into the private housing sector. As compatible with Balkan and Tümen (2016) and Balkan et al. (2018), native householders prefer to live segregated places that increase rents of the high-level housing segmentation. This situation generates an economic opportunity for building private housing. At the same time, natives who have houses and land in the low-level district find an opportunity to increase rents and housing prices of their properties. So, building new houses become more profitable than construction in the infrastructure and the public sector. The

credit usage in the textile sector, as we expected, increases in the non-cash credit since production in this sector, mostly, is exported which requires a commercial letter of credit through non-cash credit. Therefore, our key findings can support direct and indirect evidence to the findings in the literature and can extend their interpretations and results to the middle- and long-run cases.

CHAPTER 3

BACKGROUND

3.1 Theoretical background

The effects of refugee influx on the labor market are more intuitive than on the capital market. From the fundamental microeconomic theory, in a basic theoretical model in which labor type of native and immigrants cannot be differentiated, one-good environment, and the demand curve for capital slopes downward ¹, the marginal productivity of capital increases since the labor supply shock with the refugee influx makes each unit of pre-existing capital stock more productive. Our theoretical expectation in this study stems from the argument on the adjustment of the capital-to-labor ratio, the refugee influx increases capital demand in the labor market. Since, in the short-run, capital stocks cannot adjust itself while refugee influx increases labor supply initially relative to capital. For that reason, capital-to-labor ratio changes in accordance with the type of immigrants and capital movement situation in the short-run. Generally, since new immigrants cannot transfer capital, or less capital compared to natives, capital-to-labor ratio decreases because of the increase in labor supply and fixed capital stock. Therefore, this labor supply shock increases marginal productivity of capital in the short-run. We expect that the demand for investing (e.g. equipment purchasing, expanding business activities, increasing production) from the business and firm part of the economy increases in the short-run or the increase in the return to capital in the immigration process attracts foreign capital as foreign direct investment or portfolio investment to the host country.

The short-run effects of migration effects cannot be asserted as permanent in terms of theoretical expectations. In the long run, the capital stocks which are initially fixed begin to respond with the change in the labor market. The capital respond is

¹That is why firms choose to acquire less new capital and hold less existing capital at higher rates of return (or cost of capital for the firm)

observed with a lag due the unexpected nature of the migration influx. We expect that the increase in the return to capital induce the capital flow through domestic accumulation or international capital movement. As the accumulation level increases, the capital-to-labor ratio responds to the adjustment of capital stock after the increase in the labor supply which stems from the immigration influx and is restored to its original level before the immigration process. When the capital-to-labor ratio returns to its original level, wage levels and the return to capital are restored their initial level. Even if there is no capital transfer between the host and source countries, the capital accumulation in the host country through the domestic savings, international capital flow and national or international investments rises due to the higher return to capital after the immigration process.

The simple model in which refugees are undifferentiated from natives and cannot transfer capital can only capture the short-run effect of the refugee influx. However, type of immigrants in terms of personal profiles, capital stocks that they owns, and the amount of period that they live in the host country transfer the path of economy of the host country in the longer run. For that reason, arguments that are produced for long-run and short-run should be different. Firstly, in the long-run, production factors can move across region in response to the migrant shock. We can contemplate this flow of capital in two different angles: international capital flow and capital accumulation. Additionally, we can embellish this classification with adding capital transfer between the host and the source countries in the immigration process as subcategory to international capital flow. International capital transfer and capital accumulation through savings and direct and indirect investments are significant factors which can affect the capital level in the economy at the shorter-run. In this type of situations, the change in the capital-to-labor ratio and change in the marginal productivity of capital are various than the initial theoretical setting in which capital stocks are fixed and the sole change in the economy is labor supply shock though the migration.

In essence, the type of immigration is one of the most significant detail which determine the preference and action set of the immigrants. In terms of the forced

migration and civil war context, capital transfer may be one of the most preferential action of refugees among hierarchical needs. This transfer has a significant impact for economy of the host country beyond the increase in the capital stocks of the host country. In the shorter-run, as we assumed above, the capital stock is fixed while the labor supply can vary in the process of the immigration. When we assume that the production process in the host country is constant return to scale, capital transfer between host and source country increases the capital accumulation which decrease the return to capital in the host country and this situation leads to restoration of the capital-to-labor to its original level in the pre-immigration period by restoring wage to its initial level in the same period when the increase in the capital stock which is transferred from the source country is enough relative to increase in the labor supply in terms of the capital-to-labor ratio. Therefore, the theoretical expectation on the effect of capital transfer between the source and the host countries depends on the level of transfer. The relatively enough increase in the capital stock in terms of labor supply of immigrants does not effect the capital-to-labor ratio in the host country's economy, then the only effect is to boost the economic activity and growth level in the host country. We do not expect any effect on general productivity levels and wages because of the capital transfer.

Although, most of time, the refugee profile in the forced migration process is lower than in the labor profile in the host country due to the structural reasons which stems from the migration itself, we can expect that early comers in the wave of the migration are more wealthier and opportunity-seeker for wealth transfer between the host and the source countries. In the context of civil war and oppression, unnoticeable fraction of the intended migrants seek different opportunities for this transfer, if, especially, dwelling in the source countries become unlikely in terms of rudimentary human needs and security issues. Therefore, capital (or wealth) transfers between host and source countries are very likely in terms of empirical and theoretical expectations.

The main general equilibrium effect in the capital market which stems from the refugee influx with the increase in the productivity of the capital stocks is to

increase in the risk appetite for additional investment and expanding business activity in order to utilize the immigration surplus by the native employers. In this regard, an increase in the level of investment and in the level of self-employment in the process of the refugee influx are expected. Nevertheless, the source of investments due to this structural change is not clear. In a small open economy context, our expectation is to finance this investment by borrowing extra loans from the financial system. Normally, commercial credits are the best possible candidates in this type of setting. However, local and cultural variation among countries can change the tendencies and habit of borrowing for the additional investment.

Therefore, our theoretical expectation on the Syrian refugee influx for the capital market dimension of the economy is that the capital accumulation increases through domestic savings (savings of native citizens) and the level of investment rises through banking and financial system with various loaning mechanisms. However, the level of the adjustment process for capital stocks is momentous question which should be answered in order to grasp the effect of the refugee influx. The capital-to-labor ratio, probably, is negatively affected from the beginning of the Syrian refugee influx to today. Yet, even if the capital transfer and domestic accumulation are probable, the adjustment process should be gradual. In the short run, the capital-to-labor ratio may decrease because of the boost in the labor supply if the refugees did not bring with enough capital to adjust the change in the labor market. In the middle and longer run, the adjustment and the the level of capital-to-labor ratio depend on domestic savings, international capital flow, and the level of capital stocks that belong to refugees.

3.2 The Syrian refugee influx and Turkey

The upheaval of the Syrian Civil War, which erupted in March 2011 turned quickly into a humanitarian catastrophe and crisis. The occurrence which began with peaceful demonstrations against the administration of Bashar al-Assad transmuted into a civil war that led to destruction of almost the entire country. At the end of the excited but unplanned attempts ended up with disastrous consequences which is created by

mostly concomitant social conjecture and political atmosphere , approximately 5,634,791 people have had to flee their homes to border countries (Turkey, Lebanon, Jordan, and Iraq) according to September 2019 data issued by United Nations Refugee Agency (UNHCR). However, the human cost of the war, of course, is more severe than this picture. The conflict has given birth to severe human rights violations. The crisis within the country has grown, and it has aggravated to the point that is no longer merely an internal matter. This complicated situation has quickly led to regional and global actors intervening in Syria. In the conflict, around 350 thousand people have been killed, and entire cities destroyed. Although some countries have tried to shoulder the responsibility to alleviate devastation of the civil war in this in-going humanitarian tragedy, Turkey has taken an active role to put an end to the crisis. Compared with eight years ago, when 8750-person Syrian refugee group was placed in a container city in Hatay, the registered Syrian refugees today number approximately 3.5 million in Turkey. Despite all deficiencies and flaws in the management of the refugee crisis, the magnitude of the refugee numbers have turned Turkey into one of the most consequential actors, maybe even the most significant, for overcoming this humanitarian crisis.

The pre-war population of Syria was 22 million. With the war, at least 6.1 million Syrians were displaced internally within the country, and 5.6 million people fled the country. According to UNHCR figures, at the end of November 2019, more than 6 million Syrian people were internally displaced, and 6 million people had fled to other countries with most seeking asylum or permanent residency. Among the host countries which Syrian refugees have migrated, Turkey, Lebanon, Iraq, Jordan, and Egypt, countries neighboring Syria, have hosted most of the Syrian refugee population since the start of the Syrian Civil War in 2011. Current numbers of the registered refugees are 3,684,982 in Turkey, 918,974 in Lebanon, 654,266 in Jordan, 234,831 in Iraq, and 129,159 in Egypt according to the UNHCR. ². It can be observed that the vast majority of the refugees are hosted in Turkey (65.1 percent).

²<https://data2.unhcr.org/en/situations/syria>

The first Syrian refugee group migrated to Lebanon in March 2011 after the beginning of the civil war. During this ongoing process and, within one month of this event, the first refugee group to come to Turkey arrived. They were settled in a container city in Hatay, which the Turkish government opened after the beginning of the civil war. Thereafter, the refugee crisis spiraled. Other refugee groups flew to Jordan in July 2011, and in April 2012 this trend started in Iraq. At the end of 2012, approximately 500.000 Syrian people were forced to abandon their residences and migrate to other countries. After the birth of ISIS, the magnitude of the refugee influx increased exponentially, and people who had not migrated until this time were forced to move to border countries to fulfill their basic security needs with the year 2013.

The number of Syrian refugees all over the world reached 2 million by the end of 2013 and 4 million by the middle of 2015. This refugee crisis gave way to tragedy again and again with attempts of mass migration to European countries across the Mediterranean Sea, or overland through Southeast Europe in the last part of 2015, the European Migrant Crisis. Due to preventive restrictions, boats that carried Syrian refugees illegally could not approach the coasts of European countries, or any secure place and sank. The number of deaths at sea rose to record levels in April 2015, when five boats carrying almost 2,000 migrants to Europe sank in the Mediterranean Sea, with a combined death toll estimated at more than 1,200 people. At the beginning of the refugee crisis, the attitude of the Turkish government against the administration of Bashar al-Assad was what can be coined as “wait-and-see”. However, after the administration began to increase oppression and use disproportionate force against demonstrators, Turkey implemented an “open door” policy towards refugees fleeing Syria. As local tensions increase, Turkey began to take part in the occurrences that began upheavals increasingly by asserting border and national security issues. However, the administration of Bashar al-Assad regarded this attitude as the intervention in the internal affairs of Syria and qualified Turkey as hostile and ill-tensioned towards the territorial integrity of the Syrian Arab Republic. After 2012, diplomatic relations between Syria and Turkey were totally broken off, and since then, Turkey has assumed the position of protective power for Syrian refugees as a regional

actor and border country. Because of an open-door policy, the number of Syrian refugees in Turkey has increased incrementally since the start of the Syrian Civil War.

At the beginning of the refugee influx, although the attitude of Turkey in terms of the administration and civil society was positive, the Turkish government classified the Syrian population who fled from Syrian to Turkey as “guest” instead of “refugee.” There are many significant reasons for this choice, but we can mention some principal factors which affected this decision. Firstly, Syrian refugees, which Turkey hosts, were categorized as guests, not refugees due to the 1951 Geneva Convention, which is the legal basis of refugee legislation in Turkey. Only people who flee from Europe to Turkey, because of forced migration, can take the status as a refugee according to the 1951 Convention. However, this situation is not an obligatory restriction, but rather that Turkey exercised its rights as laid down by the convention. Secondly, the Turkish government did not expect that the event would turn into a protracted civil war. They thought that the situation would settle down after a while, and Syrian migrants would return to their homeland. “Guest” status has allowed the Turkish government to control two issues: guests cannot apply for asylum in a third country, which restricts the opportunities of migrating to other countries.

The other implication of the guest status, unlike the refugee status, the guest status implies that the Turkish authority can relocate refugees without any constitutional process. However, the number of Syrian refugees exceeded all expectations, and Turkey needed to assign a new status for Syrian migrants who dwelled in Turkey, which they did with “temporary protection”, and thus the scope of the prior legal status was broadened in October 2014. The temporary protection is an “exceptional measure to provide displaced persons from non-EU countries and unable to return to their country of origin, with immediate and temporary protection “(European Commission, 2019) and is implemented by the decision of the Council of Ministers (in Turkey case) in case of the national security.

When Syrian refugees first arrived in Turkey, they were mostly based in the accommodation centers or camps constructed and operated by the Turkish

government. Figure A1 (Appendix A) reflects the number of registered Syrian refugee population from February 2012 to December 2018. The number of refugee people began with 8000, and then it reached approximately 4 million. The distribution of the refugees across provinces in Turkey is shown in Figure A2 (Appendix A) in different years from 2013 to 2018. In particular, in the beginning, there were 23 accommodation centers (camps) in 10 cities in Turkey. The Turkish government and the UNHCR put the total number of all the refugees in Turkey at around an estimated 900,000 in 2014 (Kirisci, 2014). In February 2016, it was reported that 90 % of the refugees lived outside camps, although 80% of them remained in 10 provinces where camps were located. Over time, they started to move away from camps. In February 2019, 7 camps in five provinces remained in the country, i.e. in Adana, Kilis, Kahramanmaras, Hatay, and Osmaniye. As of February 2019, there were about 61,781 Syrian refugees housed in 7 camps along the Syrian border, with another 3,629,552 registered urban refugees in Turkey (TDGMM, 2019).

We can still observe that the Syrian population is dense around the regions with camps. The highest fractions were in Kilis, Hatay, Sanliurfa, Gaziantep, Mersin, Mardin, Adana, Osmaniye, and Kahramanmaras at the end of the year 2018, followed by Kayseri, Bursa, Konya, and Adiyaman. Table A1 (Appendix A) shows the fraction of refugees in the total population from 2013 to 2018 in each province in Turkey. As of 2018, most of the Syrian refugees living out of camps implied that they left Syria for security reasons, and they fled to Turkey because of the ease of transportation. The main routes for entrance were Syrian-Turkish borders (six of them were open throughout the inflows), and most refugees remained in cities close to the borders. As of February 2019, the number of registered Syrian refugees in camp was 362,888. The number of registered Syrian refugees in total urban, peri-urban, and rural was 5,317,384 (UNHRC, 2019), and the number of Syrian refugees showed a dramatic increase.

This study conducts research using quarterly panel data from December 2009 to December 2018. Since there was no noticeable Syrian population in Turkey before 2012 and deficiency in the data set, which reflects the actual number of Syrian

refugees at a provincial level in 2012, the actual numbers of Syrian refugees after 2012 can be observed in the dataset. Therefore, we can the term post-treatment era for the period after 2012 and, similarly, pre-treatment era for that before 2012, as information which is germane to the year 2012 is missing. The provincial distribution of registered Syrian refugees in Turkey is presented in Figure A2-A3 (Appendix A). At the end of 2018, the number of refugees reached approximately 3.7 million. The process of an increase in the total Syrian refugee population in Turkey from 2012 to 2018, quarterly, is illustrated in Table A1. Additionally, in Table A2, I add a yearly change of provincial distribution for the refugee influx at the provincial level. The density of the Syrian refugee population increased for cities that are close to the Syrian border. Likewise, developed cities on the West side of the country have attracted refugees since the beginning of their advent to Turkey. The cities that are the dense in terms of refugees are Kilis, Sanliurfa, Gaziantep, Hatay. These are followed by Istanbul, Adana, Bursa, and Izmir.

These high numbers and dense population distribution of the Syrian population in Turkey are accompanied by changes in financial markets which stem from the refugee influx. Financial markets and Turkish banking indicators have been affected by twofold. Firstly, the Syrian refugees who fled the Syrian civil war to Turkey brought with them their monetary assets and savings. They have incorporated these into the banking system, and deposited their money, which has increased the total money amount in Turkey. Likewise, Syrian refugees who dwell in Turkey for more than three years can borrow loans from banks to consume more or to make investments in their businesses. Secondly, although the Syrian refugees can utilize various banking services in Turkey, most of them cannot easily access the credit market due to the practical and procedural restrictions. However, indirectly, they have an impact on the tendencies and preferences of the natives for credit usage and saving decisions since they have affected the labor market outcomes of natives and economic conditions in Turkey for most of the provinces. Therefore, we can think of the impact of the refugees on the indicators as an indirect effect for the first period (2012-2015) of their advent, and as direct and indirect effects for the second period (2015-2018).

3.3 Structure of the Turkish banking system

We have to introduce some initial information about the Turkish Banking System before evaluating the impact of the refugee influx. After the Economic Crisis of 2001 with the rise of the Justice and Development Party, Turkey experienced a dense structural change in the economy in the administration of the economy in terms of the debt and fiscal balance. Moreover, the natural inclinations of consumers began to change after these sets of changes. After the establishment of the Turkish Banking and Regulation and Supervision Agency next to the crisis, regulations, and procedures has increased and improved in the banking sector, drastically. With all these positive development and overcoming the crisis environment, individuals in Turkey began to feel comfortable and gained trust in the financial markets.

Between the years 2005 and 2011, the Turkish economy witnessed a strong growth level and stability in terms of exchange rates, inflation, and interest rates. And these years coincided with the inflow of foreign investments and hot money from European countries and the USA. As the level of money and financial investment that flow to the country increased, credit supply and risk appetite of the financial institutions hit the ceiling. Although Turkish consumers warmed towards the usage of credits (especially individual credits), the major rise of the usage in credits began with 2009 in which the purchasing power of individuals and GDP per capita reached an important level. In Figure A3 (Appendix A) shows the increase of aggregate level loans between 2009 to 2018 in Turkey. The strong increases can be observed in housing credits, consumer credits, and credit cards. In this process, financialization and changes in consumer habits have been affected by the extent of positive economic shocks after 2002.

When we look at the commercial credits, we cannot come across a strong rise and growth in credit usage for every sector. Figure A5 - Figure A12 (Appendix A) reflect aggregate level commercial credits for the selected sector between 2009 and 2018 in Turkey in terms of cash and non-cash credits. We can see noticeable growth of credit usage in sectors of agriculture and fishing (Figure A5), construction (Figure

A6), brokerage (Figure A7) and energy (Figure A8) for cash credits. Even though the magnitude of growth of the credit usage in the textile sector and metal and mining sector is less significant than the other sectors mentioned above, we can observe the positive tendencies for the credit usage in these two sectors. Likewise, we can see similar trends for the usage of non-cash credits in sectors, which we mentioned above in Figure A9 - Fig A12. However, as of 2017, the political instability and economic fluctuations increased drastically, and Turkey sank into a new economic stagnation and the crisis environment. Especially after the 2016 Military Coup attempt, public banks have increased the loan supply to overcome the crisis environment with deferring debts of companies and to redress their payment balances. We can capture the increase in commercial credits of engine sectors in Turkey after 2017 in Figure A5 - Figure A12 (Appendix A).

On the other hand, the situation for savings is different from the previous picture because borrowing or taking credit reflects the indebtedness of the consumer. Therefore, individuals can borrow loans due to neediness or the potential for extra consumption. However, savings account directly reflect the wealth level of individuals in Turkey. In a historical debate, Turkish economists mostly emphasize that the saving level of households in Turkey is highly low compared to developed and other developing countries. We can observe from Figure A3 that even though total savings have increased for 10 year period, savings held in Turkish currency has been highly below the total level. In this regard, the actual increase in wealth has stemmed from the increase in the value of the dollar, namely an increase in the foreign exchange rates. This phenomenon is coined as dollarization. Even if nominal wages increase, this does not reflect itself in savings and its real counterpart loses against the arbitrage which originates from the increase in foreign exchange rates. As we discussed in the related literature above, the influx of migration from Syria has a positive effect on wages in the formal markets. This paper tries to grasp the direction of this increase and the effects of wage or income increase on the savings in the following part. Descriptive statistics of the Turkish Banking Indicators can be seen in Table A2-A3 (Appendix A).

Since regulations, laws, and the process of the Turkish banking system may be confused for the unfamiliar authors, to explain the general view of the system may be more fruitful for the following parts of the paper. In the Turkish banking system, types of banks split into three main categories: Commercial (deposit) banks, Participation (Islamic/ Interest-free) banks, Development and Investment Banks. Each subcategory can be classified as three branches: State-owned, privately owned (domestic capital owned), and foreign-owned established in Turkey. With these classifications, there few foreign commercial (deposit) banks having braches in Turkey. We conduct our analysis on the aggregation of commercial (deposit) and participation (Islamic/interest-free) banks and all banking sector, separately since commercial (deposit) and participation (Islamic) banks are only permitted to hold savings in bank accounts. Therefore, we separate the analysis level these two fundamental levels. Therefore, the banking sector consists of State-owned commercial (deposit) bank (e.g. the Turkish Republic Ziraat Bank), privately owned commercial (deposit) banks (Akbank T.A.Ş, etc.), foreign deposit banks founded in Turkey (e.g. HSBC Bank, ING Bank, etc.), state-owned participation banks (e.g. Vakıf Participation Bank A.Ş.), privately owned participation banks (Turkey Finance Participation Bank Inc.), foreign participation banks founded in Turkey (Albaraka and Kuwait Turk Participation Bank), and state-owned (İller Bankası, Turk Eximbank), privately owned and foreign development and investment banks. Detailed information about banks in the Turkish banking system can be found in Appendix B.

In the last part, we examine the general structure of the deposit account and the classification of credits in the banking system. In terms of balance sheets of banks in Turkey, we can observe seven various types of deposit accounts: saving deposit accounts, foreign deposit accounts, official deposit accounts, other cooperation deposit accounts, and bank deposit accounts. In Fintürk Geographical Distribution Dataset, we can observe two main subgroups: saving deposit accounts and other deposit accounts. In terms of the classification above, all the deposit accounts except saving deposit accounts and its counterpart in the foreign deposit accounts are included in the other deposit account. Foreign currency deposit account except in

saving deposit can be differentiated in the other deposit accounts. Likewise, saving deposit accounts in Fintürk Dataset is consists of two parts: Saving deposit accounts holding as Turkish currency and as foreign currency (mostly dollar terms). When we turn to the classification of credits, credits are split into two fundamental categories: Cash and Non-Cash credits. Cash credits are types of debts that are provided by financial institutions and banks as cash payment while non-cash credits are types of loans that are given in the form of a guarantee or written commitment by banks and other financial institutions to the third party. The main object of this type of loan is to guarantee to realize any commitments (delivering product, building an apartment, paying debt, etc.) (Creditwest Bank, 2020). In the Turkish case, non-cash credits include letters of guarantee, (commercial) letters of credits and letters of reference. Additional information on this topic is given in Appendix B.

Despite all malfunctions of the system in this process, the Turkish financial/credit market has not lost its credibility in the eyes of natives due to the structure of the regulations systems. In this regard, it has turned into a strong policy tool for the government to support flexibility for the private sector in the process of the crisis and stagnation. This flexibility leads to an adjustment of the private sector through the credit channels. In this regard, the effect of mass migration on the informal and the formal sectors may influence channels which are interrelated with these sectors.

CHAPTER 4

DATA AND DESCRIPTIVE STATISTICS

In this paper, the fundamental interest of the analysis is the impact of Syrian refugees on financial capital inflow and outflow in Turkey in terms of credit usage and savings. In this regard, this study tries to observe these effects through Turkish banking indicators. For this analysis, it is exploited by the data of the geographical distribution of Turkish banking variables, which are credits with subcategories and saving deposits with subcategories at the province level. This data compiled and put into services as an open source for researchers and banks by the Turkish Banking and Regulation and Supervision Agency (with Turkish abbreviation BDDK). This data set is coined as “FinTürk Geographical Distribution.” This data published as quarterly data and designed as a panel in terms of provinces. The part which is used for the analysis contains the period from December 2009 to December 2018, except in 2012 due to the lack of knowledge on the Syrian population in Turkey in year 2012, so it covers a total of 2673 observations at the maximum level. The orthodox tendency of previous literature on the Syrian refugee influx to Turkey, mostly, concentrates in particular years. However, we exploit all available data from December 2009 to December 2018 to control any possible trend behavior. Additionally, papers which focus on the migration effect of Syrian refugees in the literature restrict the geographical variations to two regional differences in which one of them represents treatment group, which includes high concentration for the refugee population, and control group for the other. Instead, we do not constraint the data which is utilized to particular regions, and I use a provincial variation of the refugee population in Turkey as density.

The leading indicators which is used as the object of the analysis split into two categories: credits and saving deposits. Likewise, we can categorize credits as housing credits, automobile loans, credit advanced, credit cards and consumer credits, which constitute the individual credits; and commercial credits in the sector of food

and tobacco, construction, metal and mining, financial, brokerage, tourism, textile, agriculture and fishing, energy, and navigate. This categorization is suitable and matched with the structure of the FinTürk dataset. Additionally, there are four main subcategories for savings: deposit savings, and which are held in native currency (Turkish liras), which are held in foreign currency (Dollar, Euro, etc.), saving accounts that belong to legal institutions, again, contained in foreign and native currencies. Lastly, we split banks in Turkey into two subcategories to clarify individual attempts to credit usage and savings to differentiate these attempts from economic activities and decisions of legal institutions: commercial-participation banks and all (Turkish) banking sector. Although BDDK does not indicate this classification, we can observe various types of banks in the sector, which will be shown in Appendix B, and we can aggregate different indicators under some subcategories without any problem. There are two underlying reasons for this splitting. Firstly, some bank types in the banking system, because of the legal restriction, cannot hold a saving deposit and account of deposit. We classify banks that can accept depositing money as commercial and participation banks. On the other hand, every bank in the system can give loans if its financial situations are suitable for credit. Secondly, some types of banks which are high capital owners are inaccessible for general users of banks since the scope and purposes of these banks is to finance and to support corporates and municipalities. To detect direct and indirect effects of the Syrian refugee influx on household-level indicators, the categorization seems reasonable.

Due to the structure of the Fintürk Geographical Distribution dataset, we cannot differentiate the number of credits and savings which belong to the Syrian population who came after the beginning of the Syrian Civil War. However, before the Civil War, namely 2012, the number of Syrian refugees in Turkey is at the negligible level. Therefore, it can be said that the information before the year 2012 shows movements and changes stemmed from the natives. Sources cannot support consistent information about the number of Syrian refugees in Turkey at the province level for the year 2012. For that reason, I dropped this year from the dataset. Likewise, I

cannot find any information about the number of Syrian refugees for a quarter in the years 2013, 2014, and 2015. For these years, I utilize the last month of the year, December, as the period. Consequently, there are 20 quarters of data on the number of Syrian refugees in which the research is carried out. Lastly, I cannot differentiate native and refugee categories in terms of the usage of banks mentioned above. I use a fraction of the Syrian refugees in the total population of a province as a treatment variable when analyzing the impact in the financial market. Likewise, I employ standard empirical controls like demographic profiles (e.g., age, education, average household size) of a province, and economic indicator (e.g., GDP per capita and trade volume) to increase the precision and to prevent possible omitted variable biases.

FinTürk Geographical Distribution dataset does not cover enough additional information to control the basic demographical features of those who deposit money to banks and to check the profile of users of various types of credits. Likewise, we cannot differentiate the amount of money that belongs to natives and who belongs to Syrian refugees. In spite of all my attempts, we could not take any information which specifies this difference from BDDK. Although the economic and cultural profile of the Syrian refugees stymie the usage and accessibility of the banking services in Turkey, we have to take into consideration the possibility of occurrence of high profile capital owners and middle class refugees who want to transfer their savings to Turkey in the middle of the Civil War or before the upheaval in order to preserve them. Therefore, the key variable of interest is the fraction of the Syrian refugee population in each province in Turkey. It is constructed this variable by normalizing the Syrian people by the sum of the native and Syrian population of the province in a specific quarter. Likewise, despite a deficiency of large-scale information on the profiles of Syrian refugees, this research does not require, generally, individual characteristics of the refugees because of the empirical strategies and its aims. In this regard, this research focus on the general effects of the refugee influx on the banking indicator, not just for the natives. Through the usage of fractions, we assume that Syrian refugees have some shares for the usage credits and depositing savings accounts to the banks in Turkey. In Robustness Checks part, we will try to control this assumption by using the

migrant-to-native ratio, whether they have financial capitals in the system. With these controls, we can examine the level of capital that came relative to the labor shock.

In order to fill the deficiency of FinTürk dataset, we utilize provincial datasets that are published by the Turkish Statistical Institute (TURKSTAT) in this time interval. Demographic characteristics of provinces, like age profile, educational attainment, average household size, and number, and economic indicators, which are GDP at the province level and import-export numbers in the dollar and native currency terms, are compiled in a dataset from TURKSTAT open-source data. In order to control the change in the amount of foreign currency, we take exchange ratios of different currencies to Turkish lira from the Turkish Central Banks for the interval mentioned above. The key difference of this research, except for its content, is to compel a dataset that contains quarterly numbers of Syrian refugees across provinces in Turkey from December 2015 to December 2018 with yearly numbers in 2013 and 2014 (last quarters of 2013 and 2014).

For data that is issued at annual level like GDP and native population, we extrapolate for the quarter level. We utilize annual growth of native population and we accept linear growth for each years for each province. In terms of GDP, we have quarter level data at the sector level at the country level and annual level data at the province level. We extrapolate quarter GDP level for each province by assuming that the growth rate of GDP in quarter terms is fixed in terms of annual growth and total level of GDP for each province at the specific quarter level should be equal to actual level issued by TURKSTAT.

This research is one of the pioneer studies in terms of data structure that use quarterly refugee data for Syrian immigrants except for the first three quarters of years 2013-2015 and for all quarters in year 2012 This data set is constructed from various sources: For 2013, the number of Syrian refugees is obtained from the Disaster and Emergency Management Presidency of Turkey (AFAD). For 2014, Erdogan (2014) provides the refugee numbers at the province level. Lastly, it is utilized from the Ministry of Interior Directorate General of Migration Management

website for 2015, 2016, 2017, and 2018 quarters. The directorate has issued information on the number of Syrian refugees on its website as open-source at sporadic intervals. Still, it does not put the information on the number of Syrian refugees processionally into service as a coherent dataset. Therefore, it can be said that the numbers are scattered. In order to acquire this information, we crawled the website back through totally legal approaches and tools and retrieved the information. The number of migrants in the various province for the analysis, unfortunately, starts in 2013, since the number of Syrian refugees in Turkey for 2012 is imponderous because of the deficiency of the source. In this regard, for the Difference-in-Difference analysis, the quarters from December 2013-December, 2018 are regarded as the treatment quarters, and the quarters December 2009-December, 2011 are considered the pre-treatment terms. In pre-treatment years, the numbers of the Syrian population in provinces of Turkey are regarded as zero, automatically.

Lastly, while it is constructed the instrument and its different version, we exploit the share of the Syrian population who dwelled in the various governorate in Syria, which issued in the Syrian Labor Force Survey for 2010 (the year before the beginning of the civil war). Lastly, we calculate the travel distance between each governorate in Syria and each province in Turkey by using Google Maps. Also, it is calculated the closest distance to border gates of Syria of each governorate to reach border countries, which are Turkey, Iraq, Jordan, and Lebanon. The statistical tables and graphics for the Turkish banking indicators can be found in Appendix A.

CHAPTER 5

EMPIRICAL MODEL AND IDENTIFICATION STRATEGY

5.1 Estimation strategy

This chapter explains the identification strategy and the econometric model which I will exploit in this paper. I used canonical linear Difference-in-Difference (D-i-D) identification to estimate the effect of Syrian refugee influx on credit usage and savings in Turkey. It is employed the following estimating equation below:

$$y_{i,t} = \alpha + \beta * F_{i,t} + X'_{i,t}\theta + \pi T_{i,t} + \delta_i + \delta_t + \varepsilon_{i,t} \quad (1)$$

where $y_{i,t}$ denotes the Turkish banking indicator (i.e. various types of credit usage total and per person, savings) in province i during quarter t as dependent variable. Readers can acquire detailed information about the Turkish banking indicator in Appendix B. We generally use natural logarithmic transformation for dependent variables. $F_{i,t}$ is the fraction of total number of Syrian immigrants in province i to natives who dwell in this province. $F_{i,t}$ is, at the same time, key variable of interest in this study, as treatment variable, since β , which is parameter of interest, measures the effect of change in the Syrian refugee fraction on the Turkish banking indicators. $F_{i,t}$ is a density variable that ranges between zero, which means that there is no Syrian refugees in province i and one which means the total population of province i consists of only Syrian refugees. $F_{i,t}$, by definition, is zero before 2013 because we cannot observe availability of Syrian refugees from provincial data which reflects the Syrian refugee numbers and assume that the number of Syrian population in Turkey is negligible at pre-war period. Since the main refugee influx began with the Syrian Civil War which was mentioned above in last months of 2012, observation of the availability of Syrian refugees in provinces after this year is plausible. $X'_{i,t}$ is a vector which reflects additional standard educational, demographic and economic controls of

provincial features. We will explain these controls detailed in Section 4. Therefore, θ captures the provincial effect on dependent variable. $T_{i,t}$ is the total trade volume which in terms of dollar and Turkish liras in province i and time t . We generally utilize trade volume in Turkish Lira currency for individual credit while using trade volume in native and dollar currency. It explains the economic activity in a specific quarter-region level. Last but not least, δ_i represents a province fixed effect which is a dummy variable for 81 province in Turkey, and δ_t denotes a quarter fixed effect. These fixed effects is employed the control for the unobservable characteristics that do not vary within provinces and quarters in difference-in-difference methodology. The error term is given by $\varepsilon_{i,t}$.

In terms of general controls in estimations, province-specific control variables cover for personal loans and savings which belong to real persons are average household sizes, age share group of 20-24, 25-29, 35-39, 40-55, 55-59, and over 65 age for each province. The average education categories added to the analysis are (i) primary school level graduates, (ii) high school level graduate, (iii) university graduates. The economic indicators which are proxies for growth and development level of each province are share of industry and service sector in the total GDP, logarithm of GDP per capita and of trade volume in the native currency. Likewise, Province-specific control variables cover for commercial credits and deposits which belong to legal entities and corporations are logarithm of GDP per capita, share of industry and service in total quarter GDP for each province, and logarithm of trade volume in native currency. Since GDP level for each province are issued only as annual terms by TURKSTAT (Turkish Statistical Institute) and quarterly for each sectors (agriculture, manufacturing, and services) at the country level, the numbers are extrapolated and calculated for each quarter of every provinces in this interval. The extrapolation strategy is discussed in “Data and Descriptive Statistics” part in a detailed way.

This econometric model exploits a linear Difference-in-Difference estimation strategy, which mentioned above, to measure the effect of the Syrian refugee influx by comparing Turkish banking indicators of each province with different refugee densities pre- and post-migration influx. Therefore, in the model, years before 2012 are considered pre-treatment years, and the years between 2013 and 2018 are considered the treatment years. Due to the lack of information on the Syrian numbers in provinces, we exclude variables in year 2012. It is estimated the impact of Syrian refugees at two different levels. In the first level, we use nine outcome variables which are the individual and commercial credits, saving deposit accounts in the dollar and Turkish lira while commercial deposit accounts in the dollar and Turkish lira. In the second layer, we make the same analysis in sub-breakdowns. In this level, our outcome variables are housing credits, automobile loans, credit advances, credit cards and consumer credits which are all breakdowns for individual loans, and commercial credits in selected sectors for food and tobacco, construction, metal and mining, financial, textile, brokerage, tourism, agriculture and fishing, energy and navigate. Variables which are taken into consideration are aggregate variables as mentioned above. The source of identification in this study stems from the variation of refugee fraction of provinces in different quarters. This analysis is made on quarterly data from 81 provinces of Turkey.

At this aspect, when we use the fraction of Syrian refugees instead of the migration-to-population ratio, usage and volume of Syrian refugees in the Turkish banking system can be debatable since the usage of the banking system and borrowing a loan from Turkish banks is less likely for Syrian refugees. However, when we investigate the anecdotal evidences and historical roots between Syrian people and their relatives in Turkey, we can consider that the likelihood of Syrian refugees access to the banking system may be more probable than what is thought. Besides this, refugee groups in the process of influx have not been uniform. Namely, early comers of the Syrian refugees were more risk-averse and had additional opportunity to come to Turkey because of geographical distance and economic power, and we think that these groups have noticeable amount capital to transfer. We expect,

in this regard, that this situation allowed earlier group for room when they transferred their financial and monetary capitals.

Although the rate of financial inclusion among Syrian population is a debatable topic, to assume banks as the safest place for protecting their capital in terms of security and inflation is plausible. We discussed the business activities in Section 2 and Section 4 in the context of firm entrance register. Therefore, we can observe the total effect with the use of aggregate variables. However, in the Robustness Checks, we will use per native and per population variable to control capital over labor ratios (K/L), which is one of the shreds of evidence for who exploits different credits and makes savings in terms of native and Syrian population. Although Syrians have limited access to credits and loans, they are not excluded from the banking system. In this regard, estimation results from per capita and per native variables may support proper information on the usage density of credits in terms of natives and refugees. Additionally, these estimation can contribute the discussion on the capital part of the capital-to-labor ratio contrary to previous studies that mostly focus on labor part of the discussion.

While applying Difference-in-Differences estimation strategy to estimate the causal effect of the Syrian refugee influx on capital movement in Turkey, we have to take into consideration “common trend assumption” or “parallel trend assumption,” which guarantees the internal validity of diff-in-diff estimation across province level. If the common trend assumption holds, in the pre-treatment period, change in outcome variables should have the same “trend.” Namely, this assumption ensures that the difference between treatment and control groups does not vary over time without treatment effect. In the next part, we check the common trend assumption whether to hold or not. However, most of the time, to satisfy the common trend assumption is quixotic since the regional shocks can be varied along the year/quarter changed, independently. In this regard, Joshua Angrist (2014) states that “Samples that include many states and years allow us to relax the common trend assumption, that is, to introduce a degree of nonparallel evolution in outcomes between states in the absence of a treatment effect.”(p. 598). Therefore, we relax the strict common

trend assumption in this study embellishing different time-trend-region level specification to the baseline model additional to quarter and province fixed effects. These different specifications are constituted by 5-region linear time trend, NUTS1-level linear time trends, 5-Region-by-year fixed effects, and NUTS1-by-year fixed effects. The extension of 5-Region-by-year fixed effects is highly similar to the specification of Stephens and Yang (2014) in US and Ege, Erzan, and Kirdar (2018) in Turkey context. The classifications for 5-Region are West (NUTS-1 regions 1 to 4), Central (NUTS-1 regions 5 and 7), South (NUTS-1 region 6), North (NUTS-1 regions 8 and 9) and East (NUTS-1 regions 10 to 12). This classification is compatible with Demographic and Health Surveys of Turkey. Additionally, to relax the assumption, we make our estimations on the 81-province level with 33-quarter from 2009-12 to 2018-12 level.

Besides the common trend assumption issue, the other threat is the endogeneity problem. This issue addresses that the treatment effect in the system should be systematically treated as a randomized natural experiment. Namely, there should be no self-selection criteria in which Syrian refugees can choose their location individually in terms of different indicators that affect the attractiveness of various provinces. In this regard, if Syrian refugees independently choose their dwelling location in terms of conditions that enhance credit usage and savings, then the results which come from the estimation may be biased. At the beginning of the Syrian Refugee Crisis in 2012, the migration movement in Turkey stemmed from the security concerns and was forced migration. The first engine for the refugee influx, in this regard, was out of control and mostly driven by the natural inclination with unintended rudimentary needs. However, with 2015, it can be posited that the situation for the refugee settlement in terms of Turkey changed. The illustration for the dispersion of the Syrian refugees can be observed Figure A2 in Appendix A.

Especially, Syrian refugees, with 2015, could find some illegal opportunities to flee to European countries, and the Turkish government allowed them to change their initial location, and they scattered across the country. After a while, Syrian refugees wanted to move more attractive provinces in which labor market outcomes

and employment opportunities relatively higher than the border countries of Turkey. It can be observed that the Syrian refugee number who dwell outside the refugee camps is incomparable with the population inside the camps. In this regard, we will make the same analysis on the effect of Syrian refugees with an extension of the instrumental variable approach to overcome the endogeneity problem. It will be explained the instrumental variables which is exploited in analyses in the following part in detail.

5.2 Instrumental variable approach

As we discussed above, the Syrian refugees have begun to make our decisions on location in Turkey. At least, we can observe in Figure A2 that they dispersed across provinces, which are generally economically attractive and the most developed in their region. In this regard, forced migration environment transforms into an internal migration case and quasi-self-selection problem. In order to tackle this problem, we use instrumental variable approach to weight variously more developed cities in the western part of Turkey. In the literature on the impact of Syrian refugees, there are some prevailing instruments: the interaction of distances between the major cities of NUTS-2 regions in Turkey and provinces in Syria with some Syrian population distribution (del Carpio and Wagner, 2015; Ege, Aksu, and Kırdar, 2018) and language-based instrument exploited the interaction between the overall Syrian refugee influx and the historic dispersion of Arabic speakers across Turkish provinces based on the 1965 Turkish census (Altındağ and Kaushal, 2020).

Although network effects on the dispersion of the Syrian refugee may not be negligible for the initial decision, the sociology of Turkey and the level of urbanization have changed since the survey, this IV would not give proper insights about weights to cities which Syrian population prefer. Most of research and empirical findings show that Syrian refugees tries to seek employment opportunity in non-agricultural sectors in the host country. Therefore, distance may be more proper element when Syrian refugees make their dwelling strategies. Not only for the Turkish context, according to the migration literature, migration costs are very momentous

determinants in immigrants' utility functions(Borjas). When the government began to permit internal migration of Syrians, we expect that the distance as a proxy can capture the migration costs of these immigrants and exclude the variation in the fraction of the Syrian refugees which stems from the employment seeking.

Although we consider that the distance is very proper candidate for an instrument, we have to discuss some profiles of the Syrian refugees in terms of geographical proximity between Turkey and Syria. Origin governorates in Syria of Syrian refugees is not uniformly distributed across the country. Moreover, cultural and historical proximity of various region in Syria with Turkey differ across country. Even though Turkey has the most amount of the refugees among Iraq, Jordan, Lebanon, and Egypt, it has been not the only choice to migrate. According to AFAD reports and survey research (2013, 2017), the distribution of the origin of Syrian refugees in Turkey in 2013 as following: 35.7% from Aleppo, 20.9% from Idlib, 10.9% from Ar Raqqa, 9.2% from Latakia, 7.5 % from Hamah, 5.4 % from Al Hasakah, 3.9% from Dayr Az Zawr, 3.8% from Damascus, 1.7 % from Hims, 0.4% from As Suwayda, 0.3% from Dar'a, 0.1% from Quneitra, 0.1 % from Tartus. From survey research of AFAD in 2017, 51.4 % from Aleppo, 10.7 % from Idlib, 9.3 % from Hims, 6.9 % from Hamah, 6.1 % from Latakia, 5.4 % from Damascus, 4.4 % from Ar Raqqa, 2.8 % from Al Hasakah, 1.9 % from Dayr Az Zawr, 0.6 % from Dar'a, 0.3 % from Tartus, 0.2 % from As Suwayda, 0.1 % from Quneitra. In this regard, for both of years, we can conclude that most of the Syrian refugees in Turkey has Aleppo and Idlib origin. The momentous point which we should consider is that refugees in Latakia and Hasaka did not choose to migrate to Turkey as Aleppo and Idlib although Hasaka and Latakia are as closer as Aleppo and Idlib to the border of Turkey.

In the light of information on the distribution of Syrian refugees and the condition of immigration possibility for the other destinations of the immigrants, we can infer that cultural and religious proximity with the geographical proximity are very significant determinants in which Syrian refugees chose to migrate. In this regard, we prefer to construct an instrument which takes these situations into consideration. For that reason, we exploit pre-war shares of the distribution of Syrian

population in the country to calculate the number of refugee origins and distances between districts in Turkey and Syria in order to weight various destination across Turkey. In the following part, we will discuss the advantageous of our instrument in a detailed way.

5.2.1 Cross country instrumental variable

The instrument which we construct for the number of refugees in province i and in quarter t to handle the possible endogenous location choice of refugees along the Turkey is as follows:

$$IV_{i,t}^{Cross} = \sum \frac{\frac{1}{d_{Turkey,s}}}{\frac{1}{d_{Turkey,s}} + \frac{1}{d_{Iraq,s}} + \frac{1}{d_{Jordan,s}} + \frac{1}{d_{Lebanon,s}}} * \pi_s * \frac{SyrPop_t}{D_{s,i}} \quad (2)$$

where $d_{Turkey}, d_{Iraq}, d_{jordan}, d_{Lebanon}$ point out four distance parameters which measure the distance between the capital of Syrian governorate and closest border gates of Syria with Turkey, Iraq, Jordan, and Lebanon, respectively while $D_{s,i}$ is the travel distance (in kilometers) between each province in Turkey and the capital of each Syrian governorate which is Aleppo, Raqqa, As-Suwayda, Damascus, Rif Dimashq, Daraa, Deirez-Zor, Hama, Hasaka, Homs, Idlib, Latakia, Quneitra, Tartus. In this regard, I use the same instrument with that in Aksu, Erzan and Kirdar (2018) in terms of the methodological approach. Still, I rearranged this instrument in accordance with provincial distance instead of the most populated cities in each NUT 2 region of Turkey. $SyrPop_t$ denotes the total number of registered Syrian refugees in Turkey in a quarter, and π_s is the fraction of the Syrian population that dwelled in each governorate in 2010 (pre-war shares). The identification for the instrument comes from the travel distance between 1053 destination-origin pairs: 13 Syrian governorates and 81 provinces in Turkey. As can be observed, this instrumental variable takes into consideration the possibility of alternative routes of Syrian refugee

influx to other border countries of Syria. In this regard,

$$\frac{\frac{1}{d_{c,s}}}{\frac{1}{d_{Turkey,s}} + \frac{1}{d_{Iraq,s}} + \frac{1}{d_{Jordan,s}} + \frac{1}{d_{Lebanan,s}}}$$

where c represents border countries, Turkey, Iraq, Jordan, and Jordan, part of the instrument measures division of the reciprocal of the distance between governorate s in Syria and the closest border gate of the border country c to governorate s by total of reciprocals of the closest distance for this governorate s to border gates with Turkey, Iraq, Jordan and Lebanon. This implies the likelihood of the migration decision of people who lived in governorate s in Syria to migrate to country c after the Syrian Civil War erupted. This implies that when $d_{c,s}$ decreases, the probability of migration for people who dwelled in governorate s in Syria to country c increases. Through this part of the IV, we can distribute Syrian population who migrate to various border countries in accordance with the possible migration cost proxy, the distance.

Apparently,

$$\frac{\frac{1}{d_{Turkey,s}}}{\frac{1}{d_{Turkey,s}} + \frac{1}{d_{Iraq,s}} + \frac{1}{d_{Jordan,s}} + \frac{1}{d_{Lebanan,s}}} \quad (3)$$

measures the probability for people who lived in Syrian governorate s to migrate to Turkey among four alternative border countries. It will be referred to this instrumental variable as "Cross Country IV" in the following part of the paper.

5.2.2 Del Carpio and Wagner (2015) instrumentral variable

The other instrument which we construct for the number of refugees in province i and in quarter t to handle the possible endogenous location choice of refugees along the

Turkey as an alternative to our first instrument is as follows:

$$IV_{i,t}^{DelCarpio} = \sum_s \frac{1}{D_{s,i}} * \pi_s * SyrPop_t \quad (4)$$

where $D_{s,i}$ is the travel distance (in kilometers) between each province in Turkey and the capital of each Syrian governate which is Aleppo, Raqqa, As-Suwayda, Damascus, Rif Dimashq, Daraa, Deirez-Zor, Hama, Hasaka, Homs, Idlib, Latakia, Quneitra, Tartus. $SyrPop_t$ denotes the total numbet of registered Syrian refugees in Turkey in a quarter and π_s is the fraction of the Syrian population that dwelled in each governorate in 2010 (pre-war shares). The identification for the instrument comes from the travel distance between 1053 destination-origin pairs: 13 Syrian governorates and 81 provinces in Turkey. In this regard, we use the same instrument with that in Del Carpio and Wagner (2015) in terms of methodological approach rearranging this instrument in accordance with provincial distance instead of most populous cities in each NUTS2 region of Turkey. We mention this IV as “Del Carpio and Wagner (2015) IV” in order to remove the possible confusion with “Cross Country IV” in the following parts.

This research mostly takes into consideration the IV results which generate Cross Country IV rather than “Del Carpio and Wagner (2015) IV” as it can be seen in Results and Discussion section of the thesis. We will demonstrate results that the second IV generates in order to check the robustness of the former IV. Actually, there are some momentous reasons for this choice when comparing results. Firstly, first stage results are more stronger for Cross Country IV than the second one as it can be seen in the regression results. Secondly, Del Carpio and Wagner IV (2015) assumes that the only destination for immigrants is Turkey. However, as we explained above, population who dwelled in south part of Syria before the war chose to migrate Jordan and Lebanon regardless of cultural and religious differences. Additionally, because of these differences, some refugees fled to distant countries even though they were closer to the Turkish border. The third reason which we claim that Cross Country IV is more robust is The third reason which we claim that Cross Country IV is more

robust than Del Carpio and Wagner (2015) IV is that Del Carpio and Wagner (2015) put more weight to industrialized and more urbanized provinces by controlling for the distance of the Turkish regions from the border along with their instrument. This control, as it can be realized, dilutes the variation in the instrument. Lastly, since we reconstruct the Cross Country instrumental variable for the province level, we acquire more accurate variation than the NUTS-2 version which is used by Aksu, Kirdar, and Erzan (2018).

CHAPTER 6

RESULTS AND DISCUSSIONS

This section measures and presents the estimated effects of the Syrian refugee influx on Turkish banking indicators, which are saving deposits in terms of dollar and Turkish liras and different types of credit usage with their subcategories, and then tries to discuss these outcomes and to investigate the underlying reasons for these impacts. We conduct the analysis for two different levels. At the beginning level, it is analyzed the effect of Syrian refugees on the aggregation of credits and saving deposit accounts in commercial and participation banks and then we repeat this analysis for credits and saving accounts for all types of banks. We follow this strategy because, as mentioned above, due to the structural differences of development and investment banks from other banks, they cannot hold saving accounts. Additionally, standard bank users cannot apply these banks for any purpose, easily. So, we can observe the impact and long-run effects with this strategy. However, in order to supply the clarity of the analysis, we use the data of all banking sectors in the second layer of analysis for various outcome variables.

6.1 Estimation results

In essence, we choose to utilize the fraction of Syrian refugees in every province because of the possibility which Syrian refugees would use credits and pay their financial capitals into the banking system in Turkey. We estimate in various analysis unweighted and weighted regression in which weighting strategies is to use province population and total GDP per capita in quarter terms, and standard errors are clustered at the province level. We employ nine outcome variables as dependent variables. The individual and commercial credits, saving deposit accounts in the dollar and Turkish lira, and commercial deposit accounts in the dollar and Turkish lira constitute the first level outcome variables for the analysis. In the second layer. We conduct the same

estimation for breakdowns. In this level, it is exploited housing credits, automobile loans, credit advances, credit cards and consumer credits which are all breakdowns for individual loans, and commercial credits in selected sectors which are food and tobacco, construction, metal and mining, financial, textile, brokerage, tourism, agriculture and fishing, energy and navigate as outcome variables. These variables which are mentioned are aggregate variables since the usage of the banking system and borrowing a loan from Turkish banks is less likely for Syrian refugees. Therefore, we can observe the total effect of the Syrian refugee influx by using aggregate variables. All variables are used in logarithmically transformed forms, so estimated results imply a percentage change of dependent variables as semi-elasticity measurements while the fraction of Syrian population changes in provinces across quarters.

For all tables in Appendix C and D, the first five columns reflect the results with unweighted estimations, while the last five estimates show the results with weighted estimations for total population except for Table C7-C10 and Table C13-C16. In these tables, the last five columns show results that are estimated with weighted estimations for total quarterly GDP in each province, additionally. Since these tables reflect the effect of the Syrian Refugee influx on commercial credits in selected sectors, we can expect that density and variety of quarterly GDP can be noticeable factors while estimating the impact. We choose to report results with and without weighted alternatives because the distribution of the native population and variety in GDP levels may have the power to change the distribution of the Turkish Banking indicators. Table results of OLS and IV estimations are successive with the same specification orders. OLS and IV estimation strategies are applied for a fundamental difference in the different models with four extensions. The first, at the same time, the basic model contains province-region and quarter fixed effects. The second, third, fourth, and fifth models additionally check for 5 Region Linear Time Trends, NUTS1 Linear Time Trends, 5 Region-Year Fixed Effects, NUTS1-Year Fixed Effects, respectively as we discussed in section 5.³ Results are estimated β

³You can find details about NUTS and region specifications in Appendix E.

coefficient (treatment effect) of Syrian refugee fraction in every province for Turkish banking indicators which were mentioned above in Appendix F. The results are evaluated based on clustered standard errors at 81 province levels.

Dependent variables are shown at the beginning line of the result tables, and they are separated in accordance with four breakdowns: commercial and individual with credits and savings. Because of the legal structure of some banks as investment banks and "Turkish Provinces Banks" (Türkiye İller Bankası) cannot hold saving deposits, we separate the banking sector in Turkey into two subcategories: all banking sector and commercial and participation banks. This type of categorization is not in regular usage in terms of the banking sector but suitable for our analysis.⁴ We add standard controls that reflect provincial features like trade, GDP per capita/log GDP, age structure, and similar economic and demographic indicators to the regressions at the province level.

6.2 Credit usage

Table C1, Table C2 and Table C3 (Appendix C) all together report results of the basic model which measure the impact of Syrian refugee influx on Turkish banking indicators for commercial and participation banks which are aggregate individual and commercial credits, saving deposits (in terms of dollar and Turkish liras bank accounts) and commercial deposits that belong to mostly municipalities and corporations. In both result tables, OLS and IV estimates are not statistically significant for aggregate commercial credits in every specification except Table C2 with second and third specifications. Still, results are, generally, inconclusive and inconsistent. However, when we look at the aggregate of the individual credits, results are statistically significant and consistent in terms of different specifications. In this regard, the effect ranges at the scope of 0.489-0.792, on average, in the OLS estimations. Although significance levels lose power in the total population-weighted OLS regression with second and fourth specifications, effects are close to their

⁴You can find details about the Turkish banking sector and banks classification in Appendix B.

unweighted regression counterparts. In Table C2, with cross-country IV estimation, the results lie within 0.585 and 1.035 for weighted and unweighted regressions at least five percent significance level for all specifications in individual credits. In Table C3 (Appendix C), with IV, which is constructed by DelCarpio and Wanger (2016), the effects lie within 0.421 and 0.774. Results with IV estimations are statistically significant as much as former IV estimation and slightly higher for the cross country IV. As we discussed above, cross country IV is more stable and plausible for the analysis. These results can be interpreted as that when the fraction of Syrian refugees increases by 10 percentage point, the usage of individual credits increases by, for instance, 53.7 percent using the fourth, 5 region-year fixed effects, specification in Table C1 (Appendix C) with unweighted regression estimation. The other results can be interpreted with the same approach. Note that we can easily see that the effect of Syrian refugees on credit usage is highly powerful even though the expectation about the impact before the estimation was not clear. We will discuss the channel in which increases the utilization of credits, especially for individual loans, in the third part of the section.

Table C4, Table C5, and Table C6 (Appendix C) present the effects of the basic model with different specifications on credit usage for all types of banks in the entire banking sector in Turkey. In this estimation, we include other types of banks that were excluded before. When we look at Table C4, the OLS estimation is not significant for commercial credits in any specification with unweighted and weighted regressions. However, the magnitude of the estimates for the different specifications is highly fickle. Notably, the difference between magnitudes in terms of weighted and unweighted regression is high. However, when we investigate the effects of refugees on individual credit usage amounts, we, again, quickly see the positive impact at least at a 10 % level. The estimates change between 0.523 and 0.790 with unweighted regression. The results are more stable and meaningful in terms of the scope of different models compared to results in Table C1. On the other hand, at second and fourth specifications, the results lose again their significant power in Table C4 for effects on individual credits with weighted regression. Anyhow, the baseline model

and third and fifth specifications are highly statistically significant (at least 1% percent level), and results are close to unweighted estimation counterparts in terms of range. Changes in the significance levels can be stemmed from the structure of the bank types, which we already have included in the estimation. Investment banks and development banks are momentous institutions that have substantial capital volume in the Turkish banking system, but these banks have narrow geographical distribution along with the country. In this regard, the variation which came from the distribution of banking outcome falls dramatically with 5-region specifications. Namely, this type of specifications cannot capture the change in outcome variables because of the deficiencies of the variation. The lowest significant effect for unweighted estimation is 47.7 % with baseline model for an increase in 10 percent of the Syrian refugee influx, on average, and for weighted regression is 52.5% with baseline model, again.

In addition to results in OLS estimation results, Table C5 and Table C6 (Appendix C) show the DelCarpio and Wagner (2016) and Cross Country IV, which was constructed above estimation results. The effects on commercial credits in terms of all types of banks in the banking sector for unweighted estimations are not statistically significant for both two IV types. We can observe again some significant results for weighted regressions in Table C5 and Table C6 (Appendix C). Still, results that come from extended specifications are highly volatile in terms of magnitude compared to the baseline model. When we look at the effects on individual credits for the entire banking sector in Table C5 and Table C6 (Appendix C), results with five various specifications are not only statistically more significant than OLS estimation results, but also magnitudes for both instrumental variable estimations are much higher. Magnitudes for IV estimations in Table C5 and Table C6 (Appendix C) are highly close, but explanation power is better for the cross country IV. In Table C5, the range for the magnitude of the coefficients for the effect of the Syrian refugee influx is between 0.573 and 1.026 for unweighted regression, while the interval between different specifications for weighted regression is between 0.733 and 0.963 which is quite narrower than the former estimation. Therefore we can deduce that, in different estimation strategies, the effects of the Syrian refugee influx on the usage of the

individual credits are highly positive and statistically significant while the impact on commercial loans is inconclusive.

Now, we can focus on some different breakdowns in terms of commercial and individual credits for all types of banks in the Turkish banking system and commercial-participation bank couple. Table C7 - Table C12 show commercial credits in detailed sectors as outcome variables. The first three tables depict cash credits as outcome variables, while the last three demonstrate analyses of non-cash credits. Details on the credit classification are mentioned in section 3. In order to grasp the underlying mechanism with the general credit usage channels, we exploit the categorized Turkish Council of Bank Audit and Regulation (BDDK) dataset in which credits are split into subcategories for individual credits and commercial credits. 10 subcategories constitute commercial credits in our dataset: food and tobacco, construction, metal and mining, financial sectors, textile, brokerage, tourism, agriculture and fishing, energy, and navigate. As apart from the earlier estimations, we incorporate the weighted OLS method for quarterly GDP into the estimations in addition to for total population since the logical correlation between the distribution of the commercial credits across Turkey and the distribution of the population are not mandatory. To weight the regression with the total GDP of provinces may be entirely plausible.

The OLS estimations for the impact of the influx on the usage of commercial cash credits subcategories of commercial and participation banks can found in Table C7. When we look at the results of the estimations, the conclusive outcomes come from weighted estimations, especially with quarter GDP, and the most consequential effects are in the construction sector. This is in the scope of general expectation since the construction sector, especially in terms of the private sector, increases its market power mostly in developed, urbanized, and wealthier cities in Turkey. Because of the apparent heterogeneity among provinces in Turkey in terms of development, an unweighted estimation strategy ignores these varieties and violates homoskedasticity assumption. The other statistically significant effects which come from agriculture-fishing and energy sectors disappear with the weighted regression

estimations. The significant results which come from the navigate sector do not disappear with weighted regressions, but results are not robust as much as the construction sector. Since the navigate sector concentrates on the western borders of Turkey and the location of refugees is on the side of the western part of Turkey as mentioned above, results may be biased.

The effects for construction sector credits in Table C7 are statistically significant and positive, and results vary between 1.783 4.190 for weighted estimates with a total population of the province and 1.326 and 4.732 for weighted estimations with quarterly GDP of the province. Among these estimates, only the result from the baseline model in weighted estimation with total GDP drops below the significance level at 1%. Results for both are statistically significant at least a one % significance level except for this estimate. These effects cannot be seen in the unweighted regression estimations. When we look at the navigate sector credits, the results are blurring and highly volatile. Although we can observe some statistically significant effects whose magnitudes lie between 10.190 and 14.37 in this sector, these effects disappear when the analysis is reconducted in 2SLS estimations with Cross Country IV. Since the refugee impact on the credit usage in the navigating sector, in this regard, unreasonably high, to interpret these effects is complicated even if results are accepted relevant and conclusive. Probably, economic activities in the navigate sector to concentrate on coastal areas, which are in the more developed western part of Turkey as we mentioned above. The overall positive shocks in the Turkish economy after Syrian refugees come to Turkey, e.g., decrease in general price levels (Balkan, Tümen), can positively affect the sector indirectly. Then the underlying reasons which attract Syrian refugees to Western Turkey may coincide with the economic conditions which improve the sector at this time interval. This situation, generally, confirms our claims.

The IV estimations for the effects on credit usage in commercial and participation banks are reported in Table C8 and Table C9. In Table C8 (Appendix C), generally, the impact on the credit usage in the construction sector for these types of banks keeps their magnitudes and signs for the Cross Country IV estimation. The

range for the magnitude of the effect is between 1.783 and 4.190 for weighted regression with total population for all specifications at least 10% significance level and between 1.326 and 4.732 percent for weighted regression with total GDP for all specification except the baseline model (first specification) at least 1% significance level. It can be realized that there are some statistically significant and negative impacts on credit usage in the metal and mining sector for various specifications. However, results are not conclusive and stable in terms of magnitude for different specifications. Lastly, credit usage in the navigating sector disappear its all statistically significant results for all the specifications.

The last analysis for the effects on cash credit usage of commercial credits in selected sectors from commercial and participation banks are presented in Table C9 (Appendix C). We exploit, again, Del Carpio and Wagner (2015) IV for the estimations. When we investigate the overall results, we can see statistically significant outcomes come from, at the basic, from the construction sector again. With the difference of Cross Country IV estimations, effects in the food and tobacco sector, metal and mining sector, and navigate sector gain some statistical significance. However, again, results and significance levels are not stable across different specifications except construction and navigate sectors. Since Del Carpio and Wagner IV (2015) put more weight on developed western cities and it assumes that Turkey is the only destination for Syrian refugees, the results are not plausible. We discussed why we prefer to employ mostly Cross Country IV and why it is regarded as a more consistent instrumental variable in Empirical Model and Estimation Strategy section. We can assert that results with the Cross Country IV are more probable and conclusive. To put it in a nutshell, the impacts on cash credit usage in the construction sector for commercial and participation banks keep their significance at least 10 percentage level for all estimation in Table C7 - C9 (Appendix C) for weighted estimations except the baseline model in Table C8. The overall results for the credit usage in the construction sector are positive and statistically significant for different specifications. However, the magnitude of the effects is quite higher than it can be expected before.

Now, we can discuss the results for commercial non cash credits in commercial and participation banks. The overall results for the effects of the Syrian refugee influx on non-cash loans are aggregated in Table C10- C12 (Appendix C). We give information that is required to interpret results in non-cash credits in section 3. As can be seen, non-cash credits are mostly related to export and import activities and business activities in the public sector, especially in infrastructure construction. In Table C10, results in construction, textile, and metal and mining sectors are drawn the attention. Statistically significance levels in the agriculture and fishing sector disappear with different specifications. The interpretations of these results need local information on these sectors and the function of non-cash credits in Turkey.

Firstly, when we look at the construction sector, we can easily observe that results for all estimation strategies are significant and close in terms of magnitude except the third specification in the third specification of unweighted estimation. We can conclude that the usage of non-cash credits in the construction sector decreases in provinces which Syrian refugees choose to locate more, dramatically, while cash credits in this sector increase with Syrian refugees. This can be interpreted as sectoral shifts of contractors in terms of public and private sectors which is highly significant effect in terms of economic conditions.

From anecdotal evidence and empirical studies, we can deduce that Syrian refugees lead to a significant labor supply shock in the construction and textile sector, due to their legal status. Additionally, Balkan, Tok, Torun, and Tümen (2018) demonstrate that the refugee influx increases the rents of higher-quality housing units, but does not have statistically significant effects on the rents of lower-quality units. This finding may suggest that the refugees have increased the demand for native-dominant neighborhoods with better conditions among natives. In the short-run, this finding can explain the increase in rental prices and a demand for high-class housing. However, in the long-run, because of the high demand, we can expect that contractors have stood to the private housing sector to meet the demand, increasing the housing supply. Likewise, although there are no significant effects in rental prices in low-quality housing, native owners of this type of house find an

opportunity to rent their houses because of the increasing demand. With this opportunity, they can finance their preferences to move to higher quality places. At the end of the day, this situation leads to contractors who work with the government shift to the private housing sector. As it can be known that contractors should use the letter of guarantee from banks which is a type of non-cash credits when working for a government construction business to fulfill official requirements. More or less, we can regard an increase in the usage of non-cash credits in the construction sector as sectoral shifts between private and public construction sectors.

Secondly, when we look at the commercial credit usage in the textile sector in Table C10, we can realize the positive and statistically significant impacts for lots of specifications. Magnitudes are close to each other and stable among various specifications. All of them are statistically significant at least 5% except for the last specification in weighted estimation with the total population. These results are plausible since textile in which Syrian refugees work very much (Aksu, Erzan, and Kırdar, 2018) have a momentous volume in export elements of Turkey. The refugee influx has had a positive impact on the informal sector in terms of production costs due to the cheaper labor supply (Balkan and Tumen, 2016; Aksu, Erzan, Kırdar, 2018). We can expect that producers in Turkey have gained a relative advantage in the global market and have increased their export in the textile sector. Besides this, Syrian refugees are not predominantly low skilled or unskilled labor. There are lots of Syrian immigrants who have artisanship. Likewise, due to the dispersion of the Syrian population in diaspora and cultural networks among Arab peoples, Turkey may gain an international network boost in exporting among the Arab world through Syrian Arabs in the business sector. All of these effects can explain why the Syrian refugee influx increase non-cash credits in the textile sector while no observable effects in its cash counterpart.

In Table C11 and C12, we conduct the same estimations with the instrumental variable approach. In Table C11, all significant effects disappear except for the construction and the textile sectors. Although the effects in the non-cash credit usage of the construction sector lose some significance, most of the estimates survive their

robustness at least 5%. Most of the statistically significant results die out with weighted estimations for agriculture and fishing and navigate sectors. When we turn to Table C12, we can make similar interpretations for the construction and the textile sectors with estimations in Table C10-C11. Although the effects in the non-cash credit usage in the agriculture and fishing sector gain some significance, they die out with the weighted estimations. As we discussed earlier, results on the metal and mining sector lose their explanatory powers with the estimations with both of the instrumental variables. In this regard, we can conclude that there are some positive impacts in the usage of cash credits in the construction sector and the usage of non-cash credits in the textile sector, while there is a negative effect on the usage of non-cash credits in the construction sector.

Next, we can focus on the usage of subcategories of individual credit in commercial and participation banks. Table C13, Table C14, and Table C15 (Appendix C) report the effects of the Syrian refugee influx on individual loans with the same specification and estimation strategies applied before. Table C13 (Appendix C) presents the OLS estimation results. The apparent positive and consistent effects seem on consumer credits. Results for the impact on consumer credits are statistically significant for both weighted and unweighted estimation results at least one percent significance level. They vary between 0.707 and 1.268 for unweighted and weighted estimation. The model results for housing, auto loans, and credit advanced are highly volatile since the significant effects die out after weighting and magnitudes and signs change drastically for different specifications. Even though results for credit advance gain statistical significance after weighting, the model results in highly fickle for various specifications.

Now, we can compare the effects of Table C13 (Appendix C) with IV results. Table C14 (Appendix C) and Table C15 (Appendix C) present IV results for detailed individual credit subcategories. The clear difference between the two IV's results appears in credit advances. While models which measure the effects on housing credits and the usage of credit card does not yield conclusive results for both instrumental variable estimations, the impact of auto loans is statistically significant

with unweighted regression estimation for the Cross Country IV. However, this significance loses power with weighted estimation. The models for credit advance outcome and consumer credits produce statistically significant effects for both weighted and unweighted estimations. Even though magnitudes and significance levels of the impact slightly higher than results in Table C13, results are consistently close to each other. Overall, the lowest estimate is 0.658 and 0.814, and the highest estimate is 0.902 and 0.987 for the Cross Country IV and Del Carpio and Wagner (2015) IV, respectively, for credit advance usage. Lastly, coming to consumer credits, the effects for both IV consistently coincide with each other in terms of the magnitude, sign, and significance level. While the estimate in Table C14 which reflects the effect on consumer credits points out an increase between 0.899 and 1.184 for unweighted estimation, and 1.014 and 1.359 for weighted estimation mostly at one percent significance level, it illustrates an increase between 8.93 percent and 11.84 percent for unweighted regression and between 10.14 percent and 13.59 percent for weighted regression when the fraction of Syrian refugees increase 10 percent in a province, on average. Therefore, we can deduce that the most consistent and stable results for subcategories of the individual credits in the estimations of Table 13-16 are yielded with consumer credit outcomes.

The impact on consumer credit is statistically significant for all baseline models and extended specifications, as mentioned previous paragraph. However, the underlying result of this impact is not clear. In essence, this estimation results cannot produce suggestive explanations since there are no theoretical or empirical expectations on the correlation between mass refugee influxes and change the tendency of individual credit usage. To explain these results, it can be argued that Syrian refugees may have some effects which increase the general price level for specific inelastic products, and natives can only compensate for this drawback with loaning. However, Balkanoglu and Tumen (2016) show that Syrian refugees have decreased the inflation and general price level between years of 2013-2016 because Syrian refugees comply with low wages, and this condition yields, especially in the informal market, cost reduction and allows room for price competitions. Moreover,

even in the native pool, banks prefer to lend consumer credits to customers who have a reliable credit history. In this regard, we regard this situation as a constrained situation although we do not reject this possibility. If we think of the possibilities for credit usage by Syrian refugees, we encounter some legal issues which have stymied the attempt of refugees for loaning from Turkish banks. Even though the Turkish government had allowed Syrian refugees to open bank accounts and to borrow commercial and individual credits from when they came to Turkey, the socio-economic level and economic profile of most of the Syrian refugees are not suitable for saving and loaning. For that reason, access to an overwhelming majority of refugees to the financial system in Turkey is all but impossible. So, we can assume that the underlying reasons for the increase in consumer credit may be germane to some specific features which stem from the local dynamics in Turkey. In the Robustness Checks (Section 6.4.2), we try to prove possible users of these credits through estimations per total and native households with insight on capital-to-labor ratios. Then, we will try to discuss these dynamics in part of 5.5., "Possible Channel for the Credit Usage."

In Table C16, Table C17, and Table C18 (Appendix C), I redo the analysis in Table C7 - Table C9 (Appendix C) for all types of banks in the banking sector. OLS estimations in Table C16 (Appendix C) reflect that the effects on the construction sector keep the significant outcomes at least 10 percent level for weighted regressions with total population and total GDP. Likewise, we can, again, observe positive and unexpectedly large impacts on navigate sector. As mentioned earlier, since economic activities in the navigate sector concentrate on coastal areas, which are in the more developed western part of Turkey, the overall positive shocks in the Turkish economy after Syrian refugees come to Turkey can have a positive impact on the sector indirectly. On the other hand, credit usage in the energy sector seems positively affected after the refugee influx. Still, the significant results in Table C16 for the energy sector die out after weighting estimations. Contrary to commercial and participation banks' counterpart, we come across a negative impact on credit usage in the tourism sector. However, these significances cannot survive with IV estimations.

Results for the credit usage in the construction sector lie between 1.653 and 3.367 percent for all weighted estimations at least a 10 percent significance level for all various specifications.

When we compare OLS results with IV estimations, we can see that the positive effects on the credit usage in the construction sector survive and have as statistically significant as in OLS results in Table C16 (Appendix C). Additionally, the magnitude of the effect does not vary very much in the estimation with cross country IV. However, the other impact on tourism and the navigate sector disappear. The results in Table C17 (Appendix C) does not yield a conclusive outcome for interpretation except for the construction sector. In Table C18, still, we can see a positive impact on credit usage in the construction sector again in fewer specifications with lower magnitudes. Interestingly, the positive effects on credit usage in the navigating sector can be captured with Del Carpio and Wagner (2015) instrumental variable estimation. These systematic differences between two instrumental variables can reflect a level effect of the Syrian population migrated to Turkey, which coincides with the overall shocks for the Western province of Turkey. However, this interpretation requires further exploration. Anyhow, overall, we can posit that there is a positive impact of Syrian refugees on the cash credit usage in the construction sector, which survives for all estimation strategies and analysis, at least for weighted estimations. And, of course, it is plausible since, because of the wage profile and the natural tendency of Syrian refugees for lower-wage level than natives, native employers have preferred Syrian refugees in order to reduce production costs, especially, in sectors in which informality level is higher like construction, textile, and agriculture since the beginning of the influx. This reduces the production costs to allow room higher credit usage for native employers to make further investments. In this regard, this estimations check their counterparts in Table C7-C9.

Next to the effects on cash credit usage in different sectors, we can investigate results for Non-Cash credits for all banking sector. The overall outcomes for the impacts of Syrian refugees on non-cash loans are compiled in Table C19, Table C20, and Table C21 (Appendix C). The estimates in non-cash credit usage in the

construction, the textile, and metal and mining sectors demonstrate statistically significant results for weighted and unweighted estimations. Results for the construction and textile sectors are similar to results in Table C10 in terms of significance levels and magnitudes. The usage of non-cash credits in the agriculture and fishing sector has significant results, but they disappear with weighted estimations like in Table C10. Significant results in the metal and mining sector disappear with IV estimations.

Lastly, we can look at the general effects of Syrian refugees on the usage of subcategories of individual credits in all types of banks in the banking sector. In Table C22 (Appendix C), the OLS estimation results are reported. Even though there are some statistically significant results for housing and auto loans in various specifications, these effects are highly volatile for different specifications in terms of magnitude, and they begin to lose their explanatory powers after weighting estimations. At the same time, the impact on the usage of credit advance and credit cards vary between weighted and unweighted estimation results, drastically. On the other hand, as in Table C13 (Appendix C), the impacts on credit usage in consumer credits are statistically significant for all various specifications with similar magnitudes in Table C22 (Appendix C). The Cross Country IV estimation results are presented in Table C24 (Appendix C). In Table C23, like in Table C16 (Appendix C), credit advance outcome begins to yield a statistically significant outcome, at least, at a five percent significance level, which lies between 0.658 and 0.903 for all estimation specifications. When we check these results with Del Carpio and Wagner (2015) IV, we cannot observe changes that can produce significant differences for the analysis. In this regard, we can argue that there is a noticeable impact of the Syrian refugee influx on the credit usage of individual credits when we take the usage of individual credit in all types of banks into consideration. We will discuss underlying reasons for this situation in the part of 6.5 in this section, as we mentioned above.

6.3 Saving deposits and accounts of deposits

Table C1, C2, and C3 (Appendix C) reports the estimation results of the impact of Syrian refugees on the total savings in deposit accounts and deposit accounts of government agencies, business organizations, banks in the other banks, and other organizations which are coined as “other account” in these tables. Due to the structure of the banking regulations and aims of banks in Turkey, development and investment banks do not hold deposit accounts that belong to any legal entity. Therefore, we measure the level of aggregation of commercial and participation banks for these time intervals. When we look at these three tables for other deposits, we cannot see any statistically significant impact of Syrian refugees. Since the capital inflow and outflow of the commercial entities are germane to various factors, we cannot track the movement of capital from the banking indicators. Even though companies and municipalities have been exposed to positive shock due the mass migration, this does not imply that these entities should hold their capitals in bank accounts. Likewise, since “other” accounts include municipalities and companies as one category, we cannot differentiate the attitudes of these two different entities towards the effects which have stemmed from the refugees in terms of saving and consumption decisions.

Next to this, we can concentrate on the impact of Syrian refugees on saving accounts for individual customers. Table C1 (Appendix C) presents the estimated results which reflect the impact of Syrian refugees. The Syrian refugees have a positive and statistically significant impact on total saving deposits which are calculated in terms of local/Turkish currency at least one percent significance level except for third and fifth specifications for both weighted and unweighted estimations. The results lie between 0.208 and 0.771 for unweighted, and between 0.279 and 0.729 for weighted estimations. When we look at two successive lines to total savings outcomes, we can see the decomposition of total savings in terms of local and foreign currencies. The former line after total savings reflects the effects on saving deposits held in foreign currency in terms of the dollar terms while the latter shows the part of total savings in commercial and participation banks held in local currency (Turkish

liras). We cannot see any significant effects for saving accounts in the Turkish lira term. On the other hand, the statistically significant effects on savings in dollar accounts can be seen in Table C1 (Appendix C) for both weighted and unweighted estimations at least a 10 percent significance level. The scope of the results ranges between 0.878 and 1.525 percent for all of the specifications and weighted estimations.

From the estimation results, we can deduce a significant migration impact on savings in dollar terms. However, this estimation cannot shed light on the channel and underlying reason which explains the source of increasing monetary savings. Namely, we can think of two different alternatives for this impact: the source of the rise can be stemmed from the financial capitals which the Syrian refugees brought along when they fled to Turkey. This implies that they deposit their money to Turkish banks. On the other hand, as Ege et al. (2018) refer to in their articles, the Syrian refugees have a positive impact on the wages in the formal sector. Given the financial inclusion of the formal sector in Turkey, we can claim that the wage increase in the formal sector can be observed in bank accounts. Still, we need further explorations for the reason why we cannot observe the positive impacts on the native currency deposit accounts. Presumably, the exchange rate fluctuation in Turkey has changed the natural inclination of native citizens in saving decisions. In order to prevent the uncertainty, middle-class wage-worker choose to exchange their monthly income immediately to dollars, so we can observe the impact mentioned above only in dollar saving accounts. Yet, we need more empirical evidence to support these claims.

After the examining OLS results, we can compare the results presented in Table C1 (Appendix C) with IV estimation results in Table C2 and Table C3 (Appendix C). The Cross Country IV estimation results are reported in Table C2. Even though we lose some significant impact on different specifications, especially for weighted estimation in saving dollar deposits, we can capture important effects for total saving and dollar savings. In Table C2, statistically significant results vary between 0.509 and 0.867 for total savings in the Turkish currency term, while the magnitudes line between 0.787 and 1.247 for unweighted regression estimations.

Even though there is no statistically significant effect for saving dollar accounts with cross country IV estimation in weighted OLS estimations, the overall estimates show positive impacts of the mass migration with stable magnitudes. In Table C2, results are quite analogous to results in Table C3 except for the magnitude. Effect of the migration is measured quite less for Del Carpio and Wagner (2015) IV estimation than the Cross Country IV.

When we ponder on the results which reflect the effect of mass migration on the saving accounts, we can deduce that the Syrian migration has a positive impact on savings held in the banking sector. However, when we consider the usage volume of the banking system for Turkish citizens, we can argue that the estimated results can reveal only a small amount of the immigrant effect. On the other hand, when we think of the usage volume of wage-workers who enjoy the positive shock stemmed from the Syrian population, these results can be momentous candidates to explain the consequences of the increase in wages in the formal sector.

CHAPTER 7

ROBUSTNESS CHECKS

7.1 Control for the placebo effect

In Table D1 (Appendix D), we use a placebo test in order to control the structural problem in identification strategies which is utilized and to check common trend assumption validity in this research. For this test, we construct an artificial dataset (or “fake” treatment group) in terms of the number of Syrian refugees. Since we know that there is no Syrian population in Turkey at the pre-treatment period (before 2012), there should be no province-level indicator which is affected by the treatment effect. So, we use this part of the dataset for the structural control by applying difference-in-difference estimation. It is taken the information about the number of refugees at the province level from first the last quarter of the year 2018 and it is plugged these numbers into the number of Syrian refugees at provinces in the year 2011 instead of zero. Then, we acquire a dataset that reflects the Syrian refugees fleeing from Syria to Turkey at the beginning of 2011.

The underlying logic of this test implies that since there is no treatment group which in reality is affected by the exogenous treatment, it should be found zero or insignificant effects. To come across conclusive results may imply some underlying variety in trends between provinces and/or regions (Gertler, Martinez, Premand, Rawlings, and Vermeersch, 2016). In Table D1, we can see only three statistically significant estimates for credits and saving deposits. The first one is for consumer credits whose results were inconclusive for OLS and IV estimations above, just for one specification (first specification in weighted estimation). The second significant result is for individual credits in the third specification of unweighted estimation. Again, this result is available just for one specification and it dies out after weighting regression estimation and various specifications. The third one is for total saving, and we can make some comments like the other significant results above.

The interesting part of the results of the placebo test can be seen in other deposits that cover official deposit accounts, other cooperation deposit accounts, and bank deposit accounts. Namely, estimates are statistically significant for total and local currency these types of deposits as in aggregated form for unweighted regression at least 10 percent significance level for all specifications while we cannot observe this situation for other deposits in dollar terms. The probable explanation of these consequences may derive from the companies who own large scale of dollar accounts in the system. In this situation, we can expect low regional variation and common trends between regions at different levels in terms of other deposits. However, this needs further explorations for the explanation.

7.2 Control for capital over labor ratios

Until now, we discussed the impact of the Syrian refugee influx on aggregate credits and aggregate saving deposits in order to grasp the capital movement (in terms of inflow and outflow) and the long-run effects of immigration in the host country. However, the analysis at this level cannot explain the possible channels which lead to change and cannot differentiate the source of changes, especially for individual credits and saving deposit accounts. Namely, although we can estimate an increase in aggregate individual credits and saving deposits holding in foreign currency, we cannot find exact channels of sources that give rise to these increases. In order to support insight into this situation, we conduct a similar analysis on the per native and per total number of household outcomes as dependent variables. To examine these estimations, we argue that we can produce information on the channel of change by which we exploit the variation between per native and per total estimations. This is why we expect that the impact per native and total household outcomes should be positive at the same time if Syrian refugees transformed their financial and monetary capitals that are comparable with the current capital inflow of natives to the banking system. Likewise, if Syrian refugees can access to individual credits as easily as natives in Turkey, we have to see increases in both levels of analysis, even the

increase in per native level should be more than per total since outcome variables are not divided by the number of households which cover Syrian refugees in Turkey. On the contrary, it would imply that the sources of increases are based on the effects of natives if signs are contrary to each other in these two different levels and/or magnitudes are incomparably various to each other.

Tables D2 - D3 - D4 (Appendix D) reports estimate results of the effects on individual credits and saving deposit accounts per native and total household. In Table D2, OLS results are reported for total individual credits and saving accounts per native and total household numbers with the same specifications and estimation strategies in previous parts. As it can be seen in Panel A, the estimates for Individual credits, total savings deposit, and saving a deposit in native currency term are negative and statistically significant for all specification at 1% level. In terms of magnitudes, the impacts are economically significant at the same time. We can deduce that we expected before, the main source which leads to an increase in individual credits are native individuals. When we look at Panel B, we can observe that the results are positive and statistically significant at least five % level for third and fifth specifications. Although in the weighted estimation part, we can come across negative estimations, it does not imply inconsistent results. There are some important reasons for this situation. Firstly, the weighted estimation strategy continues to put more weight on more populous cities which are generally the most developed in their region although we control the provincial variety by using per capita variables. For that reason, we may give more weight to the western cities of Turkey. The lowest magnitudes and negative signs in weighted estimations are plausible at the same time since an increase in the individual credit usage cannot stem from a more dispersed and well-distributed scenario. Especially, in NUTS-1 specifications, variations between regions increase based on geographical variation in terms of development and credit usage. This situation can imply the claim of the literature on labor market benefits in the formal market after the refugee influx. In this regard, only some part of the native society can be affected positively this shock and can find an opportunity to borrow individual credits. We discussed the possible channels for credit usage in part 6.5.

In Table D2, similar with the individual credit case, the effects on total savings and saving deposit holding in native currency per total household are negative with noticeably higher magnitudes for all estimations and specifications at least 1% significance level in Panel A. However, in Panel B, we cannot see any significant and stable effect for total saving deposits per native household. In terms of saving deposit holding in Turkish currency per native household, effects in third and fifth specifications of unweighted regression and fifth of weighted regression are significant at least five % level. Overall, all of the coefficients in this estimation are negative which may imply capital outflow from the banking system or systematic shift to foreign currency, considering results in Panel A. This would be plausible if natives found an incentive to finance their business or used their savings to spend for a high level of housing due to the relative enrichment after the refugee inflow. However, this interpretation requires further explorations. Lastly, when we look at the saving deposit accounts holding with foreign currency (mostly in dollar term), we find statistically insignificant effects in Panel A for all specifications while statistically and economically significant results of unweighted estimations in Panel B, and insignificant but slightly closer coefficients in terms of magnitude with weighted estimation. At this point, we can capture a piece of evidence which can imply that some part of Syrian refugees have relatively noticeable monetary asset to transform into Turkey after the war since we cannot see a robust decrease in Panel A, but important effects in Panel B at least in unweighted regressions. However, we mention why unweighted regression aims the main target in the analysis, and we add weighted regressions for the sake of completeness.

In Table D3, the Cross Country IV results are reported for the same specifications and weighting strategies. We can see similar results in Table D2 which allow us to make the same interpretations in terms of Individual credits, total saving deposit, and saving deposit holding in the native currency. On contrary to Table D2, the effects on saving deposit accounts for foreign currency in Panel A gain noticeable statistical significance for most specifications, increasing magnitudes. At the same time, the effects on saving deposit account holding in foreign currency loose

significance for most of the specifications and decrease their magnitudes. In this regard, we can conclude that the overall channels on the capital accumulation in Turkey and on savings are not apparent in the light of IV estimations. From the per native terms, we can find weak insights on an increase in dollar asset of Turkey because of Syrian refugees, but in Panel A of Table D3, we can see that the impacts on dollar assets in the banking system are negative when we take the number of dollar assets of Syrian refugees into consideration. However, effects on dollar accounts per native term demonstrate, more or less, an increase in the banking system. This situation can explain a change in preferences of natives to shift holding dollars rather than native currency.

The difference-in-difference methodology captures the foreign exchange shocks in Turkey since there are no geographical differences in the money market across provinces. Hence, there is no direct relation between native preferences on foreign currency and refugee influx. However, due to the uncertainty and panic after the war and mass migration, natives who live in a location in which Syrians choose to dwell have been able to turn to the different saving mechanism. Nevertheless, relatively less wealth situation of Syrian refugees and natives' strategies on holding foreign currency cannot be differentiated exactly. In this regard, the main interpretations in this part can be that natives are predominantly social groups, as we expected, can access to individual credits. Besides this, Syrian refugees have positive impacts on the assets in foreign currency in the host country. However, the channel of this impact is not clear. As mentioned above, a small proportion of Syrian refugees can transform a comparably amount of monetary capital into Turkey, but we cannot exactly observe this situation because of the low-mean of the wealth of the most refugees. Likewise, natives who gain benefits from the refugees, especially in the formal sector, can change their preferences on the foreign currency and this situation stems from a "shifting effect".

7.3 Possible channels for credit usage and savings

When we look at the results in Section 5.2 and Section 5.3, we can recapitulate findings as follows: The Syrian refugees have positive impacts on aggregate individual credits and total saving deposit accounts while not having significant and conclusive effects on aggregate commercial credits and commercial deposit accounts. In order to grasp the channel of these impacts, we decompose the aggregate data into subcategories which Turkish Banking and Regulation and Supervision Agency allows. After the re-estimation of the effects, we can observe that the increase in individual credits stems from consumer credits and credit advances, while the channel for the increase in total saving deposits is savings deposit held in dollar terms. Moreover, when we investigate the selected sectoral credits, separately, we can see that the Syrian refugee influx has a positive effects on the construction sector for cash credits and the textile sector for non-cash credits. However, the sign of the estimates for non-cash credits in the construction sector is negative. Although these estimations result are statistically acceptable, they cannot explain the underlying logic in which mass migration increases the usage of consumer credits and increase in saving accounts. Even if the effects on credits in the construction and textile sector plausible, we have to focus on the underlying mechanism which triggers this change.

Now, we can discuss these reasons in a detailed way. There can be three underlying reasons which may give rise to increase in individual credits through the channel of consumer credits: compositional effect, increase in self-employed, opportunity for more investment due to reduce in production costs. Compositional effect implies that the profile of consumers in areas which are exposed to more refugee population varies over time due to some reasons. In this case, Turkish government has appointed lots of health officers to supply health care delivery and police officers to increase security precautions. These new officials may finance their basic needs and expenditures while moving into a new house with consumer credits. We can give humanitarian activists which were appointed by international aid organizations as an example for this situation.

As Aksu et al. (2018) state that the self-employment level has significant increase in Turkey after the Syrian refugees come to Turkey. The importance of this result is related to condition in which the type of business scale and culture are shaped. Due to the small scale structure of and the tendency to informality of the self-employment, self-employers, mostly, prefer to finance their new business entry costs and additional investments from the informal channels rather than common ways. From the anecdotal evidences and the openness of the personal loan system, we find that self-employers borrow consumer credits (subcategory of personal loan) to finance their business and investment costs. Quantitatively, in Table C13 - C15 and Table C22 - C24, we estimate the substantial positive effect of Syrian refugees on consumer credits as stable reason for the increase in the usage of personal loans. Of course, there may be other plausible explanation for this increase, but this level of increase as magnitude with the additional evidence are highly powerful candidate as being one of the main reasons.

As we explained in the theoretical background, the microeconomic theory suggests that the return to capital after the refugee influx increases in the short run due to the fixed capital stocks. This condition results in a decrease in capital-to-labor ratio. Even if the domestic savings and capital investment that comes from the international market in the form of FDI or portfolio investments adjust the capital-to-labor ratio, the change generally is gradual because of the nature of the capital accumulation. More rapid change can be possible with the capital stock transfer between the host and the source country in the process of the influx. However, due to the forced nature of the Syrian refugee influx and the civil war condition, we expect that most of refugees had to flee from their countries and could not transfer their actual wealth properly in this process. Hence, in this study, our theoretical expectation and the empirical findings show that the return to capital after the immigration increases in the Turkey, and this leads to an opportunity to be more productive and a decrease in production costs with the increase in labor supply (Balkan and Tumen, 2016). Because of this positive shock, native business entrepreneurs and employers in Turkey have additional risk appetite for investment and expansion their business activities.

Besides the price effects, due to the cultural proximity and the business experiences, Syrian refugees found an opportunity to establish their firms. As Akgunduz et al. (2018) point out that the total firm entry are not significantly affected by the refugee influx in Turkey while the foreign-owned firm entries increase. However, there is a positive impact on gross profits and sales in hosting regions. At this point, our study suggests a noticeable insight on the source for investments in business activities. From results of the estimations for the effects on the textile and construction credits and personal loans, we claim that we can capture the investment effects of the Syrian refugees. But there is an important local feature of credit usage: As we expect large-scale firms in the textile and the construction sectors use formal commercial credits. Nevertheless, small-scale firms, due to the legal responsibilities prefer to borrow personal loans to invest and to expand their business activities. Moreover, we can capture the sectoral shift in terms of public infrastructure to private housing in the construction sector and increase in export levels in the textile sector can be observed from our results which stem from the refugee influx.

When we look at the policy of the administration of AKP government on the credit usage, we can come across with state incentive to increase credit usage through low interest rates. According to some anecdotal evidences, individuals employ consumer credits and credit advance to finance the expenditure on investment and to buy house and car rather than housing and car loans since the procedure of borrowing consumer credits and credit advance is easier than the other credit types for banks and individuals. Likewise, low levels of interest rates in consumer credits yield an incentive for natives to choose consumer credits. This situation can explain why we cannot observe any conclusive effect in housing credits in spite of the housing price debates. We can see the historical change in interest rates of consumer and commercial credits in Turkey from Figure D1. Although the interest rates of commercial credits have been slightly lower than consumer credits most of time, employers can take the risk for extra interest rates while choosing type of loans for an investment because of the procedural burden of commercial credits and necessities in terms of company profile. In this regard, if we combine these results with findings in

Aksu et al. (2018) on increase in self-employment and in Balkan and Tumen (2016) on decrease in production costs in the informal sector, we can deduce that the increase in consumer credits and credits advance may derive from financial requirements of individuals who move from the informal sector to self-employment and from investment opportunity of employers in the informal sector due to the cost reduction after coming of Syrian refugees into the labor market.

At the last point, we can take an attention on the wealth effect related to credit usage. As we mentioned above, there is a significant tendency for borrowing personal loans to finance business and investment with the immigrant surplus in Turkey, but there is possibility for an alternative explanation. Especially, some empirical results suggest the positive impact on the wage levels in the formal sector (Del Carpio and Wagner, 2016; Aksu et al. 2018) due to the complementarity between native and refugee labor force in the formal sector. Although we cannot differentiate personal loans in terms of the usage aims and cannot determine the actual effect of the influx on the credit-saving balance, we can expect that person who benefits the immigrant surplus is more prone to consume and borrow extra loan for consumption smoothing. Therefore, we can conclude the significant increase in the personal loans as composite of financing investment through consumer credits and a possible increase in consumption with the increase in the wage level in the formal sector.

Last but not least, we can focus on the increase in saving deposits held in dollar terms. There can be two plausible causes which can explain this increase: increase wages of wage-workers and capital transfer of the refugees from Syrian to Turkey. As Aksu et al. (2018) emphasize the positive effect in males' wages in the formal sector due to the Syrian refugees, we can observe this increase in saving accounts. Probably, because of instability in exchange rate, natives prefer to hold their saving in foreign currency. Of course that we can think of second alternative explanation for this effect. Syrian refugees can transfer their financial and monetary assets to Turkey from Syria before or at the middle of the Civil War. To see the increase in dollar accounts is plausible since refugees prefer to hold their savings in dollar to decrease uncertainty. Additionally, at the beginning of the mass migration,

especially middle class, Syrian refugees planned to move Western country using Turkey as a bridge. Therefore, foreign currency could be more useful under this circumstance.

CHAPTER 8

CONCLUSION

In this paper, we try to understand the impact of Syrian refugee influx on capital movement in Turkey. We measure the impact of the Syrian refugee influx on the Turkish capital movement through Turkish banking indicators. Specifically, we try to estimate the capital accumulation, change in deposit accounts and different types of credits between 2013 and 2018 since the coming of refugees who fled from the Syrian Civil War. The significant motivation of this study is an attempt to understand the long-run effects of Syrian refugees on the economic positions of natives and the economic implications of the mass migration through the financial capitals.

In Section 3, we try to explain our theoretical background and empirical environment in the context of our study. In Section 5, we continue to discuss our empirical model and estimation strategies that we utilize to estimate the effect of Syrian refugees on credits and savings. Our estimation strategy is compatible with the literature on the natural experimental design. We use difference-in-difference estimation with the instrumental variable extension to eliminate extraneous factors and self-selection bias. We make an additional time-region trend to give more flexibility to various models in the possibility of failure of the common trend assumption which guarantees the unbiased estimation of the actual refugees effects as Aksu, Erzan, and Kirdar (2018) utilize.

In Section 6.1, 6.2, and 6.3, we report all results of the estimations. The overall findings reflect that Syrian refugees have positive impacts on personal loans and total deposit savings while not having effects on aggregate commercial credits and commercial deposits. Besides this, we can observe increase in credits in the construction and textile sector. Cash credits in the construction sector and non-cash credits in the textile sector increase, while the noncash credit usage in the construction sector decreases. From the sectoral evidence and results of other empirical studies, the increase in the export in the textile sector and the sectoral shift

in terms of public infrastructure building and private housing lead to this increase in the usage of credits. The increase in the personal loans usage and savings, mostly, are stemmed from consumer credits and dollar accounts, respectively. Estimation results with different specification and estimation methods and the placebo test corroborate the validity of these findings.

In Section 6.5, we try to analyze the underlying mechanism which triggers this change in terms of credit usage and saving deposit accounts and discuss possible channels. While most of our findings are compatible with related literature, they supply some initial evidences for the literature. We believe that we can capture the increase in investment appetite due to the increase in return to capital after the immigration process and increase in saving and probable consumption due to the wealth effect due to the complementarity between native and immigrant workers in the formal sector. Nevertheless, due to the deficiency in our dataset, we cannot differentiate the actual channels for various reasons. Additionally, some findings may reflect local features of Turkey in terms of loaning and saving attitude. As we stated before, we expect increase in investment due to the increase in the return to capital, but we cannot predict the source for financing this investment and there is no theoretical expectation for these issues. Our estimation reveals the most probable channel as consumer credits especially for small-scale firms while commercial credits for large-scale firms, especially in the textile and the construction sectors. As future research agenda, it can be studied on the channels for the saving, loaning and consumption decision of native and Syrian refugees through financial capital accumulation. If we can separate the information which belongs to natives from which belongs to the refugees, we can make an advanced research on the long-run effects of refugees on the Turkish economy.

APPENDIX A
DESCRIPTIVES

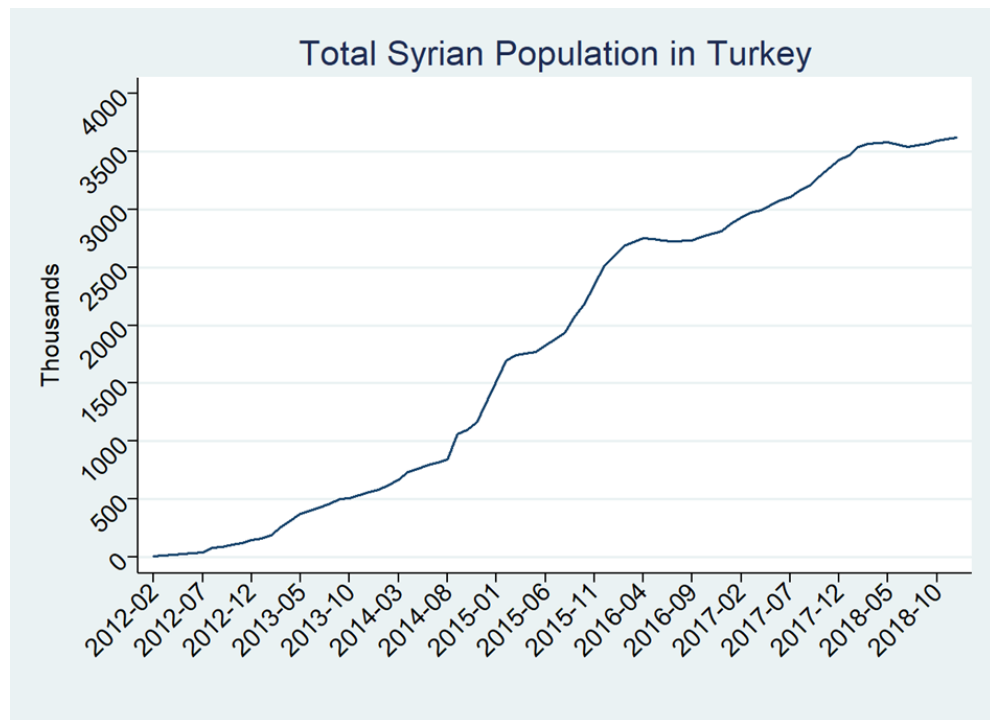


Figure A1: Number of registered Syrian Refugees in Turkey in terms of quarterly (as thousands term)

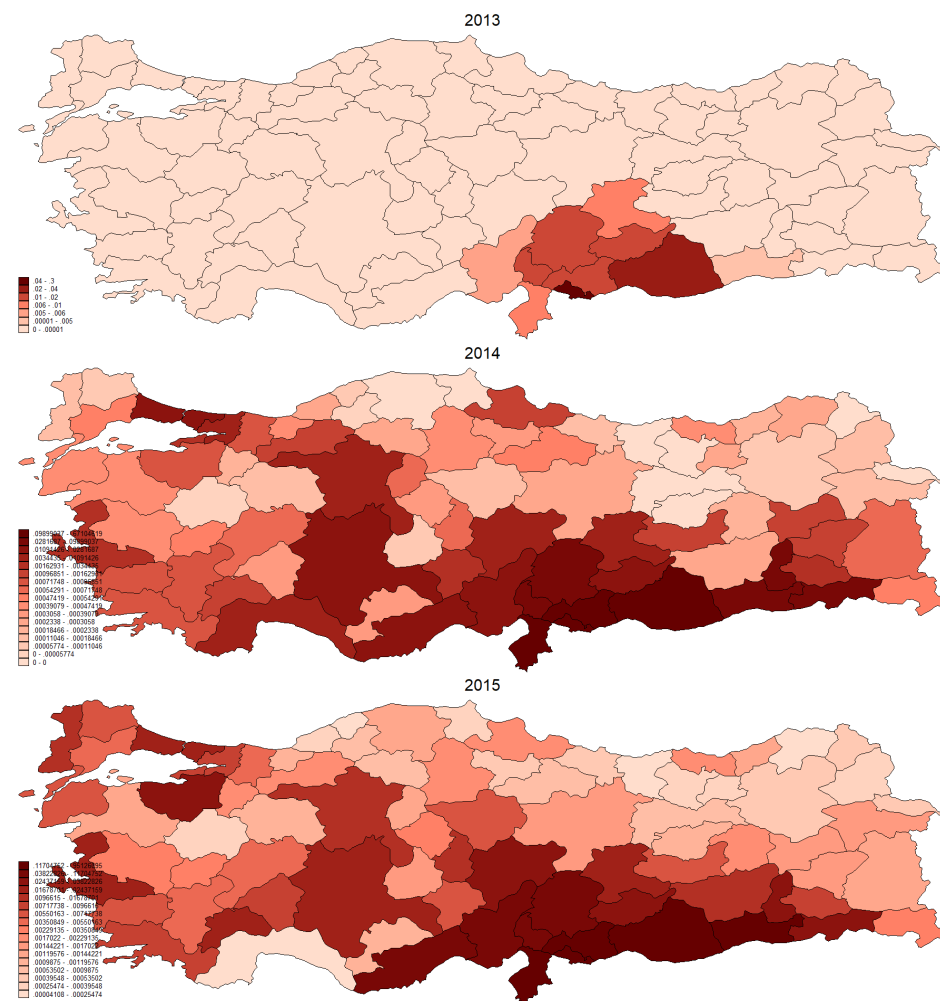


Figure A3: Yearly Change of Syrian Refugee Densities Across Provinces in Turkey: 2016-2018

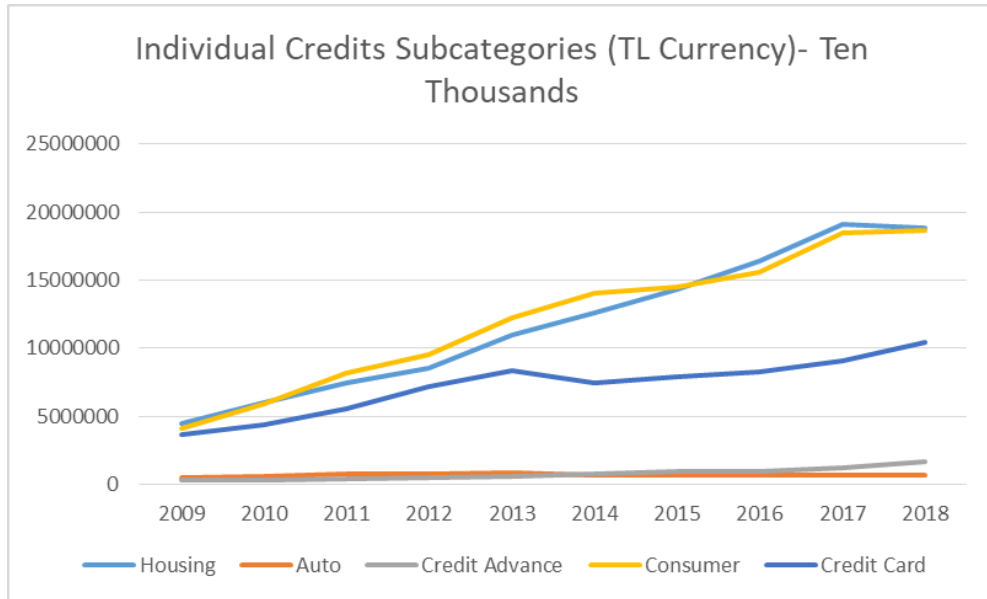


Figure A4: Subcategories of Personal Loans

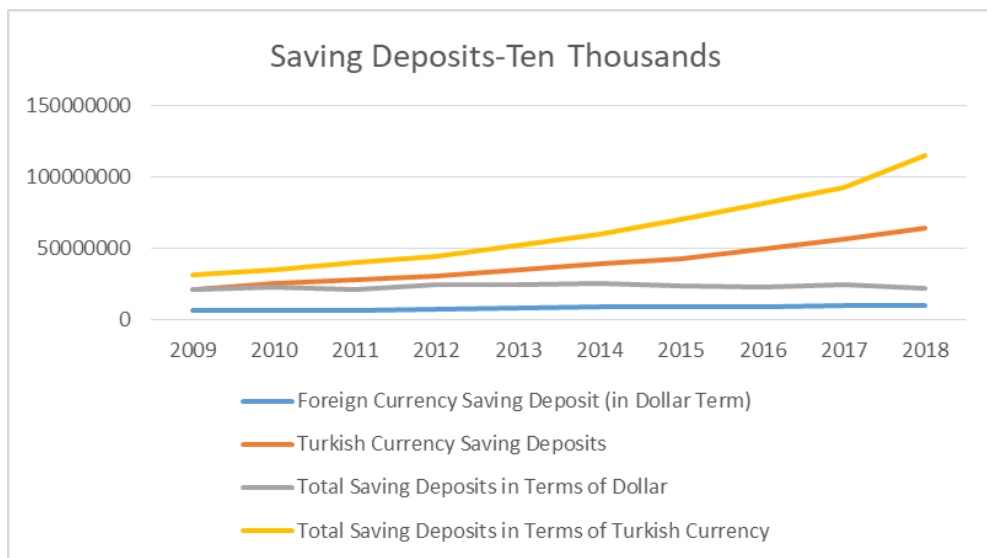


Figure A5: Subcategories of Saving Accounts

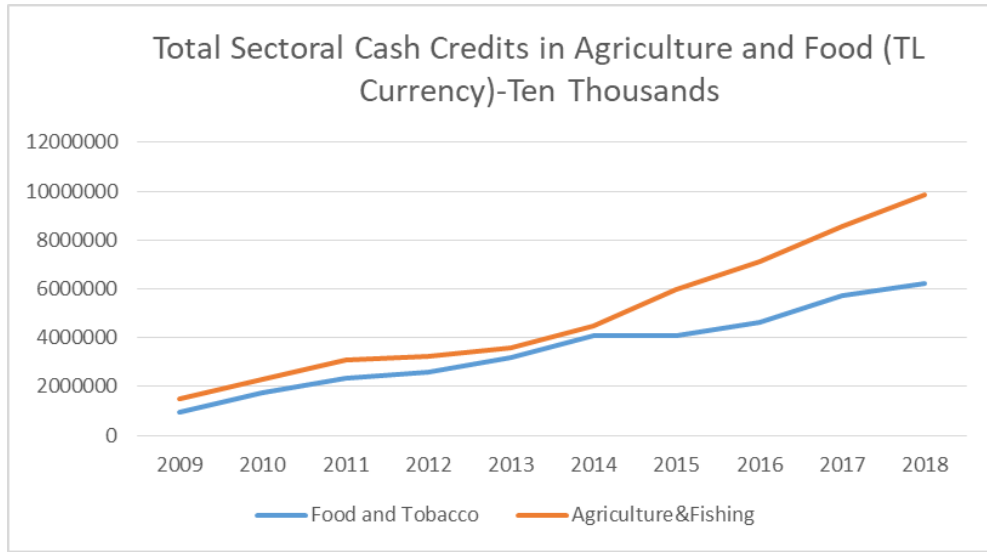


Figure A6: Commercial Cash Credits in the Agriculture and Food Sectors

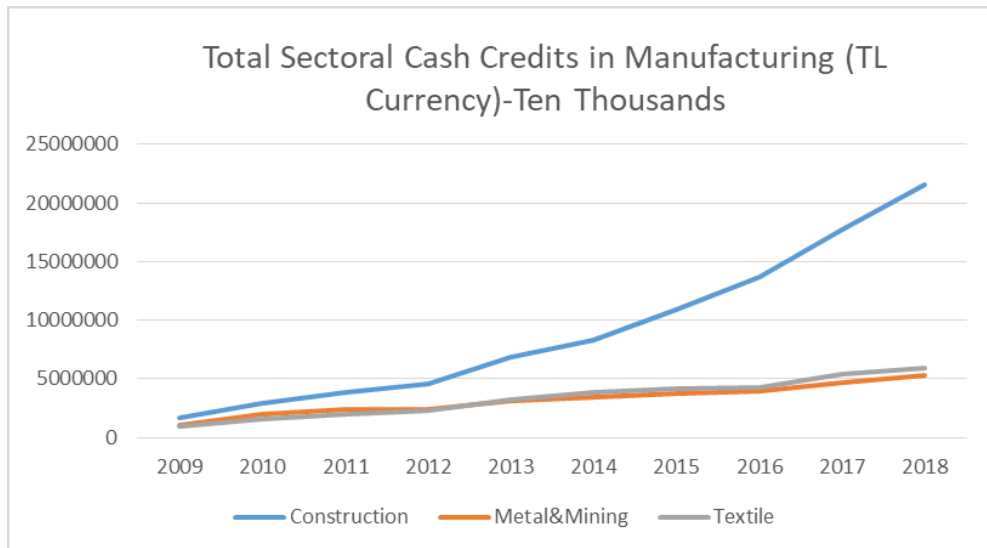


Figure A7: Commercial Cash Credits in the Construction, Metal and Mining, and Textile Sectors

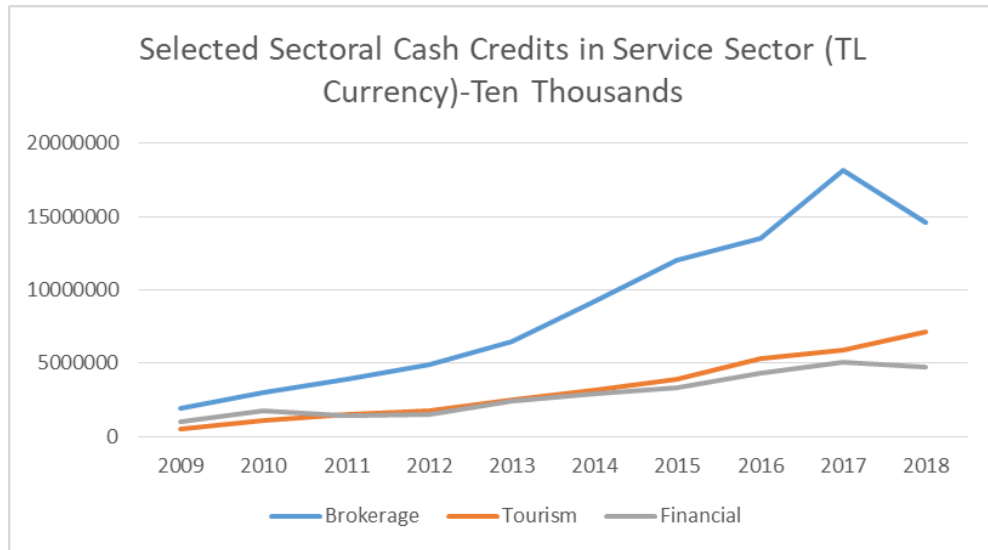


Figure A8: Commercial Cash Credits in the Brokerage, Tourism, and Financial Sectors

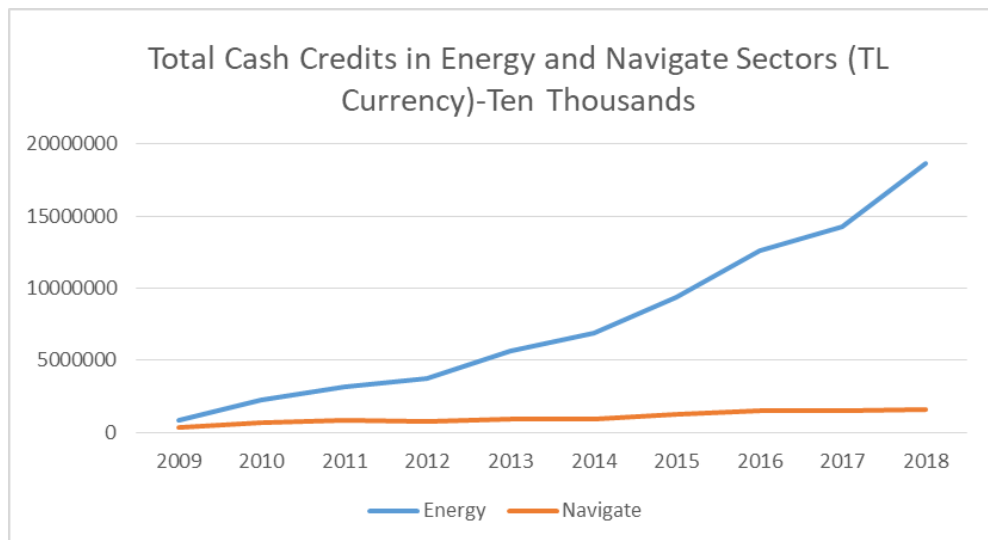


Figure A9: Commercial Cash Credits in the Energy and Maritime Sectors

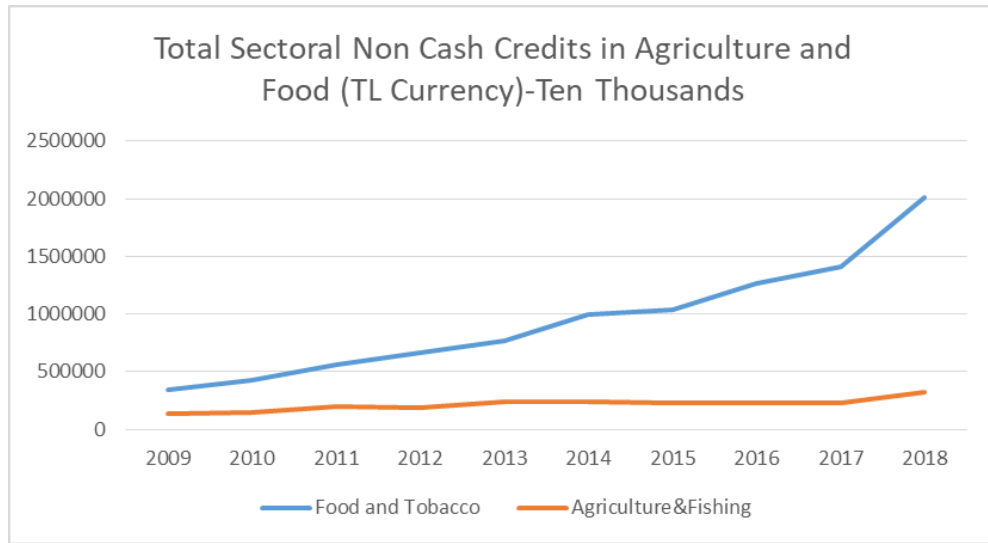


Figure A10: Commercial Non-Cash Credits in the Agriculture and Food Sectors

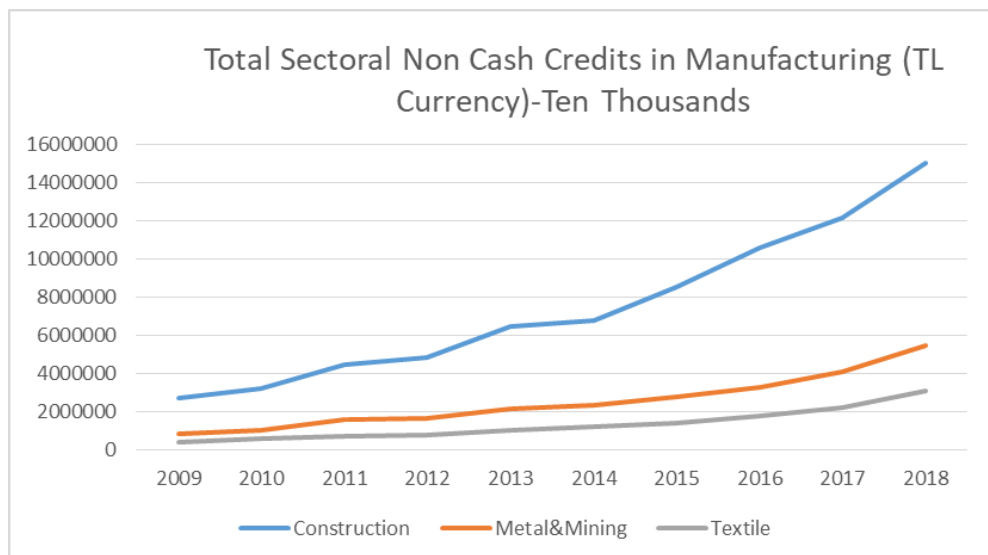


Figure A11: Commercial Non-Cash Credits in the Manufacturing Sectors

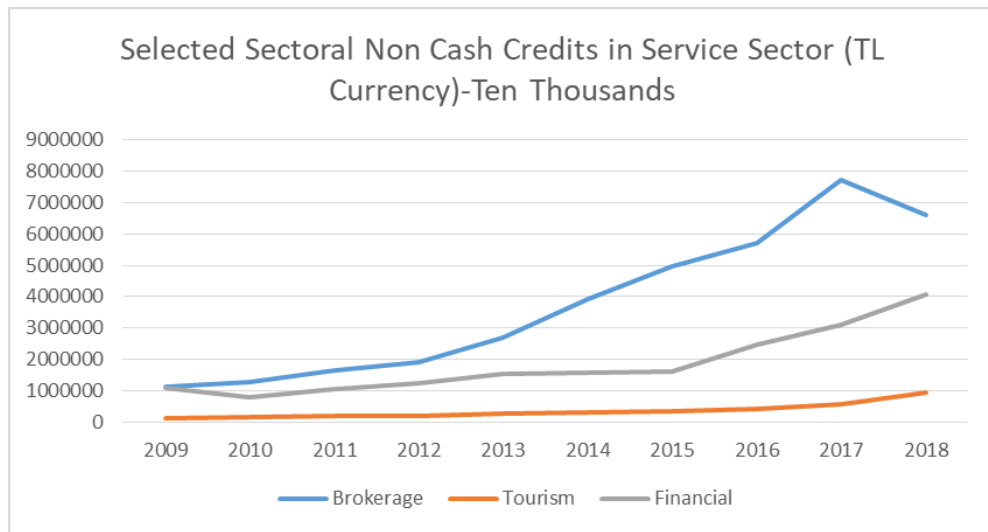


Figure A12: Commercial Non-Cash Credits in the Service Sectors

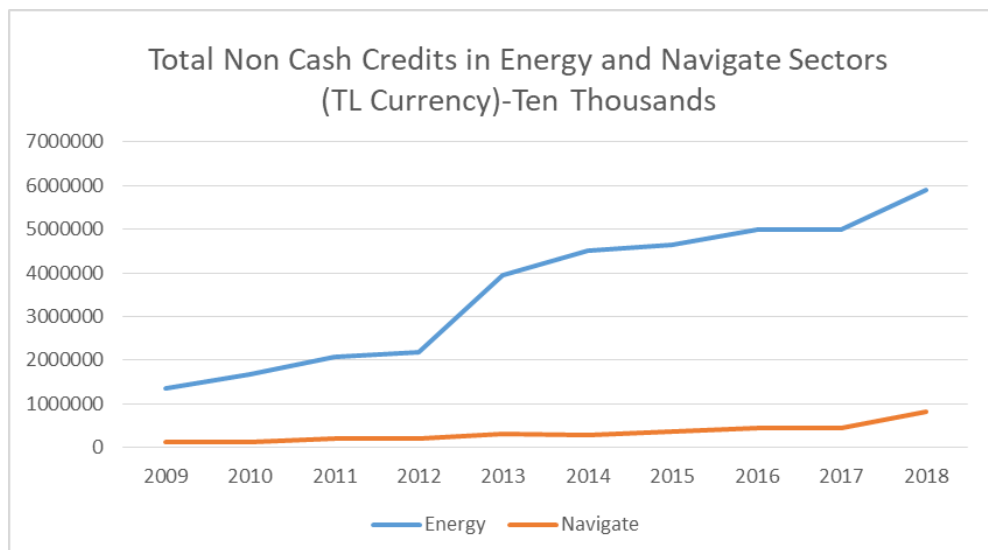


Figure A13: Commercial Non-Cash Credits in the Energy and Maritime Sectors

Table A1: Fraction of Syrian Refugees in Total Population: 2013-2018, Turkey

Provinces	2013	2014	2015	2016	2017	2018		2013	2014	2015	2016	2017	2018
KİLİS	22.860	40.394	48.751	48.414	49.173	44.896	UŞAK	0.007	0.050	0.277	0.339	0.594	0.615
HATAY	4.862	11.928	19.180	19.616	22.495	21.640	SİVAS	0.003	0.024	0.157	0.355	0.644	0.606
ŞANLIURFA	6.270	11.972	16.675	17.346	18.913	18.204	KIRŞEHİR	0.004	0.032	0.232	0.310	0.471	0.535
GAZİANTEP	6.348	11.879	14.434	13.939	14.869	17.249	KIRIKKALE	0.007	0.056	0.133	0.245	0.392	0.513
MERSİN	0.371	2.551	6.794	7.338	9.659	10.202	ESKİŞEHİR	0.003	0.019	0.102	0.246	0.423	0.495
MARDİN	4.651	9.130	10.478	10.512	10.075	9.791	ÇORUM	0.007	0.048	0.203	0.293	0.477	0.473
ADANA	0.908	2.763	5.851	6.364	7.205	9.473	DÜZCE	0.006	0.042	0.101	0.155	0.263	0.417
OSMANIYE	3.595	4.107	6.728	7.419	8.643	8.410	SAMSUN	0.014	0.097	0.193	0.312	0.386	0.409
KAHRAMANMARAŞ	2.309	5.347	6.717	7.277	8.083	7.059	TRABZON	0.006	0.043	0.170	0.267	0.345	0.375
KAYSERİ	0.103	0.717	2.958	3.941	4.876	5.295	BALIKESİR	0.006	0.042	0.119	0.162	0.304	0.354
BURSA	0.103	0.716	2.886	3.455	4.381	5.204	MUŞ	0.023	0.163	0.157	0.208	0.299	0.339
KONYA	0.304	2.099	2.231	3.164	4.391	4.556	KASTAMONU	0.000	0.000	0.135	0.205	0.343	0.336
ADIYAMAN	1.708	2.034	3.682	3.930	4.384	4.213	BİNGÖL	0.002	0.019	0.226	0.256	0.318	0.324
BATMAN	0.512	3.479	2.991	3.261	3.435	3.578	KARABÜK	0.000	0.004	0.096	0.161	0.250	0.324
İSTANBUL	0.328	2.255	2.379	2.938	3.456	3.569	KARAMAN	0.004	0.031	0.113	0.210	0.269	0.306
MALATYA	0.879	1.078	2.122	2.612	3.364	3.534	BİLECİK	0.003	0.024	0.175	0.237	0.317	0.269
İZMİR	0.045	0.317	1.958	2.339	2.945	3.183	BİTLİS	0.017	0.119	0.144	0.199	0.257	0.258
BURDUR	0.013	0.098	2.037	2.919	3.064	3.165	ÇANKIRI	0.003	0.027	0.086	0.187	0.269	0.248
NEVŞEHİR	0.009	0.063	1.361	1.962	2.605	3.101	RİZE	0.003	0.023	0.127	0.190	0.257	0.245
ŞIRNAK	0.561	3.758	2.861	2.878	2.868	2.841	EDİRNE	0.002	0.013	1.566	1.589	1.571	0.234
KOCAELİ	0.126	0.867	0.957	1.494	2.419	2.759	AMASYA	0.004	0.031	0.043	0.068	0.177	0.200
ELAZIĞ	0.022	0.159	0.713	0.896	1.337	2.092	AĞRI	0.002	0.018	0.149	0.159	0.202	0.187
DİYARBAKIR	0.044	0.306	1.651	1.715	1.836	1.915	VAN	0.008	0.056	0.128	0.149	0.257	0.186
HAKKARİ	0.007	0.055	0.308	0.326	1.892	1.873	TOKAT	0.007	0.054	0.083	0.134	0.175	0.162
ISPARTA	0.005	0.038	0.839	1.434	1.564	1.612	ARDAHAN	0.000	0.000	0.041	0.077	0.151	0.148
ANKARA	0.084	0.582	0.966	1.255	1.696	1.580	ERZURUM	0.001	0.011	0.043	0.071	0.121	0.138
SAKARYA	0.010	0.072	0.417	0.733	1.195	1.519	KÜTAHYA	0.001	0.006	0.040	0.060	0.111	0.135
MUĞLA	0.012	0.084	0.843	0.924	1.365	1.454	ZONGULDAK	0.003	0.023	0.039	0.053	0.063	0.088
YALOVA	0.050	0.345	0.916	1.106	1.390	1.310	ORDU	0.002	0.011	0.053	0.083	0.108	0.086
TEKİRDAĞ	0.008	0.053	0.465	0.610	0.852	1.229	TUNCELİ	0.000	0.000	0.099	0.109	0.133	0.066
NİĞDE	0.045	0.320	0.633	0.934	1.364	1.215	BARTIN	0.001	0.011	0.007	0.016	0.034	0.065
DENİZLİ	0.012	0.082	0.509	0.728	1.011	1.213	ANTALYA	0.065	0.450	0.004	0.016	0.024	0.062
SİİRT	0.031	0.220	0.831	0.991	1.144	1.166	SİNOP	0.000	0.000	0.025	0.035	0.054	0.056
YOZGAT	0.001	0.012	0.557	0.716	0.957	0.964	KARS	0.002	0.015	0.038	0.055	0.072	0.054
MANİSA	0.006	0.040	0.350	0.425	0.631	0.929	GÜMÜŞHANE	0.000	0.000	0.036	0.039	0.051	0.053
ÇANAKKALE	0.005	0.039	0.594	0.657	0.848	0.897	ERZİNCAN	0.000	0.000	0.072	0.078	0.072	0.045
AFYONKARAHİSAR	0.010	0.071	0.364	0.592	0.807	0.771	İĞDIR	0.000	0.000	0.040	0.042	0.053	0.044
KIRKLARELİ	0.001	0.009	0.593	0.590	0.637	0.734	BAYBURT	0.000	0.000	0.033	0.043	0.071	0.039
AYDIN	0.014	0.096	0.547	0.701	0.947	0.684	GİRESUN	0.000	0.000	0.019	0.033	0.040	0.035
BOLU	0.015	0.106	0.229	0.346	0.571	0.672	ARTVİN	0.003	0.024	0.024	0.024	0.036	0.022
AKSARAY	0.001	0.010	0.161	0.300	0.566	0.652							

Notes: This table shows the fraction of Syrian refugee population to natives in 81 provinces of Turkey between years 2013 and 2018. Fractions are calculated as the number of Syrian population dwelled in Turkey over total population. Syrian numbers are obtained from various sources: AFAD Reports for year 2013, Murat Erdoğan's survey study for year 2014, and Syrian population survey announcement of Turkish Ministry of Interior Directorate General of Migration Management for years 2015-2018. The structures of AFAD report and of Erdoğan's survey are annual and of the Interior Directorate General of Migration Management is quarter. Numbers for years 2013 and 2014 are adjusted to last-year values according to the UNHCR data on Syrian migrants. Source for Turkish native population is Turkish Statistical Institutes, TURKSTAT.

Table A2: Descriptive Statistics of Aggregate Credits and Saving Deposits by Year for Commercial and participation Banks (Million)

Variables	2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		Total	
	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd
A) Aggregate Credits																						
Individual Credits	1594.12	5131.16	1892.74	5863.18	2550.60	7602.13	3045.93	8922.87	3787.16	11118.83	4207.95	12488.19	4629.30	13676.78	4944.81	14220.85	5677.66	15675.43	6251.39	16923.35	4041.74	12274.55
Commercial Credits	2377.43	9997.33	3341.56	14678.15	4900.45	20846.66	5712.02	23569.34	7323.88	30243.42	9266.25	38341.22	11843.95	48672.85	13528.93	56836.69	16725.26	69458.49	20540.94	86058.40	10138.12	48400.37
B) Aggregate Subcategories																						
B.1) Subcategories of Aggregate Individual Credits																						
Housing Credit	547.82	1996.11	662.04	2345.17	874.24	3019.32	986.42	3359.54	1256.86	4197.11	1452.90	4795.47	1710.84	5565.59	1903.05	6140.06	2258.02	7122.00	2400.11	7326.34	1474.75	5126.992
Auto Loans	54.10	179.89	58.44	195.72	81.84	264.08	93.26	292.03	101.28	319.56	89.59	285.89	79.07	255.25	79.31	256.41	81.69	263.57	82.08	262.74	82.17	265.92
Credit Advance	32.72	90.94	34.12	94.02	40.83	114.02	52.80	135.74	61.01	154.59	84.69	213.06	111.31	277.92	115.65	276.57	133.39	317.35	176.86	416.91	88.52	245.50
Consumer Credits	508.47	1204.21	639.48	1528.05	931.17	2214.42	1106.48	2549.70	1381.93	3149.13	1639.52	3775.21	1789.25	4212.99	1850.97	4404.39	2135.45	4994.09	2378.71	5462.10	1511.36	3787.80
Credit Card	451.01	1684.17	498.65	1729.41	622.52	2017.61	806.97	2625.21	986.08	3360.84	941.26	3508.81	938.83	3442.44	995.82	3216.90	1069.11	3006.26	1213.64	3500.14	884.93	2976.79
B.2) Selected Sectoral Credits																						
B.2.1) Cash Credits																						
Food and Tobacco	117.73	418.99	176.18	696.80	257.89	915.56	293.68	989.42	350.66	1089.93	443.30	1512.60	518.41	1908.05	525.40	1925.46	651.82	2356.63	740.93	2407.80	431.10	1636.09
Construction	209.56	995.27	299.77	1507.43	400.77	2010.13	526.80	2460.29	730.20	3401.91	972.41	4468.10	1246.31	5726.97	1534.79	7459.51	1997.45	9830.78	2534.09	13012.28	1112.97	6595.15
Metal and Mining	130.04	657.29	195.79	859.72	276.44	1127.88	298.25	1216.33	350.07	1382.11	406.08	1590.52	485.15	1916.20	454.38	1837.01	543.49	2243.29	674.56	2918.04	401.81	1762.89
Financial	123.49	961.62	174.13	1374.24	176.66	1506.71	162.73	1423.15	241.60	2076.10	313.16	2637.34	393.18	3391.01	447.82	3888.87	557.00	4795.01	615.85	5310.31	336.51	3212.73
Textile	119.13	598.15	157.81	767.73	234.40	1060.41	265.34	1197.61	353.21	1570.83	446.25	1926.69	524.90	2241.36	515.79	2310.11	618.68	2714.89	757.41	3237.74	422.01	2022.98
Brokerage	240.14	1069.67	319.37	1477.86	442.73	1941.12	555.09	2321.86	727.01	3082.77	981.11	4207.92	1344.44	5675.38	1593.92	6760.08	2066.35	8733.49	2271.92	9441.68	1120.21	5557.29
Tourism	57.05	240.48	96.81	454.23	163.13	740.62	190.78	862.89	266.07	1204.05	351.85	1627.78	460.53	2129.79	567.34	2670.78	688.50	3118.38	865.30	4054.98	396.17	2178.59
Agriculture and Fishing	184.22	259.67	229.01	306.55	349.68	431.55	389.28	452.01	421.31	492.10	496.61	577.23	671.50	819.57	837.30	1040.00	1001.86	1219.89	1186.96	1440.57	608.60	886.73
Energy	100.07	560.08	206.34	1134.52	341.90	1792.24	432.30	2202.31	607.80	3137.16	793.81	3972.20	1089.72	5220.28	1360.48	6676.25	1636.74	7657.81	2139.45	9763.52	933.36	5339.37
Navigate	38.47	304.83	57.54	456.50	95.86	709.47	94.33	689.03	104.20	709.90	117.77	800.26	147.80	944.57	164.64	1032.28	182.97	1023.25	196.19	1074.18	126.59	839.17
B.2.2) Non-Cash Credits																						
Food and Tobacco	42.66	179.67	48.25	180.56	61.18	230.61	75.59	268.30	85.74	297.29	111.93	387.49	130.04	515.54	133.76	530.67	163.39	622.68	215.02	776.67	111.95	460.46
Construction	331.20	1837.89	378.54	2044.84	494.17	2068.81	586.62	3114.99	726.01	3850.59	828.66	4318.72	999.43	5316.15	1179.96	6337.18	1445.47	7774.79	1789.95	9750.35	920.18	5504.95
Metal and Mining	97.69	577.88	112.51	637.91	161.21	813.60	204.85	980.37	229.56	1117.01	276.60	1326.97	340.15	1639.08	358.10	1672.25	445.47	2040.07	642.30	3018.20	302.18	1611.87
Financial	131.96	895.27	116.09	861.96	121.94	1008.81	141.14	1170.69	174.71	1434.41	193.14	1535.92	202.96	1655.02	260.25	2116.31	353.59	2897.83	465.48	3710.55	222.95	2003.75
Textile	50.00	248.40	59.01	284.04	78.10	355.03	88.81	363.73	111.05	481.25	142.38	596.65	170.12	712.14	196.55	835.43	243.12	1025.71	352.71	1484.13	157.23	767.32
Brokerage	138.92	628.17	147.68	659.89	191.73	875.50	226.28	1017.73	280.74	1324.04	431.02	2140.99	548.90	2723.10	648.76	3075.45	864.98	4142.92	1034.20	5206.70	476.65	2759.65
Tourism	14.75	72.02	19.90	98.06	23.22	118.40	25.16	130.09	29.17	148.16	33.78	168.88	38.56	188.67	46.02	218.27	62.80	303.05	100.59	500.70	41.39	237.57
Agriculture and Fishing	16.59	75.43	16.69	65.98	21.24	65.67	21.40	47.95	26.18	72.54	29.63	86.45	30.13	78.97	27.95	68.82	26.00	61.84	35.62	80.94	25.84	70.99
Energy	166.03	1060.59	188.31	1075.21	232.38	1080.82	268.40	1192.31	381.70	1819.64	507.36	2425.03	595.31	2720.73	588.67	2712.70	607.53	2739.11	690.89	3037.02	443.47	2202.71
Navigate	16.71	118.54	14.82	107.51	19.82	152.67	23.22	160.84	31.78	222.25	36.31	243.01	45.08	287.39	50.65	345.95	52.05	368.55	84.63	491.29	39.19	285.48
C) Saving Deposits																						
Saving Deposits in Foreign Currency (Dolar terms)	838.36	3886.70	804.25	3694.75	792.30	3596.86	905.29	4093.28	958.29	4331.01	1094.05	5055.83	1144.94	5419.31	1169.00	5575.94	1210.20	5776.96	1157.76	5362.66	1021.15	4805.72
Saving Deposits in Turkish Currency	2610.65	9647.69	2919.74	10883.26	3415.76	12885.15	3663.66	14056.62	4122.00	15832.15	4587.41	17149.12	5107.31	18552.55	5810.16	20590.05	6460.64	22380.97	7642.03	26604.76	4797.99	18125.15
Total Saving Deposits in terms of Dolar	2572.21	10264.85	2722.14	10811.98	2775.01	11048.42	2954.61	11927.93	3046.14	12317.50	3153.69	12721.62	2965.26	12002.41	3073.04	12287.43	2988.87	11896.06	2720.25	10806.09	2923.47	11721.77
Total Saving Deposits (Turkish Lira Terms)	3872.98	15455.79	4143.41	16453.75	4789.23	19086.96	5282.07	21324.06	6020.59	24381.44	7024.50	28345.05	8330.33	33746.94	9378.39	37500.52	10852.98	43205.44	13395.11	53200.65	7587.55	32618.07
Number of Observations	81		324		324		324		324		324		324		324		324		324		2997	

Notes: The data come from 2009-2018 Fintürk Dataset published by the Turkish Banking and Regulation and Supervision Agency (with Turkish abbreviation BDDK) for aggregation of Commercial and participation banks in quarter terms, excluding the 2012 version. The detailed information about the Turkish banking system was provided in the part of "Data and Descriptive Statistics". The data include fundamental banking indicators which demonstrate aggregate credits and saving deposits. Table A2 shows mean and standard deviation of these variables for each years and total duration. Panel A points out aggregate level of individual and commercial credits. Panel B shows mean values and standard deviation of subcategories of aggregate individual and commercial credits. Although there are more types of commercial credits than what is shown in Panel B2, we can only observe these sub-breaks in the Fintürk Dataset. Panel C focuses on saving deposits in total, native and foreign (Dolar) currency terms in the banking system.

Table A3: Descriptive Statistics of Per Capita Credits and Saving Deposits by Year for Commercial and participation Banks

Variables	2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		Total	
	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd
A) Per Total Population																						
Total Individual Credits	1181.48	593.61	1432.35	691.64	1973.48	873.86	2358.62	1015.79	3084.22	1294.14	3304.05	1355.57	3526.37	1429.25	3654.89	1487.72	4233.28	1663.79	4646.358	1771.26	3119.07	1816.97
A.1) Individual Credits Subcategories																						
Housing Credit	337.52	238.37	415.96	279.29	558.353	345.77	632.34	381.43	884.60	497.53	1013.09	543.40	1148.53	596.42	1227.30	631.87	1463.94	718.97	1567.89	747.90	1013.28	724.40
Auto Loans	35.11	23.63	38.36	24.32	55.65	31.18	64.05	34.33	70.42	38.13	55.40	29.57	51.19	27.22	50.43	27.01	50.92	27.37	50.38	26.30	49.80	28.74
Credit Advance	28.45	15.04	29.79	13.94	35.16	15.96	46.53	19.80	57.58	24.56	79.99	31.46	101.72	39.10	99.60	37.91	114.13	41.79	149.49	53.43	82.52	56.40
Consumer Credits	491.19	195.70	610.01	245.33	880.40	335.39	1042.76	394.19	1401.48	530.26	1565.38	587.58	1562.98	575.18	1595.99	593.17	1833.77	671.02	2020.57	727.16	1366.00	759.97
Credit Card	289.21	169.48	338.24	182.05	443.93	214.75	572.93	267.11	670.14	316.74	590.20	267.33	661.95	277.26	681.57	289.06	770.52	297.34	858.03	319.68	607.53	327.20
A.2) Saving Deposits																						
Saving Deposits in Foreign Currency (Dolar terms)	483.40	404.88	469.05	381.64	474.45	368.21	534.72	401.69	585.79	449.72	602.76	465.82	585.59	471.14	578.52	465.30	566.03	454.80	560.51	426.88	535.49	427.80
Saving Deposits in Turkish Currency	1680.68	1184.59	1850.16	1276.93	2116.49	1439.61	2191.24	1535.77	2565.54	1732.69	2906.04	1897.55	3261.89	2013.13	3603.16	2179.02	4027.12	2359.15	4649.98	2747.99	3141.74	2277.43
Total Saving Deposit in terms of Dolar	1599.61	1125.64	1684.57	1152.87	1704.37	1143.57	1760.47	1195.86	1787.85	1192.36	1855.95	1210.65	1707.44	1107.11	1758.96	1121.22	1674.93	1056.52	1511.28	955.93	1678.64	1101.95
Saving Deposits (Turkish Lira Terms)	2408.53	1694.88	2563.75	1752.81	2939.031	1967.901	3147.13	2137.30	3815.80	2544.85	4303.77	2807.38	4964.56	3219.04	5366.99	3418.75	6081.77	3838.48	7440.64	4702.10	4710.89	3680.00
B) Per Native Population																						
Total Individual Credits	1181.48	593.61	1432.35	691.64	1973.52	873.85	2358.62	1015.79	2917.96	1218.11	3211.40	1307.41	3504.74	1382.04	3728.72	1475.24	4329.90	1651.79	4761.35	1758.83	3082.59	1670.66
B.1) Individual Credits Subcategories																						
Housing Credit	337.51	238.37	415.96	279.29	558.36	345.77	632.34	381.43	818.86	468.68	956.23	517.09	1132.59	582.18	1253.05	634.08	1498.26	723.68	1607.99	754.25	968.43	671.99
Auto Loans	35.11	23.63	38.36	24.32	55.65	31.18	64.05	34.33	68.40	36.66	60.04	31.86	52.20	27.14	51.59	27.39	52.27	27.98	51.83	27.03	54.40	31.05
Credit Advance	28.45	15.04	29.79	13.94	35.16	15.96	46.53	19.80	53.40	22.04	73.33	28.86	95.97	35.82	101.40	37.07	116.50	40.82	152.95	52.13	76.99	50.50
Consumer Credits	491.19	195.69	610.01	245.32	880.41	335.38	1042.76	394.19	1296.97	486.37	1505.84	558.74	1605.96	566.02	1625.74	580.34	1872.34	656.81	2066.85	711.01	1365.37	695.49
Credit Card	289.21	169.48	338.24	182.05	443.94	214.75	572.93	267.11	680.33	307.59	615.95	280.54	618.02	272.38	696.94	290.07	790.53	298.20	881.72	321.13	617.40	316.51
B.2) Saving Deposits																						
Saving Deposits in Foreign Currency (Dolar terms)	483.40	404.88	469.05	381.64	474.47	368.22	534.72	401.69	563.05	421.87	608.75	474.13	595.24	476.84	589.49	472.98	579.03	464.91	574.75	436.69	552.37	436.36
Saving Deposits in Turkish Currency	1680.68	1184.59	1850.16	1276.93	2116.53	1439.62	2191.24	1535.77	2444.12	1680.27	2793.48	1811.69	3186.47	1961.63	3667.82	2194.69	4110.32	2382.51	4756.34	2782.88	2976.93	2152.17
Total Saving Deposit in terms of Dolar	1599.61	1125.64	1684.57	1152.87	1704.40	1143.57	1760.47	1195.86	1800.52	1203.78	1862.96	1217.18	1730.22	1115.09	1791.08	1132.90	1710.81	1072.04	1547.31	972.19	1728.89	1137.46
Saving Deposits (Turkish Lira Terms)	2408.53	1694.88	2563.75	1752.81	2939.10	1967.92	3147.13	2137.30	3558.74	2388.14	4149.60	2714.39	4860.72	3141.00	5465.18	3455.07	6212.23	3895.32	7617.81	4781.69	4445.02	3428.26
Number of Observations	81		324		324		324		324		324		324		324		324		324		2997	

Notes: The data come from 2009-2018 Fintürk Dataset published by the Turkish Banking and Regulation and Supervision Agency (with Turkish abbreviation BDDK) for aggregation of Commercial and participation banks in quarter terms, excluding the 2012 version. The detailed information about the Turkish banking system was provided in the part of "Data and Descriptive Statistics". The data include fundamental banking indicators which demonstrate per native (The demonitator is the only Turkish citizens) and per capita (The demonitator is the total population dwelled in each city in terms of Turkish citizens and Syrian population) credits and saving deposits. Table A and B shows mean and standard deviation of these variables for each years and total duration. For each subcategories, we have individual credits subcategories and saving deposits.

APPENDIX B

TURKISH BANKING SYSTEM AND CREDITS

A) List of Banks in the Turkish Banking System with their original names:

Commercial (Deposit) Banks:

Domestic Banks:

State-owned Commercial (Deposit) Banks:

Turkish Republic Ziraat Bank (Türkiye Cumhuriyeti Ziraat Bankası A.Ş.)

Turkey Halkbank (Türkiye Halk Bankası A.Ş.)

Turkey VakıfBank (Türkiye Vakıflar Bankası)

Privately Owned Commercial (Deposit) Banks:

Akbank T.A.Ş.

Anadolubank A.Ş.

Fibabanka A.Ş.

Şekerbank T.A.Ş.

Turkish Bank A.Ş.

Türk Ekonomi Bankası A.Ş.

Türkiye İş Bankası A.Ş.

Yapı ve Kredi Bankası A.Ş.

Foreign Banks:

Foreign commercial (deposit) banks founded in Turkey:

Alternatif Bank A.Ş.

Arap Türk Bankası A.Ş.

Bank of Tokyo-Mitsubishi UFJ Turkey A.Ş.

Burgan Bank A.Ş.

Citibank A.Ş.

Denizbank A.Ş.

Deutsche Bank A.Ş.

HSBC A.Ş.

ICBC Turkey Bank A.Ş.

ING Bank A.Ş.

Odeabank A.Ş.

Rabobank A.Ş.

T-Bank A.Ş.

Garanti BBVA A.Ş.

Foreign commercial (deposit) banks having branches in Turkey:

Bank Mellat

Habib Bank Limited

Intesa Sanpaolo S.P.A

JP Morgan Chase Bank N.A.

Société Générale S.A.

The Royal Bank of Scotland PLC.

Participation (Islamic/Interest-free)Banks:

State-owned participation banks:

Türkiye Emlak Katılım Bankası A.Ş.

Ziraat Katılım Bankası A.Ş.

Vakıf Katılım Bankası A.Ş.

Privately owned participation banks:

Türkiye Finans Katılım Bankası A.Ş.

Foreign participation banks founded in Turkey:

Albaraka Türk Katılım Bankası A.Ş.

Kuveyt Türk Katılım Bankası A.Ş.

Development and Investment Banks:

State-owned Development and Investment Banks:

İller Bankası A.Ş. Genel Müdürlüğü

Türk Exımbank A.Ş.

Türkiye Kalkınma ve Yatırım Bankası A.Ş.

Privately Owned Development and Investment Banks:

Aktif Yatırım Bankası A.Ş.

Diler Yatırım Bankası A.Ş.

GSD Yatırım Bankası A.Ş.

IMKB Takas ve Saklama Bankası A.Ş.

Nurol Yatırım Bankası A.Ş.

Türkiye Sınai Kalkınma Bankası A.Ş.

Foreign development and investment banks:

BankPozitif Kredi ve Kalkınma Bankası A.Ş.

Merrill Lynch Yatırım Bank A.Ş.

Pasha Yatırım Bankası A.Ş.

Standard Chartered Yatırım Bankası Türk A.Ş.

B) List of Credit and Saving Accounts Types in the Banking System:

B.1) Credit Types:

Commercial Credits:

Individual Credits:

Housing Credit:

Auto Loans:

Credit Card:

Cash Advances:

Consumer Credit:

B.2) Deposits Accounts:

Saving Deposits Accounts

Foreign Currency Deposits Accounts

Government Agency Deposit Accounts

Business Organization Deposit Accounts

Other Organization Deposit Accounts

Banks Deposit Accounts:

APPENDIX C

REGRESSION TABLES

Table C1: Effects of Syrian Refugees on Aggregate Credits and Savings in Commercial and participation Banks, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
A) Credits										
Commercial	-0.120 (0.517)	-0.405 (0.400)	-0.794 (0.530)	-0.486 (0.399)	-0.871 (0.552)	-0.357 (0.964)	-0.943 (0.609)	-1.347* (0.775)	-0.990* (0.581)	-1.428* (0.777)
Individual	0.489*** (0.140)	0.551*** (0.155)	0.791*** (0.135)	0.537*** (0.166)	0.792*** (0.159)	0.543*** (0.184)	0.391* (0.214)	0.694*** (0.189)	0.405* (0.216)	0.620*** (0.203)
B) Deposits										
B.1) Savings										
Total (in Turkish Currency terms)	0.562*** (0.180)	0.703*** (0.261)	0.208 (0.247)	0.771*** (0.269)	0.352 (0.242)	0.585*** (0.212)	0.646*** (0.219)	0.279 (0.256)	0.729*** (0.228)	0.363 (0.257)
Dolar	1.228*** (0.221)	1.337*** (0.268)	1.235*** (0.316)	1.458*** (0.294)	1.525*** (0.329)	1.036** (0.404)	0.878** (0.422)	0.947* (0.481)	1.040** (0.420)	1.207** (0.498)
TL	0.139 (0.233)	0.256 (0.297)	-0.318 (0.261)	0.283 (0.303)	-0.270 (0.266)	0.275 (0.248)	0.261 (0.277)	-0.135 (0.290)	0.277 (0.278)	-0.223 (0.276)
B.2) Commercial										
Total (in Turkish Currency terms)	1.237 (1.012)	1.527 (0.977)	1.224 (1.090)	1.577 (0.978)	1.288 (1.187)	0.042 (0.783)	0.089 (0.908)	-0.234 (0.943)	0.198 (0.918)	-0.117 (1.007)
Dolar	0.899 (1.476)	1.734 (1.290)	0.828 (1.340)	1.802 (1.329)	0.807 (1.554)	-0.751 (1.000)	0.004 (0.981)	-0.261 (0.956)	0.121 (0.993)	-0.126 (0.982)
TL	1.030 (1.152)	1.078 (1.208)	1.000 (1.315)	1.135 (1.206)	1.074 (1.401)	-0.351 (0.596)	-0.794 (0.727)	-0.925 (0.858)	-0.713 (0.734)	-0.897 (0.926)
Number of observation	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Controls are presented and discussed in Chapter 5, Empirical Model and Identification Strategy. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C2: Effects of Syrian Refugees on Aggregate Credits and Savings in Commercial and participation Banks, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
A) Credits										
Commercial Credit	-0.153 (0.816)	-0.736 (0.628)	-1.180 (0.784)	-0.748 (0.623)	-1.151 (0.810)	-0.390 (1.482)	-1.779* (0.965)	-2.193** (1.107)	-1.734* (0.950)	-2.178* (1.114)
<i>First-Stage Regression</i>	0.0216*** (0.00361)	0.0226*** (0.00423)	0.0210*** (0.00431)	0.0227*** (0.00427)	0.0208*** (0.00437)	0.0158*** (0.00159)	0.0170*** (0.00229)	0.0153*** (0.00196)	0.0170*** (0.00236)	0.0150*** (0.00208)
Individual Credit	0.586*** (0.182)	0.789*** (0.174)	1.032*** (0.223)	0.782*** (0.182)	1.035*** (0.241)	0.781*** (0.284)	0.757** (0.298)	0.966*** (0.327)	0.785** (0.316)	0.962*** (0.363)
<i>First-Stage Regression</i>	0.0215*** (0.00354)	0.0218*** (0.00400)	0.0199*** (0.00407)	0.0216*** (0.00394)	0.0196*** (0.00405)	0.0159*** (0.00143)	0.0155*** (0.00185)	0.0139*** (0.00178)	0.0154*** (0.00193)	0.0134*** (0.00195)
B) Deposits										
Savings										
Total Saving Deposit	0.509*** (0.167)	0.805*** (0.248)	0.343 (0.228)	0.867*** (0.255)	0.441* (0.236)	0.391 (0.249)	0.599** (0.268)	0.246 (0.273)	0.719** (0.291)	0.320 (0.285)
Saving Deposit Dolar	0.787** (0.329)	1.144*** (0.311)	0.976*** (0.359)	1.247*** (0.335)	1.144*** (0.396)	0.502 (0.518)	0.440 (0.575)	0.230 (0.615)	0.659 (0.629)	0.461 (0.677)
Saving Deposit TL	0.148 (0.228)	0.360 (0.310)	-0.231 (0.273)	0.393 (0.314)	-0.189 (0.276)	0.137 (0.235)	0.156 (0.295)	-0.335 (0.307)	0.205 (0.300)	-0.439 (0.300)
<i>First-Stage Regression</i>	0.0220*** (0.00368)	0.0231*** (0.00418)	0.0214*** (0.00428)	0.0232*** (0.00421)	0.0213*** (0.00432)	0.0168*** (0.00188)	0.0181*** (0.00219)	0.0164*** (0.00205)	0.0181*** (0.00223)	0.0162*** (0.00220)
Commercial										
Other Deposit	0.778 (1.223)	1.319 (1.155)	0.846 (1.337)	1.360 (1.148)	0.811 (1.390)	-0.416 (1.019)	0.288 (1.276)	-0.235 (1.224)	0.385 (1.266)	-0.183 (1.279)
Other Deposit Dolar	0.165 (1.957)	1.364 (1.861)	0.0494 (2.086)	1.400 (1.878)	-0.113 (2.204)	-1.005 (1.353)	0.445 (1.389)	-0.473 (1.180)	0.455 (1.382)	-0.613 (1.211)
Other Deposit TL	0.698 (1.260)	0.788 (1.344)	0.553 (1.525)	0.838 (1.331)	0.548 (1.562)	-0.469 (0.578)	-0.961 (0.730)	-1.424* (0.781)	-0.877 (0.721)	-1.410* (0.810)
Number of observation	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Controls for										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C3: Effects of Syrian Refugees on Aggregate Credits and Savings in Commercial and participation Banks, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Commercial Credit	-0.114 (0.870)	-0.867 (0.669)	-1.442* (0.855)	-0.784 (0.672)	-1.186 (0.897)	-0.369 (1.453)	-2.065** (0.905)	-2.577** (1.032)	-1.812* (0.945)	-2.228* (1.142)
Individual Credit	0.559*** (0.210)	0.787*** (0.201)	1.076*** (0.269)	0.788*** (0.208)	1.068*** (0.280)	0.774** (0.312)	0.733** (0.315)	0.997*** (0.363)	0.806** (0.339)	0.975** (0.393)
B) Deposits										
Savings										
Total Saving Deposit	0.588*** (0.147)	0.986*** (0.218)	0.529** (0.179)	1.029*** (0.222)	0.548** (0.190)	0.461 (0.229)	0.757** (0.251)	0.402 (0.228)	0.819*** (0.252)	0.332 (0.232)
Saving Deposit Dolar	0.708* (0.402)	1.166*** (0.382)	0.971** (0.471)	1.261*** (0.383)	1.003** (0.465)	0.437 (0.559)	0.342 (0.642)	0.0667 (0.686)	0.500 (0.647)	0.087 (0.669)
Saving Deposit TL	0.288 (0.255)	0.594* (0.341)	0.007 (0.303)	0.608* (0.343)	-0.003 (0.308)	0.310 (0.267)	0.472 (0.334)	0.007 (0.313)	0.446 (0.328)	-0.248 (0.299)
Commercial										
Other Deposit	0.471 (1.295)	1.045 (1.291)	0.364 (1.511)	1.141 (1.264)	0.334 (1.517)	-0.740 (1.013)	-0.059 (1.295)	-0.779 (1.190)	0.096 (1.259)	-0.721 (1.182)
Other Deposit Dolar	-0.180 (2.102)	1.154 (2.118)	-0.501 (2.418)	1.154 (2.107)	-0.829 (2.488)	-1.177 (1.423)	0.334 (1536)	-0.802 (1.303)	0.228 (1.440)	-1.122 (1.217)
Other Deposit TL	0.471 (1.275)	0.503 (1.424)	0.117 (1.633)	0.597 (1.398)	0.141 (1.630)	-0.584 (0.560)	-1.180* (0.704)	-1.769* (0.735)	-1.059 (0.692)	-1.745** (0.742)
Number of observation	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Controls for										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C4: Effects of Syrian Refugees on Aggregate Credits in All Bank Types, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Commercial Credit	-0.002 (0.497)	-0.308 (0.425)	-0.663 (0.554)	-0.373 (0.423)	-0.735 (0.579)	-0.273 (0.878)	-0.872 (0.615)	-1.198 (0.728)	-0.879 (0.590)	-1.217 (0.734)
Individual Credit	0.477*** (0.141)	0.537*** (0.157)	0.787*** (0.137)	0.523*** (0.168)	0.790*** (0.161)	0.525*** (0.185)	0.366* (0.215)	0.679*** (0.189)	0.382* (0.216)	0.613*** (0.204)
Number of observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C5: Effects of Syrian Refugees on Aggregate Credits in All Bank Types, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Commercial Credit	-0.036 (0.803)	-0.513 (0.625)	-0.905 (0.752)	-0.523 (0.620)	-0.872 (0.775)	-0.212 (1.452)	-1.444 (0.934)	-1.766 (1.070)	-1.352* (0.942)	-1.650 (1.090)
<i>First-Stage Regression</i>	0.0216*** (0.00361)	0.0226*** (0.00423)	0.0210*** (0.00431)	0.0227*** (0.00427)	0.0208*** (0.00437)	0.0158*** (0.00159)	0.0170*** (0.00229)	0.0153*** (0.00196)	0.0170*** (0.00236)	0.0150*** (0.00208)
Individual Credit	0.573*** (0.182)	0.774*** (0.173)	1.026*** (0.224)	0.768*** (0.181)	1.031*** (0.242)	0.767*** (0.282)	0.737** (0.296)	0.956*** (0.328)	0.769** (0.313)	0.963*** (0.366)
<i>First Stage Regression</i>	0.0215*** (0.00354)	0.0218*** (0.00400)	0.0199*** (0.00407)	0.0216*** (0.00394)	0.0196*** (0.00405)	0.0159*** (0.00143)	0.0155*** (0.00185)	0.0139*** (0.00178)	0.0154*** (0.00193)	0.0134*** (0.00195)
Number of observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C6: Effects of Syrian Refugees on Aggregate Credits in All Bank Types, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Commercial Credit	-0.089 (0.866)	-0.616 (0.668)	-1.134 (0.817)	-0.535 (0.673)	-0.884 (0.855)	-0.197 (1.435)	-1.700* (0.873)	-2.114** (1.007)	-1.427 (0.941)	-1.698 (1.121)
Individual Credit	0.544*** (0.210)	0.769*** (0.201)	1.069*** (0.270)	0.770*** (0.207)	1.061*** (0.281)	0.755** (0.309)	0.704** (0.312)	0.977*** (0.361)	0.781** (0.335)	0.969** (0.393)
Number of observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C7: Effects of Syrian Refugees on Commercial Cash Credits for Selected Sector in Commercial and participation Banks, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-0.146 (0.702)	-0.367 (0.775)	-0.825 (0.876)	-0.427 (0.801)	-0.964 (0.949)	0.315 (0.853)	0.003 (0.920)	-0.127 (0.765)	-0.312 (0.986)	-0.503 (0.844)	0.884 (0.941)	0.890 (0.969)	0.698 (0.934)	0.500 (1.050)	-0.085 (1.020)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-0.210 (0.660)	0.075 (0.653)	0.693 (0.751)	0.033 (0.673)	0.544 (0.812)	1.698* (0.870)	2.404** (1.145)	3.080*** (1.002)	2.242* (1.170)	2.898** (1.305)	1.847** (0.857)	2.937** (1.132)	3.723*** (0.847)	2.681** (1.198)	3.872*** (1.300)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-1.657 (1.710)	-1.632 (2.039)	-1.631 (1.921)	-1.684 (2.119)	-2.000 (2.129)	-1.856 (2.053)	-1.910 (2.249)	-2.891* (1.723)	-2.157 (2.339)	-3.438* (1.813)	-1.051 (2.149)	-1.317 (2.099)	-2.233 (1.945)	-1.507 (2.110)	-2.752 (1.936)
N	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934
Financial	2.029 (1.571)	2.173 (1.524)	0.657 (1.512)	1.978 (1.558)	0.424 (1.650)	2.808 (2.161)	1.971 (2.308)	0.504 (2.265)	1.932 (2.397)	0.209 (2.254)	2.718 (2.901)	1.189 (3.059)	-0.381 (2.922)	1.108 (3.138)	-0.373 (2.716)
N	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924
Textile	0.804 (1.613)	1.479 (1.698)	2.905** (1.405)	1.495 (1.745)	2.591 (1.585)	0.176 (1.219)	0.778 (1.458)	1.851 (1.390)	0.662 (1.567)	1.411 (1.514)	1.315 (1.080)	2.145 (1.371)	2.717* (1.428)	2.238 (1.385)	2.445 (1.474)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Brokerage	0.427 (0.401)	0.598 (0.473)	0.486 (0.449)	0.525 (0.503)	0.345 (0.475)	-0.118 (0.634)	-0.225 (0.726)	-0.434 (0.642)	-0.414 (0.736)	-0.719 (0.574)	-0.734 (0.732)	-0.847 (0.773)	-0.910 (0.685)	-1.040 (0.759)	-1.115* (0.582)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-0.672 (0.678)	-1.173 (0.911)	-1.735* (1.019)	-1.295 (0.975)	-2.023* (1.161)	-0.547 (0.985)	-1.515 (1.181)	-1.995 (1.337)	-1.815 (1.241)	-2.511* (1.367)	-0.669 (1.045)	-1.494 (1.141)	-1.812 (1.265)	-1.807 (1.180)	-2.377* (1.247)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Agriculture and Fishing	-0.596* (0.325)	-0.869** (0.336)	-0.574 (0.364)	-1.034*** (0.340)	-0.949** (0.371)	-0.985 (0.889)	-0.862 (0.556)	-0.435 (0.510)	-1.059* (0.570)	-1.027* (0.523)	-1.522 (1.420)	-0.999 (0.736)	-0.377 (0.669)	-1.082 (0.763)	-1.172* (0.619)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Energy	5.692** (2.384)	5.804** (2.832)	5.934* (3.259)	5.700* (2.897)	6.225* (3.387)	1.039 (3.013)	1.385 (2.872)	1.897 (3.261)	1.526 (2.828)	2.348 (3.369)	1.814 (3.563)	2.716 (3.118)	3.062 (3.481)	2.903 (3.053)	3.222 (3.552)
N	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927
Navigate	12.520* (6.492)	10.440 (6.369)	10.190** (5.100)	11.440* (6.181)	12.380** (6.008)	11.740* (6.094)	11.700** (5.687)	12.700** (5.417)	12.690** (6.269)	14.370* (7.267)	11.280* (5.710)	10.540* (5.286)	11.210** (4.964)	11.260* (5.670)	12.450* (6.598)
N	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
<i>Controls for</i>															
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Trends	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Trends	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. Effects	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. Effects	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dollar currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level.

*, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C8: Effects of Syrian Refugees on Commercial Cash Credits for Selected Sector in Commercial and participation Banks, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-0.346 (0.730)	-1.081 (0.845)	-1.775 (1.103)	-1.153 (0.871)	-1.940* (1.155)	-0.085 (0.957)	-1.207 (0.880)	-1.554* (0.891)	-1.546* (0.891)	-1.974** (0.923)	0.417 (1.190)	-0.797 (0.908)	-1.272 (0.916)	-1.079 (0.944)	-2.003** (0.922)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-0.316 (0.796)	-0.027 (0.845)	0.758 (1.000)	-0.086 (0.860)	0.636 (1.040)	1.783* (0.927)	3.143** (1.239)	3.884*** (1.128)	3.076** (1.292)	4.190*** (1.396)	1.326 (0.958)	3.448*** (1.127)	4.112*** (0.978)	3.241*** (1.176)	4.732*** (1.328)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-2.201 (2.183)	-2.557 (2.697)	-2.234 (2.831)	-2.744 (2.795)	-2.534 (2.925)	-2.900 (2.079)	-2.726 (3.003)	-4.222 (2.682)	-3.098 (3.013)	-4.622* (2.639)	-3.747* (2.020)	-2.777 (3.022)	-4.744* (2.530)	-3.195 (2.886)	-5.088** (2.416)
N	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934
Financial	2.299 (1.863)	2.745 (1.985)	1.485 (1.959)	2.606 (2.006)	1.303 (2.023)	0.985 (2.285)	1.842 (2.928)	-0.092 (2.405)	1.687 (2.945)	-0.249 (2.270)	-1.235 (2.953)	1.469 (3.232)	-0.379 (2.544)	1.338 (3.182)	-0.183 (2.234)
N	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924
Textile	0.582 (1.444)	1.673 (1.445)	3.057* (1.671)	1.646 (1.481)	2.900* (1.686)	0.246 (1.387)	1.753 (1.866)	2.871 (2.604)	1.738 (1.931)	2.756 (2.622)	0.341 (1.409)	2.415 (1.997)	2.991 (2.456)	2.585 (2.027)	2.928 (2.418)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Brokerage	0.412 (0.577)	0.584 (0.696)	0.695 (0.795)	0.500 (0.720)	0.551 (0.804)	0.146 (0.899)	-0.107 (1.058)	0.003 (1.168)	-0.378 (1.064)	-0.179 (1.073)	-0.119 (1.046)	-0.488 (1.095)	-0.309 (1.176)	-0.800 (1.072)	-0.456 (1.010)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	0.362 (0.600)	0.105 (0.670)	-0.259 (0.693)	-0.056 (0.693)	-0.596 (1.082)	1.576* (0.923)	1.251 (0.989)	1.208 (1.183)	0.819 (1.008)	0.464 (1.142)	0.902 (1.209)	0.665 (1.027)	0.758 (1.099)	0.183 (1.048)	-0.094 (1.075)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Agriculture and Fishing	0.062 (0.635)	-0.517 (0.537)	0.044 (0.672)	-0.658 (0.515)	-0.213 (0.647)	0.670 (1.150)	-0.170 (0.652)	0.789 (0.809)	-0.287 (0.587)	0.394 (0.756)	1.589 (1.783)	-0.222 (0.840)	0.895 (0.889)	-0.149 (0.723)	0.351 (0.856)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Energy	4.500 (3.260)	4.099 (3.950)	3.970 (4.405)	4.049 (3.999)	4.051 (4.492)	-0.224 (3.825)	-1.590 (3.991)	-1.091 (4.482)	-1.493 (3.978)	-0.872 (4.494)	1.889 (4.488)	0.686 (4.143)	0.962 (4.723)	0.829 (4.064)	0.726 (4.633)
N	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927
Navigate	6.814 (9.090)	4.789 (7.010)	5.053 (9.931)	6.272 (6.693)	8.500 (10.350)	5.992 (8.884)	5.743 (7.588)	9.259 (8.395)	5.862 (7.853)	11.980 (10.230)	10.570 (7.834)	7.770 (6.646)	10.570 (6.984)	8.012 (6.518)	13.860 (8.626)
N	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
First-stage regression	0.0220*** (0.00368)	0.0231*** (0.00418)	0.0214*** (0.00428)	0.0232*** (0.00421)	0.0213*** (0.00432)	0.0168*** (0.00188)	0.0181*** (0.00219)	0.0164*** (0.00205)	0.0181*** (0.00223)	0.0162*** (0.00220)	0.0150*** (0.00157)	0.0174*** (0.00181)	0.0162*** (0.00188)	0.0174*** (0.00185)	0.0161*** (0.00204)
<i>Controls for</i>															
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Trends	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Trends	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. Effects	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. Effects	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dollar currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. Unweighted and two different weighted 2SLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C9: Effects of Syrian Refugees on Commercial Cash Credits for Selected Sector in Commercial and participation Banks, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-0.345 (0.814)	-1.259 (0.902)	-2.073* (1.191)	-1.331 (0.923)	-2.295* (1.229)	-0.063 (0.978)	-1.403 (0.895)	-1.700* (0.897)	-1.512* (0.891)	-2.050** (0.920)	0.555 (1.336)	-1.005 (0.981)	-1.498 (0.950)	-1.039 (1.007)	-2.099** (0.943)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-0.528 (0.829)	-0.296 (0.890)	0.565 (1.010)	-0.303 (0.906)	0.557 (1.063)	1.116 (0.955)	2.302* (1.242)	3.086*** (1.002)	2.550** (1.297)	3.852*** (1.326)	0.342 (1.136)	2.404** (1.220)	3.140*** (0.884)	2.675** (1.261)	4.433*** (1.325)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-2.699 (2.458)	-3.363 (3.063)	-2.927 (3.154)	-3.393 (3.100)	-2.992 (3.168)	-3.489 (2.138)	-3.552 (3.003)	-4.976** (2.489)	-3.539 (3.060)	-5.150** (2.541)	-4.806** (2.104)	-3.914 (2.879)	-5.762** (2.279)	-3.679 (2.859)	-5.617** (2.356)
N	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934
Financial	2.683 (1.981)	3.257 (2.117)	2.078 (2.177)	3.206 (2.169)	1.762 (2.198)	0.675 (2.444)	1.865 (2.869)	-0.215 (2.416)	2.007 (2.983)	-0.08 (2.370)	-2.459 (3.563)	0.923 (3.130)	-1.224 (2.434)	1.195 (3.201)	-0.344 (2.351)
N	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924
Textile	0.181 (1.567)	1.316 (1.579)	2.762 (1.765)	1.209 (1.648)	2.439 (1.791)	-0.359 (1.284)	1.029 (1.601)	2.205 (2.155)	1.014 (1.723)	2.036 (2.205)	-0.127 (1.338)	2.083 (1.800)	2.654 (2.183)	2.223 (1.876)	2.547 (2.184)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Brokerage	0.382 (0.627)	0.530 (0.756)	0.667 (0.878)	0.483 (0.776)	0.592 (0.892)	0.0397 (0.884)	-0.329 (1.040)	-0.287 (1.126)	-0.430 (1.080)	-0.205 (1.089)	-0.276 (1.032)	-0.837 (1.040)	-0.737 (1.085)	-0.975 (1.053)	-0.567 (1.006)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	0.306 (0.650)	0.010 (0.759)	-0.462 (1.130)	-0.102 (0.773)	-0.911 (1.135)	1.187 (0.974)	0.726 (1.014)	0.587 (1.144)	0.436 (0.991)	-0.0295 (1.070)	0.367 (1.358)	0.010 (1.116)	-0.0548 (1.103)	-0.317 (1.073)	-0.676 (1.056)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Agriculture and Fishing	0.056 (0.664)	-0.676 (0.541)	-0.080 (0.677)	-0.760 (0.523)	-0.200 (0.654)	0.802 (1.169)	-0.347 (0.622)	0.599 (0.736)	-0.465 (0.605)	0.279	2.148 (2.002)	-0.257 (0.807)	0.819 (0.868)	-0.387 (0.761)	0.165 (0.859)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Energy	4.551 (3.360)	3.912 (4.065)	3.872 (4.628)	3.977 (4.109)	3.696 (4.742)	0.866 (3.969)	-0.718 (4.069)	0.138 (4.835)	-0.529 (4.021)	0.013 (4.727)	3.361 (4.926)	1.626 (4.457)	2.191 (5.306)	1.819 (4.370)	1.58 (5.065)
N	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927
Navigate	10.880 (8.301)	10.970* (6.098)	12.280 (7.844)	11.870** (6.024)	13.170 (9.046)	11.190 (7.975)	12.670* (6.864)	15.970** (7.517)	12.030* (7.291)	18.050* (9.837)	15.810** (7.086)	13.460** (5.836)	16.000*** (6.110)	12.740** (5.999)	18.920** (8.501)
N	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
<i>Controls for</i>															
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Trends	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Trends	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. Effects	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. Effects	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted 2SLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C10: Effects of Syrian Refugees on Commercial Non-Cash Credits for Selected Sector in Commercial and participation Banks, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-0.255 (1.310)	0.368 (1.307)	0.888 (1.332)	0.190 (1.365)	0.516 (1.424)	-0.102 (2.410)	1.114 (2.457)	0.138 (2.376)	1.062 (2.460)	-0.266 (2.380)	-0.032 (2.670)	1.692 (2.639)	0.525 (2.578)	1.603 (2.647)	0.062 (2.635)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-1.818** (0.894)	-2.229** (1.014)	-1.905 (1.156)	-2.300** (1.090)	-1.948 (1.342)	-2.903*** (0.856)	-2.709*** (0.925)	-2.177** (0.938)	-2.893*** (1.021)	-2.326** (1.081)	-3.111*** (0.872)	-2.896*** (0.927)	-2.538** (1.033)	-3.184*** (0.997)	-2.470** (1.110)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-5.785* (3.236)	-6.058* (3.320)	-4.832 (3.314)	-5.22 (3.388)	-4.18 (3.639)	-5.733** (2.623)	-5.602** (2.539)	-5.472* (3.145)	-5.172* (2.663)	-5.294 (3.546)	-5.302** (2.263)	-4.964** (2.143)	-5.395** (2.461)	-4.394* (2.325)	-4.625 (2.932)
N	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Textile	7.038*** (1.552)	8.867*** (1.889)	7.760*** (2.120)	9.180*** (1.929)	8.307*** (2.292)	6.507*** (2.117)	7.641*** (2.659)	5.354** (2.640)	7.819*** (2.647)	5.501* (2.808)	7.506*** (2.325)	8.486*** (2.801)	6.268** (2.714)	8.577*** (2.777)	6.399** (2.869)
N	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843
Brokerage	0.774 (0.665)	0.752 (0.654)	0.66 (0.791)	0.782 (0.675)	0.847 (0.841)	0.0208 (1.002)	0.464 (0.816)	0.540 (0.993)	0.587 (0.809)	0.878 (1.064)	-0.161 (1.157)	0.631 (0.838)	0.751 (0.955)	0.725 (0.821)	1.356 (0.994)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-2.627 (1.457)	-1.188 (1.546)	-2.487 (1.869)	-1.292 (1.527)	-2.633 (2.110)	-1.799 (2.359)	-1.212 (2.246)	-1.300 (2.451)	-1.439 (2.178)	-1.100 (2.438)	-3.423 (2.804)	-3.995 (2.725)	-4.516 (2.997)	-4.367 (2.719)	-4.257 (3.018)
N	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917
Agr. and Fishing	-2.836 (1.914)	-2.964 (1.888)	-4.776*** (1.754)	-3.126 (1.916)	-5.334*** (1.856)	0.688 (1.710)	1.192 (2.024)	-0.687 (2.001)	0.941 (2.078)	-1.341 (2.099)	1.594 (1.622)	1.866 (1.885)	0.057 (1.920)	1.585 (1.894)	-1.027 (1.927)
N	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911
Energy	4.329 (3.185)	4.845* (2.686)	4.136 (3.035)	4.657* (2.773)	4.343 (3.353)	-0.458 (3.977)	1.050 (4.485)	-0.296 (4.200)	1.029 (4.624)	-0.162 (4.130)	-1.548 (4.177)	-0.195 (4.626)	-1.297 (4.419)	-0.185 (4.764)	-0.920 (4.203)
N	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916
Navigate	-2.446 (7.022)	-8.978 (5.582)	-8.866 (6.803)	-8.074 (5.452)	-11.24 (7.131)	-1.700 (6.826)	-5.935 (5.612)	-4.633 (5.561)	-2.658 (5.687)	-4.717 (4.887)	1.926 (8.030)	-4.202 (6.489)	-3.603 (6.286)	-0.707 (6.646)	-2.997 (6.269)
N	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667
<i>Controls for</i>															
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trend	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trend	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted OLS results are shown, seperately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C11: Effects of Syrian Refugees on Commercial Non-Cash Credits for Selected Sector in Commercial and participation Banks, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-1.038 (1.720)	-1.391 (1.698)	-0.866 (1.996)	-1.596 (1.716)	-1.123 (2.045)	-1.211 (3.272)	-1.248 (3.651)	-2.357 (3.397)	-1.286 (3.679)	-2.633 (3.385)	0.140 (3.823)	-0.401 (3.729)	-1.913 (3.266)	-0.301 (3.819)	-2.276 (3.304)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-1.569* (0.841)	-2.144** (1.073)	-1.780 (1.228)	-2.186* (1.126)	-1.816 (1.312)	-2.599*** (0.877)	-2.292** (0.986)	-1.666* (0.968)	-2.354** (1.059)	-1.463 (1.064)	-3.123*** (0.933)	-2.893*** (0.965)	-2.608*** (1.000)	-3.087*** (1.040)	-2.224** (1.111)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-3.529 (3.565)	-3.528 (4.135)	-2.219 (3.851)	-3.163 (4.294)	-1.945 (4.086)	-3.337 (2.899)	-1.760 (3.218)	-1.209 (3.437)	-1.530 (3.389)	-0.521 (3.601)	-4.338 (2.804)	-2.541 (2.930)	-2.683 (3.060)	-2.353 (3.178)	-1.487 (3.269)
N	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Textile	7.507*** (1.742)	10.66*** (2.616)	9.346*** (3.213)	11.14*** (2.731)	10.04*** (3.433)	7.310*** (2.276)	10.15*** (3.628)	7.713** (3.367)	10.65*** (3.720)	8.555** (3.555)	6.868*** (2.580)	9.569** (3.879)	6.991** (3.402)	10.01** (3.933)	8.068** (3.619)
N	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843
Brokerage	1.299 (0.906)	0.868 (0.891)	1.094 (1.006)	0.896 (0.893)	1.244 (1.005)	0.805 (1.230)	1.067 (1.037)	1.827* (1.021)	1.204 (1.017)	2.278** (1.043)	0.797 (1.207)	0.744 (1.072)	1.529 (1.006)	0.824 (0.990)	2.241** (0.996)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-2.613 (1.751)	0.163 (1.836)	-1.549 (2.180)	0.042 (1.786)	-1.654 (2.313)	-1.611 (3.229)	1.082 (2.470)	0.771 (2.677)	0.937 (2.471)	0.884 (2.655)	-2.543 (3.501)	0.051 (2.628)	-0.789 (2.890)	-0.313 (2.640)	-0.773 (2.836)
N	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917
Agr. and Fishing	-2.887 (2.003)	-3.345 (2.059)	-5.140** (2.183)	-3.518* (2.039)	-5.499** (2.235)	0.458 (1.796)	1.036 (2.308)	-0.967 (2.548)	0.942 (2.274)	-1.330 (2.568)	0.673 (2.035)	0.932 (2.133)	-1.485 (2.464)	1.011 (2.054)	-2.273 (2.519)
N	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911
Energy	2.061 (4.257)	2.690 (3.952)	2.703 (4.215)	2.373 (4.096)	2.464 (4.458)	-3.891 (3.250)	-3.222 (4.477)	-4.034 (4.956)	-3.753 (4.688)	-3.805 (5.088)	-4.489 (2.811)	-3.401 (4.019)	-4.470 (4.365)	-4.022 (4.144)	-3.939 (4.226)
N	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916
Navigate	0.045 (7.690)	-8.086 (6.902)	-6.955 (7.689)	-7.699 (6.504)	-9.256 (8.047)	-1.183 (7.131)	-11.11** (5.216)	-10.89** (5.028)	-8.177 (5.227)	-10.030* (5.428)	8.562 (8.741)	-9.544* (5.656)	-9.793* (5.371)	-6.469 (5.996)	-9.176 (6.521)
N	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667
<i>First-stage regression</i>	0.0220*** (0.00368)	0.0231*** (0.00418)	0.0214*** (0.00428)	0.0232*** (0.00421)	0.0213*** (0.00432)	0.0168*** (0.00188)	0.0181*** (0.00219)	0.0164*** (0.00205)	0.0181*** (0.00223)	0.0162*** (0.00220)	0.0150*** (0.00157)	0.0174*** (0.00181)	0.0162*** (0.00188)	0.0174*** (0.00185)	0.0161*** (0.00204)
<i>Controls for</i>															
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trend	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trend	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted 2SLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C12: Effects of Syrian Refugees on Commercial Non-Cash Credits for Selected Sector in Commercial and participation Banks, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-1.223 (1.912)	-1.960 (1.837)	-1.405 (2.205)	-2.179 (1.863)	-1.717 (2.206)	-0.946 (3.101)	-1.238 (3.390)	-2.362 (3.173)	-1.402 (3.461)	-2.925 (3.168)	0.960 (3.793)	-0.006 (3.529)	-1.468 (3.146)	-0.171 (3.616)	-2.271 (3.101)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-1.670* (0.973)	-2.328* (1.253)	-1.976 (1.439)	-2.446* (1.320)	-2.255 (1.511)	-3.022*** (0.899)	-2.861*** (0.991)	-2.237** (0.988)	-2.990*** (1.061)	-2.222** (1.087)	-3.650*** (1.014)	-3.560*** (1.002)	-3.280*** (1.020)	-3.761*** (1.048)	-2.988*** (1.128)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-4.860 (4.149)	-5.237 (4.679)	-3.982 (4.294)	-4.748 (4.747)	-3.442 (4.356)	-4.338 (3.153)	-3.120 (3.300)	-2.729 (3.471)	-2.833 (3.404)	-1.784 (3.575)	-5.192 (3.131)	-3.450 (3.042)	-3.737 (3.215)	-3.023 (3.154)	-2.162 (3.298)
N	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
Textile	7.766*** (1.983)	11.360*** (3.036)	9.717*** (3.653)	11.710*** (3.103)	10.080*** (3.774)	7.296*** (2.385)	10.270*** (3.758)	7.477** (3.376)	10.680*** (3.809)	7.904** (3.409)	6.893** (2.713)	9.860** (4.054)	6.895** (3.439)	10.200** (4.118)	7.614** (3.570)
N	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843	1843
Brokerage	1.412 (0.971)	0.813 (0.982)	1.076 (1.089)	0.875 (0.998)	1.192 (1.126)	0.811 (1.150)	0.883 (0.933)	1.584* (0.931)	0.983 (1.003)	1.997* (1.045)	0.978 (1.226)	0.635 (0.958)	1.353 (0.919)	0.667 (0.984)	2.089** (0.994)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-2.423 (1.919)	0.769 (1.941)	-1.148 (2.295)	0.681 (1.911)	-1.476 (2.423)	-1.820 (3.096)	1.100 (2.359)	0.868 (2.665)	0.891 (2.356)	0.766 (2.629)	-3.316 (3.559)	-0.347 (2.650)	-1.138 (3.017)	-0.780 (2.664)	-1.443 (2.948)
N	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917
Agr. and Fishing	-3.148 (2.095)	-3.864* (2.195)	-6.064** (2.425)	-3.771* (2.222)	-5.917** (2.222)	0.0239 (1.854)	0.332 (2.243)	-1.893 (2.737)	0.549 (2.234)	-1.813 (2.659)	0.242 (2.312)	0.230 (2.143)	-2.375 (2.793)	0.443 (2.079)	-2.823 (2.760)
N	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911
Energy	1.533 (4.551)	2.158 (4.335)	2.299 (4.589)	2.196 (4.346)	2.278 (4.632)	-3.469 (3.267)	-2.695 (4.507)	-3.772 (4.702)	-2.349 (4.556)	-2.45 (4.578)	-4.641 (3.091)	-3.603 (4.291)	-4.932 (4.345)	-3.118 (4.256)	-2.882 (4.081)
N	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916
Navigate	4.002 (7.519)	-4.778 (7.387)	-3.934 (7.961)	-6.955 (6.613)	-8.979 (8.128)	7.217 (7.171)	-4.803 (5.159)	-5.108 (4.939)	-5.539 (5.437)	-7.816 (5.383)	18.39** (8.966)	-2.813 (5.634)	-3.642 (5.977)	-3.614 (6.546)	-6.374 (6.890)
N	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667
<i>Controls for</i>															
Province F. Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter F. Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Tr.	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Tr.	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. E.	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. E.	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dollar currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted 2SLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C13: Effects of Syrian Refugees on Individual Credits in Commercial and participation Banks, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Housing	0.059 (0.246)	0.060 (0.309)	1.002*** (0.275)	-0.035 (0.318)	0.954*** (0.293)	0.280 (0.302)	0.081 (0.306)	0.716** (0.308)	0.033 (0.307)	0.580* (0.332)
Auto	1.031** (0.514)	0.892 (0.627)	1.180** (0.549)	1.009 (0.616)	1.327** (0.609)	0.621 (0.714)	0.271 (0.782)	0.259 (0.704)	0.373 (0.743)	0.349 (0.689)
Credit Advance	0.292 (0.231)	0.352 (0.292)	0.271 (0.298)	0.443 (0.294)	0.364 (0.288)	0.548** (0.238)	0.432 (0.286)	0.565** (0.258)	0.466 (0.296)	0.645** (0.278)
Credit Card	0.239 (0.432)	0.407 (0.459)	1.068*** (0.313)	0.384 (0.475)	1.084*** (0.383)	0.057 (0.367)	0.181 (0.371)	1.018** (0.389)	0.248 (0.382)	0.792** (0.348)
Consumer	0.926*** (0.247)	0.953*** (0.260)	0.707*** (0.236)	0.972*** (0.270)	0.717*** (0.239)	1.268*** (0.246)	1.099*** (0.282)	0.931*** (0.277)	1.121*** (0.296)	0.915*** (0.300)
Number of observation	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C14: Effects of Syrian Refugees on Individual Credits in Commercial and participation Banks, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Housing	0.139 (0.313)	0.298 (0.334)	1.365*** (0.459)	0.231 (0.344)	1.348*** (0.472)	0.712* (0.391)	0.745* (0.441)	1.491** (0.700)	0.711 (0.462)	1.473** (0.724)
Auto	1.261*** (0.435)	1.283** (0.566)	1.758*** (0.582)	1.355** (0.600)	1.798*** (0.654)	1.382** (0.653)	1.519* (0.844)	1.839* (0.970)	1.581* (0.947)	1.944* (1.139)
Credit Advance	0.658** (0.281)	0.745** (0.339)	0.696** (0.338)	0.832** (0.337)	0.769** (0.337)	0.902*** (0.330)	0.718** (0.330)	0.780** (0.318)	0.714** (0.345)	0.789** (0.338)
Credit Card	0.288 (0.458)	0.519 (0.490)	1.102*** (0.409)	0.500 (0.496)	1.111** (0.450)	0.132 (0.453)	0.251 (0.407)	0.829** (0.341)	0.436 (0.406)	0.859** (0.368)
Consumer	0.993*** (0.249)	1.174*** (0.313)	0.903*** (0.287)	1.184*** (0.317)	0.899*** (0.285)	1.359*** (0.291)	1.296*** (0.365)	1.095*** (0.349)	1.255*** (0.379)	1.014*** (0.370)
<i>First Stage Regression</i>	0.0215*** (0.00354)	0.0218*** (0.00400)	0.0199*** (0.00407)	0.0216*** (0.00394)	0.0196*** (0.00405)	0.0159*** (0.00143)	0.0155*** (0.00185)	0.0139*** (0.00178)	0.0154*** (0.00193)	0.0134*** (0.00195)
Number of observation	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C15: Effects of Syrian Refugees on Individual Credits in Commercial and participation Banks, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Housing	0.031 (0.369)	0.184 (0.396)	1.429*** (0.519)	0.133 (0.403)	1.369*** (0.524)	0.664 (0.423)	0.661 (0.445)	1.529** (0.712)	0.704 (0.486)	1.494** (0.735)
Auto	1.122** (0.514)	1.079 (0.660)	1.602** (0.649)	1.165* (0.668)	1.530** (0.658)	1.181* (0.688)	1.188 (0.830)	1.473* (0.895)	1.259 (0.875)	1.388 (0.916)
Credit Advance	0.814*** (0.302)	0.947*** (0.341)	0.987*** (0.336)	0.996*** (0.334)	0.959*** (0.335)	0.976*** (0.355)	0.790** (0.352)	0.910*** (0.341)	0.814** (0.363)	0.902** (0.351)
Credit Card	0.187 (0.502)	0.390 (0.562)	1.036** (0.485)	0.404 (0.562)	1.080** (0.497)	0.174 (0.502)	0.307 (0.410)	1.045** (0.419)	0.429 (0.403)	0.888** (0.378)
Consumer	1.023*** (0.254)	1.261*** (0.316)	0.972*** (0.295)	1.275*** (0.322)	0.968*** (0.293)	1.323*** (0.290)	1.231*** (0.359)	0.993*** (0.339)	1.279*** (0.381)	0.997*** (0.369)
Number of observation	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C16: Effects of Syrian Refugees on Commercial Cash Credits for Selected Sector in All Banks, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-0.168 (0.735)	-0.410 (0.779)	-0.918 (0.850)	-0.481 (0.801)	-1.098 (0.914)	0.510 (0.914)	0.159 (0.989)	-0.089 (0.815)	-0.146 (1.053)	-0.480 (0.883)	1.134 (1.053)	1.159 (1.095)	0.902 (1.043)	0.792 (1.179)	0.107 (1.123)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-0.159 (0.675)	0.122 (0.663)	0.703 (0.769)	0.074 (0.682)	0.565 (0.830)	1.581* (0.795)	2.236** (1.027)	2.848*** (0.894)	1.987* (1.049)	2.680** (1.035)	1.653** (0.786)	2.690*** (1.013)	3.367*** (0.728)	2.369** (1.074)	3.425*** (0.917)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-1.371 (1.507)	-1.225 (1.857)	-1.251 (1.703)	-1.275 (1.931)	-1.724 (1.901)	-1.387 (1.994)	-1.324 (2.215)	-2.400 (1.641)	-1.618 (2.276)	-3.205* (1.633)	-0.654 (2.024)	-0.917 (2.052)	-1.961 (1.854)	-1.175 (1.990)	-2.802 (1.690)
N	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934
Financial	2.333 (1.802)	2.386 (1.701)	0.693 (1.630)	2.112 (1.726)	0.419 (1.753)	3.64 (2.384)	2.771 (2.462)	1.001 (2.357)	2.758 (2.559)	0.781 (2.436)	4.377 (3.073)	3.019 (3.168)	1.179 (2.957)	3.099 (3.287)	1.172 (2.922)
N	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924
Textile	1.399 (1.374)	2.185 (1.444)	3.306** (1.259)	2.215 (1.481)	2.975** (1.419)	1.115 (1.319)	1.814 (1.559)	2.706 (1.634)	1.726 (1.649)	2.264 (1.717)	2.283* (1.331)	3.135** (1.572)	3.623* (1.832)	3.185** (1.583)	3.117* (1.813)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Brokerage	0.526 (0.435)	0.671 (0.492)	0.554 (0.467)	0.625 (0.523)	0.472 (0.497)	0.097 (0.612)	0.022 (0.710)	-0.147 (0.664)	-0.130 (0.722)	-0.373 (0.596)	-0.261 (0.692)	-0.316 (0.749)	-0.359 (0.742)	-0.459 (0.729)	-0.446 (0.608)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-1.303 (0.920)	-1.705 (1.200)	-2.170* (1.302)	-1.752 (1.256)	-2.313 (1.446)	-1.842 (1.157)	-2.860** (1.293)	-3.273** (1.466)	-2.987** (1.338)	-3.507** (1.508)	-1.823 (1.173)	-2.788** (1.181)	-3.084** (1.293)	-2.960** (1.214)	-3.393** (1.308)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Agr. and Fishing	-0.598* (0.328)	-0.859** (0.339)	-0.578 (0.368)	-1.016*** (0.343)	-0.933** (0.377)	-0.935 (0.867)	-0.805 (0.554)	-0.390 (0.514)	-0.948 (0.559)	-0.934 (0.502)	-1.399 (1.380)	-0.891 (0.738)	-0.28 (0.679)	-0.901 (0.758)	-1.094 (0.605)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Energy	5.841** (2.254)	6.160** (2.588)	6.307** (3.044)	6.040** (2.647)	6.464** (3.151)	1.547 (3.046)	2.457 (2.952)	3.008 (3.405)	2.581 (2.875)	3.349 (3.482)	2.045 (3.541)	3.434 (3.189)	3.774 (3.615)	3.585 (3.100)	3.845 (3.692)
N	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927
Navigate	13.590** (6.793)	11.000* (6.583)	10.120* (5.137)	11.730* (6.318)	11.360* (6.269)	14.300** (6.361)	12.280** (5.878)	13.780** (5.470)	13.120** (6.365)	14.890** (7.247)	13.490** (6.066)	10.970** (5.363)	12.170** (5.132)	11.630** (5.816)	13.600** (6.627)
N	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
<i>Controls for</i>															
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Trends	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Trends	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. Effects	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. Effects	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted OLS results are shown, seperately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level.

*, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C17: Effects of Syrian Refugees on Commercial Cash Credits for Selected Sector in All Banks, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-0.309 (0.762)	-1.130 (0.831)	-1.804* (1.062)	-1.219 (0.855)	-1.986* (1.108)	0.171 (1.042)	-1.151 (0.949)	-1.592* (0.863)	-1.486 (0.966)	-2.008** (0.909)	0.757 (1.389)	-0.706 (1.077)	-1.227 (0.934)	-0.977 (1.149)	-1.968** (0.989)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-0.251 (0.801)	0.037 (0.850)	0.797 (1.016)	-0.0352 (0.862)	0.658 (1.049)	1.756*** (0.856)	3.039*** (1.148)	3.681*** (1.055)	2.721*** (1.157)	3.497*** (1.089)	1.298 (0.842)	3.345** (1.032)	3.816*** (0.927)	2.837** (1.040)	3.702*** (0.934)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-1.709 (1.858)	-1.85 (2.384)	-1.475 (2.488)	-2.014 (2.463)	-1.799 (2.548)	-2.002 (1.993)	-1.353 (3.012)	-2.799 (2.718)	-1.677 (2.967)	-3.274 (2.552)	-2.935 (1.872)	-1.672 (2.945)	-3.543 (2.474)	-2.039 (2.735)	-4.005* (2.198)
N	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934
Financial	2.844 (2.241)	3.217 (2.381)	1.923 (2.278)	3.009 (2.390)	1.687 (2.331)	2.213 (2.725)	3.135 (3.545)	1.23 (2.966)	3.054 (3.641)	1.09 (2.980)	0.251 (3.169)	3.139 (3.952)	1.434 (3.216)	3.239 (4.053)	1.537 (3.162)
N	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924
Textile	0.653 (1.459)	1.929 (1.448)	2.874* (1.705)	1.896 (1.486)	2.696 (1.733)	-0.106 (1.505)	1.788 (2.091)	2.490 (2.707)	1.709 (2.162)	2.348 (2.692)	-1.085 (1.888)	1.946 (2.311)	2.454 (2.688)	1.943 (2.377)	2.250 (2.572)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Brokerage	0.541 (0.583)	0.594 (0.684)	0.676 (0.788)	0.544 (0.709)	0.582 (0.797)	0.193 (0.834)	0.016 (1.018)	0.032 (1.136)	-0.230 (1.013)	-0.109 (1.033)	-0.013 (0.939)	-0.137 (1.075)	-0.166 (1.150)	-0.430 (1.019)	-0.221 (0.955)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-0.505 (0.673)	-0.695 (0.804)	-1.060 (1.135)	-0.804 (0.854)	-1.295 (1.218)	-0.047 (1.092)	-0.423 (0.951)	-0.540 (1.055)	-0.668 (0.985)	-0.989 (1.073)	-0.849 (1.450)	-1.167 (1.095)	-1.201 (1.064)	-1.480 (1.110)	-1.755 (1.094)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Agriculture and Fishing	0.047 (0.640)	-0.502 (0.546)	0.046 (0.680)	-0.634 (0.525)	-0.194 (0.660)	0.641 (1.142)	-0.153 (0.678)	0.786 (0.807)	-0.198 (0.593)	0.415 (0.764)	1.573 (1.756)	-0.205 (0.879)	0.917 (0.889)	-0.010 (0.734)	0.318 (0.879)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Energy	4.342 (3.261)	4.117 (3.820)	3.750 (4.292)	4.036 (3.878)	3.762 (4.381)	-0.958 (3.755)	-1.698 (3.953)	-1.487 (4.378)	-1.634 (3.937)	-1.290 (4.383)	0.718 (4.207)	0.351 (4.021)	0.438 (4.525)	0.466 (3.932)	0.216 (4.432)
N	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927
Navigate	6.783 (9.575)	4.531 (7.236)	3.049 (10.310)	5.760 (6.832)	5.497 (11.160)	6.501 (9.886)	6.094 (7.269)	9.216 (8.025)	5.935 (7.356)	10.650 (10.100)	9.963 (8.483)	8.098 (5.953)	11.200* (6.282)	7.950 (5.663)	13.770* (8.086)
N	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
<i>First-stage regression</i>	0.0220*** (0.00368)	0.0231*** (0.00418)	0.0214*** (0.00428)	0.0232*** (0.00421)	0.0213*** (0.00432)	0.0168*** (0.00188)	0.0181*** (0.00219)	0.0164*** (0.00205)	0.0181*** (0.00223)	0.0162*** (0.00220)	0.0150*** (0.00157)	0.0174*** (0.00181)	0.0162*** (0.00188)	0.0174*** (0.00185)	0.0161*** (0.00204)
<i>Controls for</i>															
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Trends	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Trends	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. Effects	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. Effects	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted 2SLS results are shown, seperately. Dependent variables in each model are used in logarithmic form. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C18: Effects of Syrian Refugees on Commercial Cash Credits for Selected Sector in All Banks, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-0.288 (0.857)	-1.301 (0.893)	-2.072* (1.145)	-1.392 (0.913)	-2.305** (1.173)	0.191 (1.085)	-1.369 (0.984)	-1.757** (0.881)	-1.490 (0.995)	-2.124** (0.912)	0.931 (1.551)	-0.905 (1.166)	-1.432 (0.993)	-0.955 (1.230)	-2.069** (1.014)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-0.454 (0.825)	-0.219 (0.883)	0.616 (1.015)	-0.237 (0.898)	0.591 (1.063)	1.088 (0.871)	2.185* (1.125)	2.877*** (0.889)	2.217* (1.161)	3.127*** (0.993)	0.291 (1.021)	2.254** (1.078)	2.815*** (0.768)	2.279** (1.122)	3.317*** (0.910)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-2.225 (2.145)	-2.659 (2.753)	-2.164 (2.776)	-2.697 (2.789)	-2.266 (2.788)	-2.722 (1.982)	-2.328 (2.838)	-3.736 (2.286)	-2.396 (2.894)	-4.063* (2.323)	-4.077** (1.908)	-2.892 (2.581)	-4.696** (1.953)	-2.810 (2.561)	-4.799** (2.019)
N	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934	1934
Financial	3.333 (2.375)	3.849 (2.549)	2.686 (2.538)	3.731 (2.596)	2.263 (2.538)	2.098 (2.845)	3.444 (3.537)	1.410 (3.029)	3.619 (3.732)	1.413 (3.095)	-0.561 (3.721)	3.177 (4.016)	1.159 (3.245)	3.600 (4.223)	1.74 (3.350)
N	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924
Textile	0.321 (1.592)	1.703 (1.577)	2.675 (1.811)	1.581 (1.646)	2.322 (1.848)	-0.798 (1.484)	1.077 (1.833)	1.774 (2.289)	1.037 (1.943)	1.639 (2.305)	-1.937 (2.137)	1.463 (2.209)	1.826 (2.443)	1.558 (2.271)	1.812 (2.386)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Brokerage	0.573 (0.641)	0.581 (0.745)	0.717 (0.882)	0.548 (0.763)	0.663 (0.890)	0.095 (0.822)	-0.181 (0.995)	-0.197 (1.101)	-0.246 (1.028)	-0.0837 (1.055)	-0.203 (0.912)	-0.471 (1.002)	-0.521 (1.057)	-0.550 (0.990)	-0.255 (0.958)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-0.608 (0.791)	-0.848 (0.954)	-1.345 (1.296)	-0.932 (0.976)	-1.732 (1.324)	-0.329 (1.128)	-0.812 (1.005)	-0.967 (1.077)	-0.963 (0.996)	-1.435 (1.035)	-1.259 (1.560)	-1.649 (1.174)	-1.783 (1.119)	-1.870* (1.132)	-2.267** (1.099)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Agriculture and Fishing	0.041 (0.669)	-0.652 (0.549)	-0.066 (0.687)	-0.735 (0.531)	-0.179 (0.666)	0.798 (1.161)	-0.277 (0.631)	0.656 (0.742)	-0.374 (0.606)	0.303 (0.748)	2.196 (1.986)	-0.134 (0.820)	0.947 (0.885)	-0.237 (0.770)	0.137 (0.884)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Energy	4.456 (3.371)	4.005 (3.939)	3.698 (4.501)	4.044 (3.993)	3.529 (4.627)	0.113 (3.864)	-0.785 (4.024)	-0.227 (4.671)	-0.584 (3.987)	-0.244 (4.609)	2.022 (4.569)	1.215 (4.292)	1.554 (5.020)	1.429 (4.223)	1.103 (4.848)
N	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927
Navigate	10.820 (8.743)	10.950 (6.332)	10.530 (8.213)	11.640 (6.217)	10.540 (9.689)	11.480 (8.917)	13.130** (6.630)	16.250** (7.259)	12.220* (7.023)	16.870* (9.757)	14.820* (7.616)	14.020*** (5.182)	16.960*** (5.594)	12.780** (5.415)	18.840** (8.097)
N	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
<i>Controls for</i>															
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Trends	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Trends	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. Effects	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. Effects	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted 2SLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C19: Effects of Syrian Refugees on Commercial Non-Cash Credits for Selected Sector in All Banks, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-0.280 (1.290)	0.345 (1.291)	0.920 (1.311)	0.150 (1.348)	0.544 (1.415)	-0.138 (2.390)	1.112 (2.439)	0.170 (2.352)	1.056 (2.442)	-0.226 (2.357)	-0.101 (2.643)	1.656 (2.616)	0.524 (2.547)	1.564 (2.629)	0.0646 (2.612)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-1.800** (0.890)	-2.239** (1.011)	-1.915 (1.157)	-2.304** (1.088)	-1.953 (1.343)	-2.893*** (0.860)	-2.724*** (0.929)	-2.194** (0.944)	-2.912*** (1.026)	-2.342** (1.087)	-3.117*** (0.880)	-2.939*** (0.936)	-2.587** (1.045)	-3.234*** (1.007)	-2.507** (1.121)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-6.084 (3.265)	-6.352 (3.307)	-5.071 (3.323)	-5.533 (3.380)	-4.448 (3.649)	-5.930** (2.661)	-5.755** (2.559)	-5.572* (3.186)	-5.373** (2.678)	-5.410 (3.577)	-5.512** (2.297)	-5.102** (2.153)	-5.463** (2.490)	-4.603* (2.327)	-4.708 (2.956)
N	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Textile	6.976*** (1.549)	8.842*** (1.891)	7.774*** (2.118)	9.126*** (1.938)	8.268*** (2.301)	6.648*** (2.105)	7.675*** (2.659)	5.391** (2.651)	7.816*** (2.665)	5.498* (2.819)	7.631*** (2.329)	8.413*** (2.801)	6.186** (2.706)	8.486*** (2.813)	6.270** (2.870)
N	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Brokerage	0.891 (0.648)	0.792 (0.655)	0.577 (0.789)	0.867 (0.667)	0.841 (0.827)	0.0805 (0.944)	0.404 (0.786)	0.388 (0.955)	0.635 (0.764)	0.839 (1.004)	0.0755 (1.031)	0.659 (0.771)	0.66 (0.879)	0.912 (0.735)	1.493 (0.853)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-2.851** (1.405)	-1.418 (1.460)	-2.457 (1.865)	-1.501 (1.454)	-2.604 (2.100)	-1.928 (2.372)	-1.334 (2.247)	-1.324 (2.459)	-1.550 (2.183)	-1.136 (2.446)	-3.596 (2.822)	-4.165 (2.727)	-4.587 (3.008)	-4.521 (2.725)	-4.353 (3.029)
N	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917
Agr. and Fishing	-2.927 (1.860)	-3.035 (1.828)	-4.890*** (1.646)	-3.178* (1.861)	-5.373*** (1.777)	0.598 (1.671)	1.103 (1.976)	-0.714 (1.986)	0.899 (2.057)	-1.265 (2.126)	1.453 (1.598)	1.694 (1.842)	-0.0273 (1.935)	1.464 (1.897)	-1.006 (2.009)
N	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911
Energy	3.814 (3.261)	4.388 (2.756)	3.279 (3.065)	4.187 (2.847)	3.435 (3.415)	-1.015 (3.946)	0.480 (4.473)	-0.979 (4.110)	0.382 (4.604)	-0.925 (4.018)	-1.996 (4.150)	-0.672 (4.620)	-1.788 (4.374)	-0.763 (4.755)	-1.524 (4.139)
N	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916
Navigate	0.339 (7.200)	-5.469 (6.123)	-5.076 (7.304)	-4.400 (6.146)	-6.949 (7.775)	-1.006 (6.762)	-4.789 (5.748)	-3.198 (5.692)	-1.561 (5.819)	-3.007 (5.001)	2.681 (7.980)	-2.893 (6.723)	-2.094 (6.512)	0.612 (6.892)	-1.139 (6.355)
N	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680
<i>Controls for</i>															
Province F. E.	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter F. E.	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Tr.	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Tr.	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. E.	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. E.	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted OLS results are shown, seperately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5%, and 1% levels, respectively.

Table C20: Effects of Syrian Refugees on Commercial Non-Cash Credits for Selected Sector in All Types of Banks, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-1.051 (1.699)	-1.399 (1.681)	-0.828 (1.983)	-1.626 (1.698)	-1.097 (2.043)	-1.279 (3.233)	-1.259 (3.617)	-2.351 (3.367)	-1.304 (3.645)	-2.626 (3.359)	0.039 (3.771)	-0.443 (3.686)	-1.916 (3.228)	-0.353 (3.780)	-2.297 (3.268)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-1.542* (0.838)	-2.151** (1.070)	-1.782 (1.228)	-2.190* (1.123)	-1.813 (1.312)	-2.573*** (0.883)	-2.290** (0.993)	-1.665* (0.974)	-2.355** (1.064)	-1.457 (1.071)	-3.098*** (0.939)	-2.898*** (0.972)	-2.622*** (1.009)	-3.099*** (1.047)	-2.215** (1.118)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-3.886 (3.640)	-3.880 (4.129)	-2.535 (3.819)	-3.512 (4.289)	-2.253 (4.060)	-3.701 (2.974)	-2.092 (3.199)	-1.462 (3.402)	-1.926 (3.379)	-0.805 (3.595)	-4.581 (2.827)	-2.830 (2.894)	-2.809 (3.046)	-2.749 (3.148)	-1.674 (3.270)
N	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Textile	7.531*** (1.676)	10.780*** (2.590)	9.461** (3.165)	11.240*** (2.717)	10.140** (3.396)	7.481*** (2.067)	10.550** (3.520)	7.992* (3.259)	10.980** (3.643)	8.761* (3.471)	6.786** (2.393)	9.786* (3.827)	7.147* (3.352)	10.16** (3.923)	8.129* (3.578)
N	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Brokerage	1.412 (0.873)	0.888 (0.869)	0.951 (0.987)	0.954 (0.868)	1.152 (0.978)	0.775 (1.133)	0.890 (0.942)	1.422 (0.984)	1.126 (0.910)	1.952 (0.996)	0.848 (1.050)	0.651 (0.897)	1.043 (0.962)	0.888 (0.814)	1.927** (0.955)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-2.895 (1.708)	-0.148 (1.700)	-1.601 (2.155)	-0.251 (1.667)	-1.700 (2.284)	-1.744 (3.276)	0.957 (2.498)	0.733 (2.689)	0.820 (2.504)	0.829 (2.668)	-2.705 (3.556)	-0.111 (2.648)	-0.838 (2.903)	-0.459 (2.672)	-0.852 (2.852)
N	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917
Agr. and Fishing	-3.086 (1.915)	-3.557* (1.950)	-5.421*** (2.096)	-3.723* (1.936)	-5.751*** (2.170)	0.102 (1.765)	0.584 (2.191)	-1.408 (2.631)	0.510 (2.197)	-1.740 (2.705)	0.328 (2.079)	0.483 (2.056)	-1.875 (2.627)	0.581 (2.036)	-2.644 (2.755)
N	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911
Energy	1.393 (4.399)	2.081 (4.117)	1.662 (4.351)	1.749 (4.267)	1.382 (4.618)	-4.579 (3.261)	-3.948 (4.484)	-4.884 (4.946)	-4.577 (4.706)	-4.779 (5.112)	-5.115 (2.772)	-4.069 (3.988)	-5.152 (4.327)	-4.824 (4.126)	-4.793 (4.209)
N	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916
Navigate	3.656 (7.996)	-4.479 (7.329)	-3.081 (8.142)	-3.911 (7.137)	-4.600 (8.602)	-0.644 (6.974)	-10.26** (5.218)	-9.599* (5.061)	-7.633 (5.221)	-8.614 (5.418)	8.684 (8.410)	-8.725 (5.679)	-8.573 (5.413)	-5.974 (6.021)	-7.826 (6.490)
N	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680
<i>First-stage regression</i>	0.0220*** (0.00368)	0.0231*** (0.00418)	0.0214*** (0.00428)	0.0232*** (0.00421)	0.0213*** (0.00432)	0.0168*** (0.00188)	0.0181*** (0.00219)	0.0164*** (0.00205)	0.0181*** (0.00223)	0.0162*** (0.00220)	0.0150*** (0.00157)	0.0174*** (0.00181)	0.0162*** (0.00188)	0.0174*** (0.00185)	0.0161*** (0.00204)
<i>Controls for</i>															
Province F. Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter F. Effect	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Tr.	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Tr.	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. E.	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. E.	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted 2SLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C21: Effects of Syrian Refugees on Commercial Non-Cash Credits for Selected Sector in All Types of Banks, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation with Tot. Pop					Weighted Estimation with GDP				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Food and Tobacco	-1.251 (1.888)	-1.982 (1.823)	-1.384 (2.189)	-2.217 (1.847)	-1.700 (2.197)	-1.023 (3.066)	-1.249 (3.366)	-2.356 (3.153)	-1.420 (3.434)	-2.916 (3.146)	0.849 (3.746)	-0.042 (3.496)	-1.471 (3.117)	-0.224 (3.583)	-2.290 (3.069)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Construction	-1.644* (0.971)	-2.337* (1.251)	-1.977 (1.439)	-2.454* (1.317)	-2.251 (1.510)	-2.999*** (0.904)	-2.862*** (0.995)	-2.236** (0.993)	-2.995*** (1.066)	-2.217** (1.094)	-3.632*** (1.021)	-3.573*** (1.004)	-3.295*** (1.027)	-3.783*** (1.054)	-2.984*** (1.135)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Metal and Mining	-5.150 (4.206)	-5.496 (4.679)	-4.182 (4.285)	-5.010 (4.754)	-3.639 (4.354)	-4.626 (3.216)	-3.354 (3.309)	-2.877 (3.471)	-3.134 (3.434)	-1.966 (3.605)	-5.343 (3.142)	-3.658 (3.035)	-3.789 (3.221)	-3.361 (3.168)	-2.283 (3.328)
N	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Textile	7.750*** (1.937)	11.44*** (3.024)	9.772** (3.620)	11.76*** (3.092)	10.12** (3.744)	7.309** (2.229)	10.500** (3.734)	7.591* (3.334)	10.860** (3.781)	7.943* (3.362)	6.588* (2.590)	9.877* (4.118)	6.832* (3.476)	10.13* (4.181)	7.432* (3.575)
N	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Brokerage	1.540 (0.937)	0.848 (0.963)	0.935 (1.067)	0.932 (0.973)	1.083 (1.094)	0.787 (1.044)	0.718 (0.829)	1.190 (0.882)	0.890 (0.890)	1.639* (0.995)	1.027 (1.056)	0.559 (0.791)	0.904 (0.871)	0.701 (0.808)	1.732 (0.960)
N	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937	1937
Tourism	-2.766 (1.862)	0.382 (1.763)	-1.246 (2.280)	0.307 (1.748)	-1.548 (2.407)	-1.963 (3.142)	0.963 (2.380)	0.832 (2.677)	0.757 (2.380)	0.717 (2.641)	-3.490 (3.616)	-0.522 (2.665)	-1.185 (3.033)	-0.949 (2.684)	-1.521 (2.968)
N	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917	1917
Agr. and Fishing	-3.319 (2.044)	-4.050* (2.132)	-6.319*** (2.380)	-3.948* (2.161)	-6.163** (2.422)	-0.216 (1.915)	0.024 (2.234)	-2.160 (2.862)	0.257 (2.237)	-2.087 (2.806)	0.006 (2.437)	-0.096 (2.190)	-2.613 (2.980)	0.127 (2.146)	-3.087 (2.984)
N	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911	1911
Energy	0.829 (4.669)	1.513 (4.477)	1.148 (4.680)	1.531 (4.492)	1.052 (4.737)	-4.218 (3.243)	-3.510 (4.477)	-4.745 (4.604)	-3.230 (4.527)	-3.537 (4.501)	-5.334* (3.029)	-4.357 (4.227)	-5.722 (4.244)	-3.937 (4.188)	-3.785 (3.968)
N	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916	1916
Navigate	7.214 (7.781)	-1.350 (7.727)	-0.175 (8.352)	-3.158 (7.263)	-4.185 (8.747)	7.341 (7.006)	-4.169 (5.150)	-4.087 (4.928)	-5.096 (5.443)	-6.461 (5.348)	18.060** (8.545)	-2.207 (5.615)	-2.699 (5.959)	-3.191 (6.575)	-5.085 (6.832)
N	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680
<i>Controls for</i>															
Province F. Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter F. Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region L. Time Tr.	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no	no
NUTS1 L. Time Tr.	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year F. E.	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year F. E.	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	yes

Notes: Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dollar currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey. The weighting strategy is weighted 2SLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted 2SLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C22: Effects of Syrian Refugees on Individual Credits in All Banks, OLS Estimates

D.Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Housing	0.057 (0.251)	0.054 (0.314)	1.017*** (0.279)	-0.043 (0.323)	0.971*** (0.297)	0.279 (0.315)	0.063 (0.313)	0.718** (0.312)	0.018 (0.314)	0.589* (0.337)
Auto	1.009* (0.525)	0.889 (0.640)	1.254** (0.551)	1.007 (0.632)	1.402** (0.616)	0.572 (0.717)	0.258 (0.779)	0.320 (0.694)	0.355 (0.744)	0.424 (0.685)
Credit Advance	0.292 (0.231)	0.351 (0.292)	0.271 (0.298)	0.443 (0.294)	0.364 (0.288)	0.548** (0.238)	0.431 (0.286)	0.565** (0.258)	0.465 (0.296)	0.645** (0.278)
Credit Card	0.234 (0.436)	0.404 (0.462)	1.067*** (0.316)	0.381 (0.478)	1.085*** (0.386)	0.047 (0.369)	0.176 (0.373)	1.014** (0.389)	0.242 (0.383)	0.790** (0.349)
Consumer	0.906*** (0.246)	0.930*** (0.259)	0.688*** (0.235)	0.951*** (0.270)	0.702*** (0.269)	1.243*** (0.243)	1.058*** (0.281)	0.900** (0.275)	1.080*** (0.295)	0.893*** (0.299)
Number of observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C23: Effects of Syrian Refugees on Individual Credits in All Banks, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Housing	0.140 (0.313)	0.291 (0.336)	1.382*** (0.465)	0.225 (0.346)	1.367*** (0.478)	0.732* (0.39)	0.754* (0.444)	1.529** (0.721)	0.731 (0.465)	1.527** (0.748)
Auto	1.202*** (0.441)	1.248** (0.574)	1.793*** (0.59)	1.316** (0.607)	1.830*** (0.664)	1.266** (0.634)	1.449* (0.849)	1.824* (0.982)	1.494 (0.947)	1.928* (1.145)
Credit Advance	0.658** (0.282)	0.745** (0.339)	0.696** (0.338)	0.832** (0.337)	0.769** (0.337)	0.903*** (0.331)	0.719** (0.330)	0.782** (0.318)	0.713** (0.345)	0.788** (0.338)
Credit Card	0.282 (0.461)	0.514 (0.493)	1.099*** (0.412)	0.495 (0.500)	1.109** (0.452)	0.118 (0.457)	0.242 (0.410)	0.822** (0.343)	0.428 (0.409)	0.854** (0.369)
Consumer	0.972*** (0.248)	1.151*** (0.311)	0.881*** (0.285)	1.164*** (0.316)	0.881*** (0.284)	1.338*** (0.289)	1.256*** (0.365)	1.057*** (0.345)	1.215*** (0.378)	0.986*** (0.367)
<i>First Stage Regression</i>	0.0215*** (0.00354)	0.0218*** (0.00400)	0.0199*** (0.00407)	0.0216*** (0.00394)	0.0196*** (0.00405)	0.0159*** (0.00143)	0.0155*** (0.00185)	0.0139*** (0.00178)	0.0154*** (0.00193)	0.0134*** (0.00195)
Number of observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table C24: Effects of Syrian Refugees on Individual Credits in All Banks, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Housing	0.028 (0.371)	0.169 (0.401)	1.438*** (0.521)	0.116 (0.407)	1.379*** (0.527)	0.670 (0.428)	0.646 (0.446)	1.540** (0.717)	0.701 (0.485)	1.531** (0.748)
Auto	1.045** (0.524)	1.022 (0.670)	1.622** (0.659)	1.107 (0.677)	1.549** (0.672)	1.039 (0.673)	1.083 (0.833)	1.421 (0.904)	1.151 (0.874)	1.354 (0.921)
Credit Advance	0.814*** (0.302)	0.948*** (0.341)	0.987*** (0.336)	0.996*** (0.334)	0.959*** (0.335)	0.978*** (0.355)	0.791** (0.352)	0.911*** (0.342)	0.814** (0.363)	0.901** (0.351)
Credit Card	0.179 (0.506)	0.382 (0.566)	1.030** (0.488)	0.396 (0.565)	1.076** (0.500)	0.157 (0.504)	0.295 (0.412)	1.034** (0.420)	0.417 (0.404)	0.878** (0.378)
Consumer	1.004*** (0.254)	1.241*** (0.315)	0.953*** (0.294)	1.255*** (0.321)	0.950*** (0.292)	1.303*** (0.288)	1.191*** (0.361)	0.956*** (0.337)	1.239*** (0.381)	0.968*** (0.366)
Number of observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
Controls for										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

APPENDIX D

ROBUSTNESS CHECKS

Table D1: Placebo Effects in Commercial and Participation banks, OLS Estimates

D.Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Aggregate Personal Loan	0.316*** (0.107)	0.172 (0.117)	0.197** (0.0942)	0.174 (0.121)	0.210* (0.116)	0.336*** (0.126)	0.0619 (0.139)	0.170* (0.0942)	0.0499 (0.153)	0.157 (0.114)
Total Savings	0.387*** (0.0528)	0.256*** (0.0720)	0.135 (0.0998)	0.278*** (0.0706)	0.209** (0.100)	0.414*** (0.103)	0.235 (0.150)	0.194 (0.170)	0.265* (0.141)	0.289* (0.157)
Savings in Foreign Currency	-0.0920 (0.234)	-0.318 (0.236)	-0.275 (0.266)	-0.304 (0.231)	-0.113 (0.295)	0.450 (0.452)	0.165 (0.504)	0.377 (0.529)	0.200 (0.500)	0.656 (0.550)
Savings in Native Currency	0.525*** (0.112)	0.429*** (0.0963)	0.283** (0.125)	0.453*** (0.0970)	0.332** (0.140)	0.347** (0.147)	0.247** (0.109)	0.111 (0.120)	0.276** (0.120)	0.147 (0.144)
Housing Credit	0.447** (0.182)	0.150 (0.225)	0.221 (0.200)	0.140 (0.235)	0.257 (0.229)	0.496** (0.195)	0.0414 (0.228)	0.247 (0.202)	0.0164 (0.260)	0.258 (0.232)
Auto	0.689 (0.448)	0.399 (0.509)	0.680* (0.383)	0.398 (0.534)	0.896** (0.420)	0.572 (0.348)	0.250 (0.444)	0.454 (0.328)	0.247 (0.494)	0.585 (0.390)
Credit Advance	-0.335** (0.165)	-0.490*** (0.121)	-0.471*** (0.142)	-0.481*** (0.128)	-0.520*** (0.158)	-0.0477 (0.147)	-0.289* (0.147)	-0.167 (0.156)	-0.232 (0.158)	-0.164 (0.195)
Credit Card	0.406** (0.157)	0.236 (0.175)	0.282** (0.123)	0.241 (0.181)	0.343** (0.154)	0.470*** (0.168)	0.0725 (0.208)	0.211 (0.135)	0.0585 (0.231)	0.235 (0.160)
Consumer	0.207*** (0.0513)	0.0989 (0.0604)	0.0758 (0.0677)	0.0981 (0.0663)	0.0377 (0.0827)	0.171** (0.0793)	0.0128 (0.0784)	0.0183 (0.0780)	0.00930 (0.0823)	-0.0610 (0.0901)
Number of Observation	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample includes detailed savings and personal loan variables (housing credits, auto loans, credit advance, credit card, consumer credits) in every quarters of years 2009-2011 in commercial and participation banks in the Turkish banking system from the Fintürk Dataset issued by the Turkish Banking and Regulation and Supervision Agency. The key variable of interest is place treatment variable by assuming that Syrian refugees who came in 2018 had come in 2011. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table D2: Effects of Syrian Refugees on Per Total and Per Native Household Credits and Savings in Commercial and participation Banks, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
A) Per Total Household										
Individual Credit Per Total Household	-1.121*** (0.136)	-1.195*** (0.170)	-0.791*** (0.122)	-1.239*** (0.173)	-0.824*** (0.140)	-0.978*** (0.225)	-1.192*** (0.234)	-0.679*** (0.174)	-1.193*** (0.225)	-0.768*** (0.169)
Total Saving Deposit Per Total Household	-1.037*** (0.198)	-1.048*** (0.220)	-1.372*** (0.243)	-1.005*** (0.226)	-1.262*** (0.239)	-0.912*** (0.169)	-0.932*** (0.196)	-1.077*** (0.256)	-0.869*** (0.195)	-1.004*** (0.242)
Saving Deposit TL Per Total Household	-1.461*** (0.240)	-1.495*** (0.246)	-1.899*** (0.254)	-1.493*** (0.251)	-1.884*** (0.259)	-1.222*** (0.191)	-1.317*** (0.213)	-1.491*** (0.273)	-1.320*** (0.211)	-1.590*** (0.255)
Saving Deposit Dolar Per Total Household	-0.371 (0.246)	-0.414 (0.257)	-0.345 (0.312)	-0.319 (0.279)	-0.0892 (0.328)	-0.461 (0.386)	-0.700 (0.442)	-0.409 (0.471)	-0.557 (0.427)	-0.161 (0.466)
B) Per Native Household										
Individual Credit Per Native Household	0.103 (0.200)	0.0697 (0.242)	0.498*** (0.185)	0.0285 (0.244)	0.472** (0.213)	0.0820 (0.41)	-0.0931 (-0.42)	0.408** (2.26)	-0.0925 (-0.43)	0.329* (1.78)
Total Saving Deposit Per Native Household	0.185 (0.119)	0.216 (0.152)	-0.0858 (0.181)	0.263* (0.156)	0.0315 (0.183)	0.151 (0.142)	0.169 (0.163)	0.009 (0.231)	0.235 (0.160)	0.091 (0.216)
Saving Deposit TL Per Native Household	-0.239 (0.157)	-0.230 (0.175)	-0.612*** (0.198)	-0.225 (0.179)	-0.591*** (0.208)	-0.159 (0.173)	-0.215 (0.192)	-0.405 (0.249)	-0.216 (0.186)	-0.495** (0.234)
Saving Deposit Dolar Per Native Household	0.851*** (0.213)	0.851*** (0.238)	0.941*** (0.282)	0.949*** (0.256)	1.204*** (0.305)	0.602 (0.368)	0.402 (0.428)	0.676 (0.475)	0.547 (0.413)	0.935* (0.472)
Number of Observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes
weight	no	no	no	no	no	yes	yes	yes	yes	yes
control	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

Notes: The sample includes all per total and per native household credits and savings variables in every quarters of years 2009-2018 in Commercial and participation banks from the Fintürk Dataset issued by the Turkish Banking and Regulation and Supervision Agency, excluding first three quarters of year 2009 due to the change in the data accumulating system of the BDDK, first three quarters of years 2013-2015 with all quarters in year 2012 due to the lack of knowledge on the Syrian population in Turkey in year 2012. The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table D3: Effects of Syrian Refugees on Per Total and Per Native Household Credits and Savings in Commercial and participation Banks, 2SLS Estimates (Cross-Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
A) Per Total Household										
Individual Credit Per Total Household	-0.963*** (0.190)	-0.972*** (0.163)	-0.560*** (0.196)	-1.006*** (0.164)	-0.586*** (0.208)	-0.678** (0.274)	-0.787*** (0.240)	-0.352 (0.296)	-0.770*** (0.246)	-0.356 (0.331)
Total Saving Deposit Per Total Household	-1.021*** (0.171)	-0.957*** (0.205)	-1.240*** (0.243)	-0.916*** (0.214)	-1.171*** (0.249)	-1.022*** (0.171)	-0.937*** (0.203)	-1.055*** (0.276)	-0.836*** (0.213)	-0.983*** (0.268)
Saving Deposit TL Per Total Household	-1.381*** (0.249)	-1.402*** (0.262)	-1.814*** (0.280)	-1.390*** (0.267)	-1.802*** (0.282)	-1.276*** (0.192)	-1.380*** (0.227)	-1.636*** (0.330)	-1.350*** (0.229)	-1.742*** (0.312)
Saving Deposit Dolar Per Total Household	-0.742*** (0.280)	-0.618** (0.288)	-0.608* (0.336)	-0.536* (0.309)	-0.468 (0.371)	-0.912** (0.387)	-1.096** (0.496)	-1.070* (0.591)	-0.896* (0.534)	-0.842 (0.641)
B) Per Native Household										
Individual Credit Per Native Household	0.222 (1.070)	0.261 (1.290)	0.689*** (2.950)	0.229 (1.140)	0.668*** (2.620)	0.337 (1.220)	0.262 (1.070)	0.678** (2.280)	0.281 (1.130)	0.681** (2.080)
Total Saving Deposit Per Native Household	0.162 (0.115)	0.276* (0.143)	0.007 (0.177)	0.320** (0.147)	0.082 (0.185)	-0.009 (0.153)	0.110 (0.181)	-0.023 (0.253)	0.213 (0.184)	0.056 (0.241)
Saving Deposit TL Per Native Household	-0.198 (0.175)	-0.169 (0.196)	-0.567*** (0.214)	-0.154 (0.199)	-0.549** (0.217)	-0.263 (0.181)	-0.333 (0.222)	-0.604* (0.323)	-0.300 (0.220)	-0.703** (0.314)
Saving Deposit Dolar Per Native Household	0.441 (0.327)	0.616* (0.321)	0.639* (0.374)	0.700** (0.332)	0.785* (0.405)	0.101 (0.384)	-0.048 (0.474)	-0.038 (0.565)	0.153 (0.508)	0.197 (0.608)
Number of observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
<i>Controls for</i>										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample includes all per total and per native household credits and savings variables in every quarters of years 2009-2018 in Commercial and participation banks from the Fintürk Dataset issued by the Turkish Banking and Regulation and Supervision Agency, excluding first three quarters of year 2009 due to the change in the data accumulating system of the BDDK, first three quarters of years 2013-2015 with all quarters in year 2012 due to the lack of knowledge on the Syrian population in Turkey in year 2012. The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table D4: Effects of Syrian Refugees on Per Total and Per Native Household Credits and Savings in Commercial and participation Banks, 2SLS Estimates (Del Carpio IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
A) Per Total Household										
Individual Credit Per Total Household	-0.992*** (0.216)	-1.019*** (0.194)	-0.547** (0.240)	-1.034*** (0.194)	-0.567** (0.247)	-0.698** (0.299)	-0.841*** (0.264)	-0.323 (0.343)	-0.777*** (0.270)	-0.334 (0.372)
Total Saving Deposit Per Total Household	-0.943*** (0.169)	-0.823*** (0.210)	-1.089*** (0.239)	-0.791*** (0.219)	-1.082*** (0.254)	-0.966*** (0.173)	-0.818*** (0.206)	-0.909*** (0.260)	-0.766*** (0.220)	-0.968*** (0.272)
Saving Deposit TL Per Total Household	-1.243*** (0.270)	-1.215*** (0.293)	-1.611*** (0.312)	-1.211*** (0.297)	-1.633*** (0.314)	-1.117*** (0.195)	-1.103*** (0.231)	-1.304*** (0.294)	-1.138*** (0.233)	-1.548*** (0.291)
Saving Deposit Dolar Per Total Household	-0.823** (0.337)	-0.643* (0.346)	-0.647 (0.425)	-0.559 (0.350)	-0.627 (0.425)	-0.990** (0.429)	-1.233** (0.556)	-1.244* (0.666)	-1.084* (0.565)	-1.212* (0.651)
B) Per Native Household										
Individual Credit Per Native Household	0.183 (0.790)	0.207 (0.910)	0.694** (2.500)	0.193 (0.860)	0.678** (2.310)	0.327 (1.110)	0.230 (0.900)	0.732** (2.160)	0.293 (1.120)	0.728** (1.970)
Total Saving Deposit Per Native Household	0.230* (0.129)	0.403** (0.157)	0.151 (0.185)	0.438*** (0.161)	0.162 (0.198)	0.058 (0.163)	0.252 (0.185)	0.149 (0.231)	0.302 (0.196)	0.095 (0.244)
Saving Deposit TL Per Native Household	-0.070 (0.197)	0.012 (0.223)	-0.371 (0.236)	0.018 (0.227)	-0.389 (0.242)	-0.094 (0.189)	-0.033 (0.222)	-0.246 (0.272)	-0.070 (0.221)	-0.485* (0.277)
Saving Deposit Dolar Per Native Household	0.350 (0.393)	0.584 (0.392)	0.593 (0.483)	0.670* (0.385)	0.617 (0.472)	0.033 (0.428)	-0.164 (0.539)	-0.187 (0.644)	-0.016 (0.543)	-0.149 (0.622)
Number of observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
Controls for										
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample includes all per total and per native household credits and savings variables in every quarters of years 2009-2018 in Commercial and participation banks from the Fintürk Dataset issued by the Turkish Banking and Regulation and Supervision Agency, excluding first three quarters of year 2009 due to the change in the data accumulating system of the BDDK, first three quarters of years 2013-2015 with all quarters in year 2012 due to the lack of knowledge on the Syrian population in Turkey in year 2012. The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table D5: Effects of Syrian Refugees on Per Total and Per Native Household Detailed Individual Credits in Commercial and Participation Banks, OLS Estimates

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
A) Per Total Household										
Housing Credit per Total Household	-1.552*** (0.271)	-1.686*** (0.342)	-0.581** (0.256)	-1.811*** (0.348)	-0.661** (0.268)	-1.240*** (0.394)	-1.502*** (0.371)	-0.656** (0.313)	-1.565*** (0.364)	-0.808** (0.331)
Auto Loans per Total Household	-0.579 (0.536)	-0.854 (0.669)	-0.403 (0.559)	-0.767 (0.652)	-0.288 (0.611)	-0.900 (0.791)	-1.312 (0.860)	-1.113 (0.787)	-1.225 (0.806)	-1.039 (0.746)
Credit Advance per Total Household	-1.319*** (0.228)	-1.394*** (0.247)	-1.312*** (0.303)	-1.333*** (0.248)	-1.251*** (0.296)	-0.972*** (0.184)	-1.151*** (0.261)	-0.807*** (0.270)	-1.132*** (0.267)	-0.742** (0.290)
Credit Card per Total Household	-1.371*** (0.426)	-1.339*** (0.497)	-0.515 (0.327)	-1.392*** (0.508)	-0.531 (0.392)	-1.464*** (0.421)	-1.401*** (0.412)	-0.354 (0.369)	-1.350*** (0.413)	-0.596** (0.296)
Consumer Credit per Total Household	-0.684*** (0.249)	-0.793*** (0.204)	-0.876*** (0.211)	-0.804*** (0.213)	-0.898*** (0.215)	-0.253 (0.187)	-0.484** (0.199)	-0.442* (0.225)	-0.477** (0.215)	-0.473* (0.252)
B) Per Native Household										
Housing Credit per Native Household	-0.328 (0.316)	-0.421 (0.407)	0.708** (0.284)	-0.543 (0.411)	0.635** (0.305)	-0.180 (0.363)	-0.403 (0.355)	0.430 (0.315)	-0.465 (0.352)	0.290 (0.337)
Auto Loans per Native Household	0.644 (0.586)	0.411 (0.737)	0.886 (0.640)	0.501 (0.722)	1.008 (0.700)	0.160 (0.762)	-0.213 (0.844)	-0.0264 (0.790)	-0.124 (0.795)	0.0588 (0.763)
Credit Advance per Native Household	-0.0949 (0.161)	-0.130 (0.183)	-0.0225 (0.227)	-0.0648 (0.185)	0.0448 (0.224)	0.0878 (0.161)	-0.0521 (0.225)	0.279 (0.218)	-0.0314 (0.229)	0.355 (0.232)
Credit Card Per Native Household	-0.148 (0.520)	-0.0741 (0.579)	0.774* (0.417)	-0.124 (0.591)	0.765 (0.486)	-0.404 (0.426)	-0.303 (0.422)	0.732* (0.393)	-0.250 (0.427)	0.502 (0.352)
Consumer Credit Per Native Household	0.540*** (0.154)	0.471*** (0.130)	0.413*** (0.136)	0.463*** (0.141)	0.398*** (0.145)	0.807*** (0.147)	0.615*** (0.163)	0.645*** (0.187)	0.623*** (0.178)	0.625*** (0.211)
Number of Observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample includes detailed individual credits variables (housing credits, auto loans, credit advance, credit card, consumer credits) per total and native household terms in every quarters of years 2009-2018 in commercial and participation banks from the Fintürk Dataset issued by the Turkish Banking and Regulation and Supervision Agency, excluding first three quarters of year 2009 due to the change in the data accumulating system of the BDDK, first three quarters of years 2013-2015 with all quarters in year 2012 due to the lack of knowledge on the Syrian population in Turkey in year 2012. The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate OLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native and dolar currency. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey and quarterly total GDP level for each province. Unweighted and two different weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table D6: Effects of Syrian Refugees on Per Total and Per Native Household Detailed Individual Credits in Commercial and Participation Banks, 2SLS Estimates (Cross Country IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
A) Per Total Household										
Housing Credit per Total Household	-1.411*** (0.344)	-1.463*** (0.347)	-0.227 (0.433)	-1.557*** (0.354)	-0.273 (0.444)	-0.747* (0.403)	-0.798** (0.371)	0.173 (0.657)	-0.843** (0.390)	0.154 (0.692)
Auto Loans per Total Household	-0.288 (0.415)	-0.478 (0.559)	0.166 (0.564)	-0.432 (0.585)	0.177 (0.633)	-0.0766 (0.572)	-0.0240 (0.780)	0.521 (0.967)	0.0260 (0.869)	0.625 (1.136)
Credit Advance per Total Household	-0.892*** (0.317)	-1.016*** (0.314)	-0.896** (0.350)	-0.955*** (0.311)	-0.852** (0.348)	-0.557** (0.270)	-0.825*** (0.316)	-0.538 (0.332)	-0.841** (0.328)	-0.529 (0.356)
Credit Card per Total Household	-1.262*** (0.442)	-1.242** (0.526)	-0.490 (0.407)	-1.288** (0.529)	-0.510 (0.443)	-1.327** (0.548)	-1.293*** (0.479)	-0.489 (0.357)	-1.119** (0.458)	-0.459 (0.351)
Consumer Credit per Total Household	-0.557* (0.287)	-0.587** (0.271)	-0.689** (0.273)	-0.604** (0.273)	-0.722*** (0.264)	-0.100 (0.208)	-0.247 (0.253)	-0.224 (0.285)	-0.300 (0.267)	-0.304 (0.314)
B) Per Native Household										
Housing Credit per Native Household	-0.225 (0.346)	-0.230 (0.377)	1.021** (0.446)	-0.322 (0.382)	0.981** (0.460)	0.268 (0.397)	0.251 (0.366)	1.203* (0.653)	0.207 (0.382)	1.191* (0.680)
Auto Loans per Native Household	0.897** (0.433)	0.755 (0.597)	1.415** (0.613)	0.803 (0.620)	1.431** (0.689)	0.939* (0.558)	1.025 (0.749)	1.551* (0.933)	1.077 (0.835)	1.662 (1.094)
Credit Advance per Native Household	0.294 (0.238)	0.217 (0.238)	0.353 (0.271)	0.280 (0.236)	0.402 (0.271)	0.458* (0.273)	0.223 (0.308)	0.492 (0.315)	0.209 (0.323)	0.507 (0.341)
Credit Card Per Native Household	-0.0759 (0.527)	-0.00856 (0.608)	0.759 (0.514)	-0.0530 (0.611)	0.744 (0.553)	-0.312 (0.561)	-0.244 (0.506)	0.541 (0.398)	-0.0683 (0.491)	0.578 (0.403)
Consumer Credit Per Native Household	0.629*** (0.187)	0.646*** (0.181)	0.559*** (0.185)	0.631*** (0.186)	0.532*** (0.187)	0.915*** (0.189)	0.802*** (0.221)	0.807*** (0.252)	0.751*** (0.232)	0.732*** (0.277)
Number of Observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample includes detailed individual credits variables (housing credits, auto loans, credit advance, credit card, consumer credits) per total and native household terms in every quarters of years 2009-2018 in Commercial and participation banks from the Fintürk Dataset issued by the Turkish Banking and Regulation and Supervision Agency, excluding first three quarters of year 2009 due to the change in the data accumulating system of the BDDK, first three quarters of years 2013-2015 with all quarters in year 2012 due to the lack of knowledge on the Syrian population in Turkey in year 2012. The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is Cross-Country IV (Aksu, et al. 2018) which exploits the likelihood of migration of Syrian migration stock between four border countries (Turkey, Iraq, Jordan, and Lebanon) in each quarter between 2013-2018, the bilateral distances of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

Table D7: Effects of Syrian Refugees on Per Total and Per Native Household Detailed Individual Credits in Commercial and Participation Banks, 2SLS Estimates (Del Carpio and Wagner (2015) IV)

Dependent Variable	Unweighted Estimation					Weighted Estimation				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
A) Per Total Household										
Housing Credit per Total Household	-1.519*** (0.406)	-1.621*** (0.418)	-0.195 (0.497)	-1.689*** (0.421)	-0.266 (0.503)	-0.808* (0.452)	-0.913** (0.414)	0.209 (0.690)	-0.878** (0.437)	0.186 (0.723)
Auto Loans per Total Household	-0.428 (0.506)	-0.727 (0.662)	-0.0219 (0.629)	-0.657 (0.663)	-0.105 (0.635)	-0.291 (0.644)	-0.385 (0.801)	0.153 (0.929)	-0.324 (0.830)	0.0799 (0.944)
Credit Advance per Total Household	-0.737** (0.326)	-0.858*** (0.314)	-0.637* (0.349)	-0.826*** (0.309)	-0.676* (0.350)	-0.496* (0.289)	-0.784** (0.319)	-0.410 (0.348)	-0.769** (0.326)	-0.406 (0.361)
Credit Card per Total Household	-1.364*** (0.482)	-1.415** (0.595)	-0.588 (0.470)	-1.418** (0.590)	-0.554 (0.479)	-1.298** (0.566)	-1.267*** (0.454)	-0.274 (0.405)	-1.154*** (0.432)	-0.421 (0.340)
Consumer Credit per Total Household	-0.527* (0.287)	-0.544** (0.272)	-0.652** (0.282)	-0.547* (0.280)	-0.667** (0.274)	-0.149 (0.207)	-0.343 (0.249)	-0.327 (0.282)	-0.304 (0.272)	-0.312 (0.326)
B) Per Native Household										
Housing Credit per Native Household	-0.345 (0.405)	-0.396 (0.443)	1.046** (0.512)	-0.461 (0.444)	0.979* (0.523)	0.217 (0.438)	0.157 (0.402)	1.263* (0.689)	0.191 (0.426)	1.247* (0.720)
Auto Loans per Native Household	0.746 (0.522)	0.499 (0.700)	1.219* (0.683)	0.571 (0.697)	1.140 (0.697)	0.735 (0.626)	0.685 (0.774)	1.207 (0.904)	0.746 (0.801)	1.141 (0.913)
Credit Advance per Native Household	0.438* (0.261)	0.368 (0.248)	0.604** (0.291)	0.402* (0.244)	0.569** (0.289)	0.530* (0.295)	0.286 (0.310)	0.645* (0.333)	0.301 (0.319)	0.655* (0.347)
Credit Card Per Native Household	-0.189 (0.561)	-0.189 (0.672)	0.653 (0.576)	-0.190 (0.666)	0.690 (0.587)	-0.273 (0.571)	-0.197 (0.465)	0.780* (0.421)	-0.0839 (0.449)	0.641* (0.377)
Consumer Credit Per Native Household	0.647*** (0.195)	0.682*** (0.190)	0.589*** (0.208)	0.680*** (0.198)	0.578*** (0.210)	0.877*** (0.194)	0.727*** (0.228)	0.728*** (0.263)	0.766*** (0.246)	0.750*** (0.302)
Number of Observation	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
Province Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Quarter Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
5 Region Linear Time Trends	no	yes	no	no	no	no	yes	no	no	no
NUTS1 Linear Time Trends	no	no	yes	no	no	no	no	yes	no	no
5 Region-Year Fixed Effects	no	no	no	yes	no	no	no	no	yes	no
NUTS1-Year Fixed Effects	no	no	no	no	yes	no	no	no	no	yes

Notes: The sample includes detailed individual credits variables (housing credits, auto loans, credit advance, credit card, consumer credits) per total and native household terms in every quarters of years 2009-2018 in Commercial and participation banks from the Fintürk Dataset issued by the Turkish Banking and Regulation and Supervision Agency, excluding first three quarters of year 2009 due to the change in the data accumulating system of the BDDK, first three quarters of years 2013-2015 with all quarters in year 2012 due to the lack of knowledge on the Syrian population in Turkey in year 2012. The sample covers 1937 observations as unit of observation at quarter-province level. Each column demonstrates the estimates for the key variable of interest – the fraction of Syrian population to the total population dwelled in each province of Turkey in a separate 2SLS regression of dependent variable on the key variable of interest, a bunch of province-specific demographic, education, and economic characteristics, a set of geographical-area and quarter control variables, and the logarithm of trade volume in the native currency. The instrumental variable used in this specification is a modified version used by Del Carpio and Wagner (2015) which exploits the quarterly Syrian migration stock in Turkey between 2013-2018, the bilateral distance of the 13 Syrian governorate to the center of 81 provinces in Turkey, and the distribution of the Syrian population across 13 governorates in Syria at pre-war terms. The weighting strategy is weighted OLS regression by total population (natives and Syrian population) in each province in Turkey. Unweighted and weighted OLS results are shown, separately. Dependent variables in each model are used in logarithmic form. Standard errors, given in parentheses, are clustered at the province level. *, **, or *** indicates significance at the 10%, 5% and 1% levels, respectively.

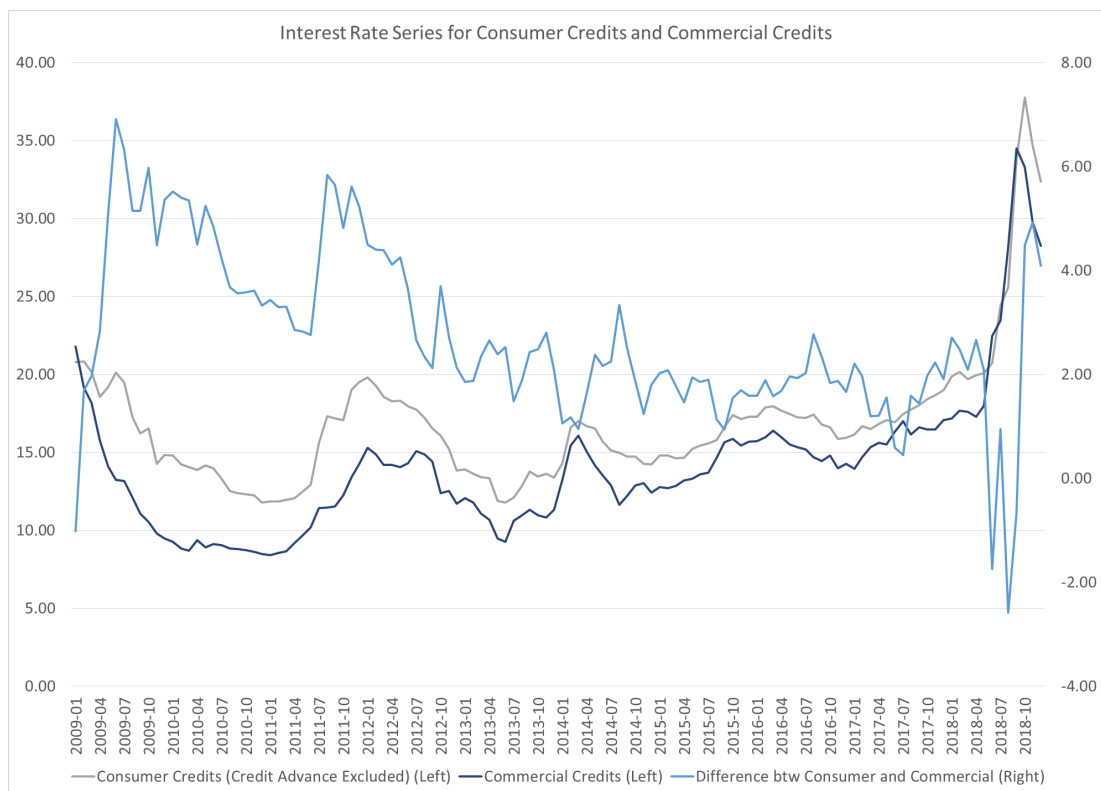


Figure D1: Interest Rate Levels of Consumer and Commercial Credits

APPENDIX E

NUTS LEVEL REGIONAL DIVISIONS

12 NUTS-1 Level	26 NUTS-2 Level	81 NUTS-3 Level (Province)
Istanbul	Istanbul	Istanbul
West Marmara	Tekirdag Balıkesir	Tekirdağ, Edirne, Kırklareli Balıkesir, Çanakkale
Aegean	İzmir Aydın Manisa	İzmir Aydın, Denizli, Muğla Manisa, Afyonkarahisar, Kütahya, Uşak
East Marmara	Bursa Kocaeli	Bursa, Eskişehir, Bilecik Kocaeli, Sakarya, Düzce, Bolu, Yalova
West Anatolia	Ankara Konya	Ankara Konya, Karaman
Mediterranean	Antalya Adana Hatay	Antalya, Isparta, Burdur Adana, Mersin Hatay, Kahramanmaraş, Osmaniye
Central Anatolia	Kırıkkale Kayseri	Kırıkkale, Nevşehir, Aksaray, Niğde, Kırşehir Kayseri, Sivas, Yozgat
West Black Sea	Zonguldak Kastamonu Samsun	Zonguldak, Karabük, Bartın Kastamonu, Çankırı, Sinop Samsun, Tokat, Çorum, Amasya
East Black Sea	Trabzon	Trabzon, Ordu Giresun, Rize, Artvin, Gümüşhane
Northeast Anatolia	Erzurum Ağrı	Erzurum, Erzincan, Bayburt Ağrı, Kars, Iğdır, Ardahan
Central East Anatolia	Malatya Van	Malatya, Elazığ, Bingöl, Tunceli Van, Muş, Bitlis, Hakkari
Southeast Anatolia	Gaziantep Sanliurfa Mardin	Gaziantep, Adıyaman, Kilis Sanliurfa, Diyarbakır Mardin, Siirt, Batman, Şırnak

APPENDIX F

DESCRIPTION OF VARIABLES

Syrian Refugee Fraction: This is the treatment variable that is utilized to identify the causal effect of the refugee influx on the Turkish Capital Market through the banking indicators. It is calculated as the number of Syrian refugees over the total population which cover native population and Syrian refugees for each province level.

Total Number of Natives: The total number of native population for each province

Total Population: The variable describes the total population that is constituted by native and Syrian populations for each province.

Per Total Population: This term defines outcome variables that is divided by the total population for each province.

Per Native Population: This term defines outcome variables that is divided by the native population for each province.

Aggregate Personal Loans: It describes aggregation of personal loans that contain housing credit, auto loans, credit advance, credit card, consumer credit for each province.

Housing Credit: The total amount of housing credits for each province.

Auto Loan: The total amount of auto loans for each province.

Credit Advance: The total amount of credit advances for each province.

Credit Card: The total amount of credit cards used for each province.

Consumer Credit: The total amount of consumer credits for each province.

Commercial Cash Credits: It describes cash payment credits in the commercial credits.

Commercial Non-Cash Credits: It describes non-cash credits (like letter of guarantee) in the commercial credits.

Food and Tobacco: It describes aggregation of commercial (cash or non-cash) credits in the food, beverage, and tobacco sectors for each province.

Construction: It describes aggregation of commercial (cash or non-cash) credits in the construction sector for each province.

Metal and Mining: It describes aggregation of commercial (cash or non-cash) credits in the metal and mining sectors for each province.

Financial: It describes aggregation of commercial (cash or non-cash) credits in the financial sector for each province.

Textile: It describes aggregation of commercial (cash or non-cash) credits in the textile sector for each province.

Brokerage: It describes aggregation of commercial (cash or non-cash) credits in the brokerage sector for each province.

Tourism: It describes aggregation of commercial (cash or non-cash) credits in the tourism sector for each province.

Agriculture and Fishing: It describes aggregation of commercial (cash or non-cash) credits in the agriculture and fishing sectors for each province.

Energy: It describes aggregation of commercial (cash or non-cash) credits in the energy sector for each province.

Maritime: It describes aggregation of commercial (cash or non-cash) credits in the maritime sector for each province.

Total Saving Deposit: It defines the total amount of monetary stock in the saving deposit accounts which can be opened by real persons in domestic currency term (Turkish Lira)

Saving Deposits Dolar: It defines the total amount of monetary stock in the saving deposit accounts which can be opened by real persons held in foreign currency in terms of Dollar terms.

Saving Deposits TL: It describes the total amount of monetary stock in the saving deposit accounts which can be opened by real persons held in native currency in terms of Turkish Lira terms.

Other Deposit: It is the variable that describes total amount of monetary stock in deposit accounts except for saving deposit accounts in terms of native currency (Turkish Lira).

Other Deposit Dolar: It is the variable that describes total amount of monetary stock in deposit accounts except for saving deposit accounts held in foreign currency in terms of Dollar terms.

Other Deposit TL: It is the variable that describes total amount of monetary stock in deposit accounts except for saving deposit accounts held in domestic currency in terms of native currency terms (Turkish Lira).

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