

How Do Shared Experiences of Economic Shocks Impact Refugees and Host Communities?

Evidence from Afghan Refugees in Iran

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Abstract

Using representative survey data including Iranians and Afghan refugees in Iran in 2011–2019, this paper explores the unequal impact of macroeconomic fluctuations due to Iran's nuclear dispute on Afghan refugees and host communities. The paper finds that economic shock increases refugee's exit and disproportionately reduces their consumption expenditure and aid received from the host community. In addition, bad and good economic cycles

create asymmetric impacts. While negative shocks affect the economic outcomes of two communities homogenously, it hurts social cohesion between them. In contrast, economic recovery benefits refugees relatively more in terms of consumption and income, but the impact on social cohesion measures is insignificant. The findings also suggest that in turbulent economic times, both inter-community and intra-community inequalities go up.

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How do shared experiences of economic shocks impact refugees and host communities? Evidence from Afghan refugees in Iran¹

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1. Introduction

According to UNHCR (2020), 85% of the displaced population worldwide live in developing countries, where economic shocks are frequent, and a global crisis can damage more than the developed world (Gourinchas & Obstfeld, 2012). Previous studies suggest that migrants are disproportionately hit by economic downturns, and they might be used as a cyclical buffer to alleviate the consequences of recession (Dustmann et al., 2010). The unequal effect of economic shocks can be more severe for refugees as their employment relationships are commonly informal and in poorly regulated activities. Turbulent economic times may also escalate tensions between host and displaced communities by increasing competition over scarce resources.

The primary focus of forced displacement literature has been on the consequences of forced migration – for either receiving, sending, or displaced populations – and the disproportionate impact of economic shocks in the host country on indigenous and displaced communities is an understudied field of inquiry. This paper will contribute to the forced displacement literature by exploring the unequal impact of economic fluctuations in Iran on Afghan refugees and host communities.

Using representative household-level surveys, we study how the economic shocks due to Iran's conflict with the United States in the 2010s affected inequality and social cohesion between Afghan refugees and Iranians. We examine how these shocks affect inter-community and intra-community inequalities and whether bad and good shocks have asymmetric effects on welfare and social cohesion. To measure social cohesion between the two communities, we utilize information on aid received by refugees from other households. For estimation, Afghan refugees are compared once with all Iranians and once with the matched sample of Iranians with similar characteristics.

We find that during turbulent times in Iran, Afghan refugees exit the country more often, spend less for consumption, and disproportionately receive less aid from other households than similar Iranians. The last evidence suggests that economic shock weakens trust as a dimension of social cohesion between refugees and host communities. Our findings show that the effects of bad and good shocks are not symmetric, and the economic effect of business cycles on Afghan refugees is different from its social effect. While in bad economic times, the shock homogenously affects economic outcomes it hinders social cohesion between communities. In contrast, good shocks disproportionately increase the income and expenditure of Afghan refugees, but it does not significantly affect our measures of social cohesion. Besides, we find that turbulent economic times increase both inter-community and intra-community inequalities and the relative increase is stronger in the former.

This paper provides timely evidence on Afghan refugees as the abrupt US withdrawal from Afghanistan and the resurgence of the Taliban has boosted the risk of an internal war and the outflow of displaced people from the country. Our findings will be helpful for UNHCR and World Bank to implement proper policies and funding decisions regarding the current situation in Afghanistan. In addition, the paper is policy-relevant as the global Covid-19 pandemic has caused a severe slowdown in world economic activity and has created evident threats to tolerance and social cohesion. It shows that macroeconomic shocks by increasing inequality and generating a disproportionate effect on charitable giving make life much harder for the vulnerable refugees. In this regard, humanitarian organizations need to develop infrastructure to identify needy refugees for better aid targeting. In the medium term, removing institutional discrimination against refugees in the labor market and investment in their human capital are two critical factors to promote social cohesion between refugees and indigenous communities.

2. Context

In this section, we briefly review the history of Afghan refugees in Iran and then describe major events resulting in macroeconomic fluctuation in Iran's economy between 2011 and 2019.

2.1. Afghan refugees in Iran

Iran is one of the leading refugee host countries in the world. The United Nations High Commissioner for Refugees (UNHCR) reports that 800,000 refugees live in Iran, of which 780,000 are Afghans. These are Afghans with a valid residence card (Amayesh card) whose stay is regularized as refugees. Besides, 275,000 Afghans live in Iran with passport and visa (UNHCR, 2021). However, the Afghan population living in Iran is much larger. Many Afghans live without any valid document to state their legal residence (undocumented Afghans). According to Iran's 2016 census, more than 1.58 million Afghans live in Iran (2% of the population).

For decades, Iran has been the destination of seasonal workers, merchants, and pilgrims from Afghanistan. From the 1960s onwards, young Afghans migrated to Iran to seek temporary employment or study in Islamic seminaries. Nevertheless, the mass displacement of Afghans in Iran started 40 years ago. There were four significant phases of forced displacement of Afghans in the past four decades (Abraham, 2013). The military coup by the People's Democratic Party of Afghanistan (PDPA), followed by Soviet occupation to assist the party against the Mujaheddin rebels in the early 1980s, created massive instability in Afghanistan. The spread of violence initiated the first phase of displacement and the two neighboring countries, Pakistan and Iran, were the major destinations. Even after the withdrawal of Soviet forces, the instability continued due to the internal power struggle and created another phase of displacement. The Taliban rise in the mid-1990s and the conflicts following the United States war in 2001 led to the third and fourth phases of Afghans' forced migration.

The first phase of Afghans displacement resulted from the transformative vision of the Islamic revolution in Iran. With an emphasis on Islamic brotherhood, Iran followed an open-door policy toward Afghan refugees after the 1979 revolution. In the 1980s and early 1990s, the "blue cards" were issued for most Afghans to state their legal stay and permission to work in Iran. They had access to free education, healthcare, and food subsidies, although their employment was limited to low-wage jobs (Abbasi-Shavazi et al., 2008). The increasing cost of providing prolonged unconditional support to refugees and the limited resource to revive the economy in the aftermath of the Iran-Iraq war altered the Iranian government policy toward refugees (Rajaei, 2000). In the early 1990s, through a Tripartite Agreement between Iran, Afghanistan, and UNHCR, the repatriation process of Afghan refugees started. The new policies by the Iranian government made the country a less desirable destination for Afghan refugees. Their access to public services, specifically free education and subsidized food, were restricted, and the new registration cards were issued temporarily (Abbasi-Shavazi & Sadeghi, 2015).

Afghans were not able to work without a valid permit since 1993. In 2001, legal restrictions and penalties were imposed to prevent the employment of illegal foreigners. Nevertheless, the Afghans' willingness to work with lower wages induced the employers to take the risk and many refugees continued to reside in the banned regions and work informally (Turton & Marsden, 2002). Moreover, in 2004, the government banned the refugees from settling down and working in 16 out of 31 provinces. Despite the new restricting policies and UN effort to facilitate Afghans' repatriation, Iran remained one of the main destinations due to its cultural proximity and long shared border with Afghanistan. Afghans repatriation diminished when the Taliban gained power and took Kabul in 1996, and once again when the Taliban resurged and increased attacks against US and Afghan forces in 2003.

Figure 1 displays the number of Afghan refugees in Iran from 1979 onward. As explained above, from 1979 to 2001, Afghanistan experienced a very unstable era. After the US invasion of Afghanistan, although the instability was still present due to the war between the US and Taliban, no specific event boosted the flow of refugees between the borders. Later in 2010, the initial steps toward peace took place. Fortunately for our study, there is no significant change in push factors involved from Afghanistan after 2010, which is the period of our estimations. The relative stability in the origin country allows us to identify better the unequal effect of macroeconomic fluctuations in the destination.

2.2. Macroeconomics shocks in Iran in the 2010s

The dispute about Iran's nuclear program was initiated in the early 2000s. However, it escalated in 2011 when the International Atomic Energy Agency (IAEA) stated that credible evidence demonstrates Iran's intention to non-peaceful usage of nuclear energy until 2033. Following the IAEA report, a series of unprecedented sanctions were imposed on Iran, including the European Union embargo on Iran's oil, freezing Iran's central bank's assets by the EU, and the disconnection of Iranian banks from the secure financial messaging services (SWIFT). The various restrictions imposed on Iran by the EU, the US, and many other countries reduced foreign trade, specifically oil export, in Iran. As a result of the economy's dependence on oil revenue, sanctions significantly depreciated the Iranian currency and led to an economic downturn. Iran's GDP growth dropped from +5.8% in 2010 to -7.4% in 2012 (Figure 2).

The severe depreciation of Rial continued until 2013, when the new president, Hassan Rouhani, won the election. Rouhani's promise to revive relations with the international community formed positive expectations and ceased further depreciation of Iranian currency. In 2015, the Iranian government and P5+1³ reached an agreement. The agreement terminated all EU and UN sanctions related to Iran's nuclear program, including restrictions on financial and banking transactions and embargos on Iran's oil and petrochemical products. In 2013, Iran's economy entered a relatively stable period. Until 2017, the annual GDP growth rate exceeded 4% on average and peaked at +14.2% in 2016.

The revival period of the economy came to an end soon. In May 2018, the newly elected US president, Donald Trump, announced the withdrawal from the Iran nuclear deal. Donald Trump reinstated all the previous sanctions by the US and expanded them many times. Despite the regrets within and opposition outside the US, restrictive regulations and heavy fines imposed by the United States prevented international companies and financial institutions from working with Iran. The former deals with foreign companies, such as Total SE and Boeing, were canceled, and oil export plummeted again. As Figure 2 demonstrates, US withdrawal formed a new phase of Rial depreciation and led to a growth rate of less than -6% in two consecutive years.

To summarize, Iran faced two waves of sharp economic downturns, mainly due to the conflict on its nuclear program (Figure 3). International sanctions restrained Iranian oil export and led to severe depreciation of the domestic currency. The sanctions dealt a huge blow to Iran's economy, and from 2010 to 2019, the poverty rate increased by almost 6%, and the average standard of living fell by 17.7 (Salehi-Isfahani, 2020). We can reasonably assume these fluctuations were exogenous for our study.

3. Theoretical motivation

Forced displacement is not a recent issue. World wars I and II formed significant phases of forced migrations in the past century. However, relatively recent conflicts in many countries, such as Iraq, Afghanistan, and Syria, and the rising figures of refugees and asylum seekers worldwide, brought the issue to the researchers' attention again. In the majority of empirical papers in forced displacement literature, forced migration is considered an exogenous shock, and the impact of this shock on the welfare of either receiving, sending, or displaced populations is investigated (Ruiz & Vargas-Silva, 2012; Becker & Ferrara, 2019; Verme & Schuettler, 2021). However, the unequal effect of economic shocks in the host country on the host and displaced communities is an understudied field of inquiry. We aim to extend this literature by exploring the impact of recent economic shocks in Iran on Afghan refugees and Iranian households.

Previous studies suggest that economic downturns disproportionately hit migrants, and they might be used as a cyclical buffer to alleviate the consequences of recession (Dustmann et al., 2010; Barrett & Kelly, 2012; Rodríguez-Planas, 2016). However, the unequal effect of economic shocks can be more severe for refugees as their employment relationships are commonly informal and in poorly regulated activities.

³ The five permanent members of the United Nations Security Council—China, France, Russia, United Kingdom, United States—plus Germany

Bratsberg et al. (2018) provide evidence that migrants from less developed countries have more precarious jobs and are more exposed to the adverse consequences of firms' bankruptcy and closure. Although displaced workers are the last hired and first fired and earn much less than natives, they may stay and work even longer during a crisis in the destination because conditions at home could be even worse. Danzer and Dietz (2018) find that Tajik workers stayed longer in Russia during the crisis of 2007-09, even though they earned less, became more exposed to illegal work, harassment, and deportation.

Turbulent economic conditions may also escalate social tensions between host and displaced communities by increasing competition over scarce resources. Given the lack of evidence for anti-refugee sentiments during a crisis, we refer to works on change in attitude toward migrants during bad economic times. Studies using European Social Survey suggest that the crisis of 2007-09 raised negative attitudes toward migrants, especially in countries more influenced by the crisis (Hatton, 2016; Isaksen, 2019; Turner & Cross, 2015). More recent papers explore the impact of the Covid-19 outbreak on the rise of negative attitudes towards migrants (Daniele et al., 2020; Dipoppa et al., 2021).

The papers focusing on displaced populations mostly struggle with scarce and unreliable data (Ruiz & Vargas-Silva, 2012). Refugees are normally excluded from household budget surveys, and the available data is mostly collected by humanitarian organizations without sufficient experience in measuring welfare and poverty (Verme, 2017). The scarcity of reliable data can explain the relative absence of refugees-related articles in the literature on the impact of economic shocks. However, the advantage of our paper is having access to the two national surveys conducted by the Statistical Center of Iran, the Labor Force Survey (LFS) and the Household Expenditure and Income Survey (HEIS), with a suitable coverage of Afghan refugees.

4. Research design

In this section, we first describe data sources and the matching strategy. Then we explain the key variables and how they are constructed. Finally, we elaborate our identification strategy to assess the unequal impact of macro shocks in Iran on Afghan refugees and the host communities.

4.1. Data

Our data is drawn from two surveys regularly conducted by the Statistical Center of Iran, the main governmental body to run sample surveys: the Labor Force Survey (LFS) and the Household Expenditure and Income Survey (HEIS). They both have nationwide and provincial representative samples of rural and urban households, and the latest quinquennial population census is used as their framework. As there is no camp for Afghan refugees in Iran, they spread over specific regions of the country, and the national household surveys have good coverage of them.⁴

LFS has been conducted in the middle of each quarter since spring 2005 and is the primary source of employment statistics in Iran. The information available in LFS covers a wide range including household member's demographic and employment status, such as education, migration, working hours, industry, occupation, and experience (but not wage and income). Importantly for this research, the nationality of each household member is also inquired in this survey. The sampling of LFS is on a rotating panel basis in the sense that each household is sampled in two consecutive seasons of two consecutive years. This feature enables us to observe each individual's change in employment status and compare it between two communities. Table 1 lists the LFS rounds with the available sample of Afghan refugees.

HEIS has been conducted annually since 1963, but its raw data is available from 1984 onwards. Its enumeration is uniformly spread over the year such that in each month, a representative sample of households is surveyed. HEIS covers a variety of information on household demographics, facilities, and income, together with a detailed questionnaire on expenditure items. In contrast to LFS, the HEIS

⁴ Since 2004, Afghan refugees are forbidden to stay in specific provinces, mainly near borders of Iran, but there is no other legal restrictions for their stay or movement in Iran.

questionnaire does not include information about the nationality of the household members. Nevertheless, as described in Appendix A, we can identify the nationality of households from the expenditure items after 2011.

4.1.1. Matched samples

As the impact of macroeconomic shocks can be highly heterogeneous across different segments of society, in addition to comparing Afghan refugees with all Iranians, we also make a comparison group of Iranians who have similar characteristics with Afghans. In this way, we can assume that in the absence of shocks, the trend of Afghan refugees' outcomes would have been more similar to the matched sample rather than the whole population. For this purpose, first, we make a stratification based on survey round and location in which matching is exact. Second, we use a vector of covariates to match Afghan individuals in LFS and Afghan households in HEIS to their Iranian counterparts within each stratum.

To match Afghan individuals in LFS with Iranians, we exclude the population not participating in the labor force and apply exact matching on round, location, and employment status (employed/unemployed). We then use the following variables for matching at the individual level: gender, being household head, education, marital status, age, work experience, and household size. For employed individuals, we also include occupation code, job status code (self-employed, wage-earner, etc.), firm size, and having medical insurance via their job as additional covariates for matching. The covariates utilized for matching in HEIS include household size, number of students and workers, vehicle possession, household head's gender, age, education, marital status, and occupation dummies. In both surveys, we achieve the best balance when using Mahalanobis pair matching with replacement. Appendix Table 2 shows the covariate balance between Afghan and Iranians for different matching techniques in HEIS.

4.2. Variables and summary statistics

To measure inequality and social cohesion between and within refugees and host communities, we utilize the surveys to construct various variables. In below, we provide the definition of each variable and its summary statistics.

4.2.1. LFS variables

Table 2 shows that the **working hours** per week is about 2 hours higher in Afghan individuals compared to Iranians, and the **unemployment rate** (percent of unemployed individuals to active population) is much less among Afghan refugees (4.8%) compared to Iranians (10.8%). Among unemployed individuals, being laid off is less common among Afghan refugees (8.5%) than Iranians (11%). The **duration of unemployment** also suggests a better image among Afghan refugees than Iranians. Table 2 shows that, on average, the unemployment length of Afghans takes 7.1 months, but this number is 19.3 months for Iranians. However, comparing the job class between Iranians and Afghan refugees shows much better conditions for Iranians. Based on the classification of occupation (ISCO-4), we distinguish between unskilled and skilled/semi-skilled occupations⁵ and compute the share of unskilled workers among employed individuals. The fifth row of Table 2 shows a significant discrepancy in terms of unskilled jobs between Afghan refugees (50.8%) and Iranian workers (15.2%). Hence, although Afghan refugees have less and shorter unemployment than Iranians, they mainly work longer hours in low-paying unskilled jobs.

Using the rotating panel feature of LFS, we compute various transition variables for each subsample by comparing the average outcome of individuals present in the sample in the same season of two consecutive years. First, we define the **sample replacement**, which is a dummy in the LFS rotating panel sample and is one if the household is not responding next survey round and replaced by a new household. As the sample design in LFS and HEIS is based on households' location, the sample replacement dummy indicates whether the household is present in its previous dwelling or replaced by new households residing there. If no one is present in the previously sampled location, the SCI officer chooses a nearby location within the substratum for sampling. Hence, sample replacement is an index of movement that can be due

⁵ The first digit of ISCO-4 corresponds to different skills and category 9 is for unskilled occupation in various sectors.

to migration, job mobility, non-ownership of residence, death, etc. Row (6) of Table 2 shows that the replacement rate is much higher for Afghan refugees (12.9%) compared to Iranians (3.7%).

Next, we look into the change in the employment status of *active individuals* (employed and unemployed) in the rotating panel sample. Figure 4 illustrates the transition rates from employment/unemployment into employment/unemployment/inactivity. We find that transition from unemployment to employment is much higher among Afghan individuals (62.4%) than Iranians (38.2%). The transition rate from employment to unemployment is slightly larger among Afghan individuals (16.5%) than Iranians (14.3%). Based on these transition rates, we define two variables for regression estimations: **unemployment to employment** is a dummy variable for unemployed individuals that becomes one if the status becomes employed in the next period. In a similar way, we define **employment to unemployment** dummy for unemployed individuals in each round of LFS surveys.

Using the information of the type of occupations and the transition between them, we can measure upward and downward occupational mobility. Figure 5 shows the transition between skilled and unskilled jobs for individuals who are *employed* in two consecutive years. While 41% of Iranians with an unskilled job move to a skilled job next year, this rate for Afghan refugees is 28%. On the other hand, the skilled to unskilled transition is higher among Afghans (26.5%) than Iranians (7.1%). The transition rates for the matched sample of Iranians are between Afghan refugees and all Iranians. Hence, we can conclude that in terms of occupational mobility, Afghan refugees have lower upward mobility and higher downward mobility. In this regard, we define two dummy variables for employed individuals in two consecutive years: **upward mobility** is a dummy for unskilled workers that becomes one if they obtain a skilled job next year. **Downward mobility** is a dummy for skilled workers and is one if they have an unskilled job next year.

One important issue regarding the transition dummies is that due to refreshing the LFS rotating panel sample in 2013 and 2018 by SCI, we cannot observe the transition variables from 2012 to 2013, from 2017 to 2018, and from 2019 to 2020 (the data is not available yet). This is rather unfortunate for our study since, according to Figure 3, these years were important times in terms of macroeconomic shocks. Missing them reduces the variation of the independent variable in our estimations.

4.2.2. HEIS variables

Rows (11) to (18) of Table 2 show variables computed from HEIS surveys. All of these variables are measured as the logarithm of values at constant 2011 prices. For measuring household per capita expenditure, we use the modified OECD adult equivalent scale, which gives value 1.0 to the first adult, 0.5 to each member aged 14 and over, and 0.3 to each child aged under 14. Since the HEIS recall period for the majority of expenditure items is past month, we measure per capita **total expenditure** and **food expenditure** on a monthly basis. Figure 6 shows the distribution of total expenditure per capita by nationality of the household which has a log-normal shape. We observe that Afghan households spend less on average, and their expenditure distribution has a shorter tail. The recall period of income tables is past year, and thus they have larger numbers. According to Table 2, Afghan refugees spend less overall and on food items and have lower **total income**. Their **earned income**, however, is larger than Iranians because of their higher labor force participation. The **wage rate** of the household's head is almost equal in the two communities, even though, on average, Afghan households have higher wage rates than the matched sample of Iranians, suggesting that Afghan workers are more productive than their Iranian counterparts. It is to be noted that the wage rate is reported only for wage-earners and not self-employed individuals, and for this reason, it has fewer observations than earned income.

4.2.3. Measuring social cohesion

Social cohesion is a multi-faceted phenomenon with a range of dimensions such as belonging, inclusion, participation, recognition, and legitimacy. In the forced displacement context, factors such as common identity, economic inclusion, and trust between two communities are critical dimensions to measure social cohesion (de Berry & Roberts, 2018). Measuring all dimensions of social cohesion needs a range of subjective and objective indicators concerning inter and intra-community relations and attitudes. In the

absence of such data sources for Afghan refugees and Iranians, we focus on a specific dimension of social cohesion that can be measured using items in HEIS. In particular, we look into assistance received by Afghan households from other households as a measure of trust between two communities. Pham et al. (2021) use participatory research methods to identify the elements of the predominant understanding of social cohesion in the Democratic Republic of the Congo. Their study suggests that helping each other and sharing (generosity and charity) represent strong indicators of social cohesion. Accordingly, although our measure of social cohesion departs from its general definition, it captures one of the most important aspects of a broad concept.

Having our definition of social cohesion in mind, we compute different variables using HEIS to measure trust between the communities. **Aid** is an unearned income item corresponding to aids received from NGOs and charity institutions. **Transfer** is another item in the unearned income table that comes from direct monetary transfers from other households. Moreover, in HEIS expenditure tables, in addition to the quantity and value of the items, their method of obtaining (purchase, home production, from work, free) is also inquired. Using this information, we compute **free items** as the sum of all expenditure items that their method of obtaining is mentioned as ‘free’. Finally, we sum over household expenditure items for charitable giving and build variable **donation** that measures the transfers and contributions that are given to other households. According to rows (16) to (18), the means of aid, transfer, and free items are significantly higher among Afghan households, and it raises above their monthly expenditure per capita. However, the share of Afghan households who receive aid, transfer, and free goods are respectively 3.2%, 6.6%, and 14.4%, which is significantly lower than these shares for Iranians.

4.2.4. Measuring economic shock

In order to measure shocks, we need a variable that both reflects the exogenous nature of macro shocks in Iran’s economy and has at least a monthly frequency to be merged with HEIS data. In this regard, our best candidate is the exchange rate (US dollar to IR rial) which is available daily and, as shown in Figure 3, quickly reveals the effect of sanctions on Iran’s economy. In addition, since we aim to study the effect of shock on social cohesion, it is also important that exchange rate shock captures not only the direct economic impact of exogenous shocks but also people’s perceptions and expectations about the status of the economy. Besides, many Afghan refugees send remittances back home and regularly consider returning home or remigrating to other places. Such considerations are mostly affected by the exchange rate that is instantly visible to them. In contrast, other shock measures like GDP growth capture the economic shocks to all sectors of the economy, many of which are irrelevant to work for refugees.

Since the recall period for most of our dependent variables is the past year, our primary variable to measure monthly shock is the year-on-year difference in log of USD to IRR rate, i.e. $(\log Xrate_{m,y} - \log Xrate_{m,y-1})$. However, because the exchange rate in Iran jumps in bad economic times and remains almost constant in good times, which is evident in Figure 3, the variation in this measure of shock mainly reflects bad economic shocks. For this reason, when we examine the asymmetric effect of good and bad shocks in section 5.4, we apply a Hodrick-Prescott filter to extract the cyclical component of the log of the exchange rate.

4.3. Identification strategy

In order to examine the unequal effect of economic shocks in Iran on Afghan refugees and natives, we utilize two approaches. The first approach is based on estimating the following regression

$$y_{it} = \alpha_0 + \alpha_1 \text{Afghan}_i + \alpha_2 \text{Shock}_t + \alpha_3 \text{Shock}_t \times \text{Afghan}_i + \gamma X_{it} + T_t + \varepsilon_{it} \quad (1)$$

where y_{it} is one of the dependent variables listed in Table 2, Afghan_i is the dummy of being a refugee for household or individual i , Shock_t is the index of economic shock at time t , X_{it} is a vector of control variables, T_t is a vector of year and month fixed effects, and ε_{it} is the error term. We estimate this regression with OLS method when the dependent variable is continuous and with Logit when the dependent variable

is binary. The identifying assumption in (1) is that conditional on observable variables X_{it} and time fixed effects T_t , and in the absence of economic shocks, the trend of the dependent variable would have been parallel between Afghan refugees and the host communities. For the LFS sample, we estimate (1) for all individuals in the data and control for age, household size, job experience, having insurance, education, occupation, and dummies for being household head, being married, and gender. We estimate (1) at the household level for the HEIS sample and control for household size and head's characteristics, including age, gender, literacy, occupation, and being married.

The second approach for estimation is based on a matching method. We match each Afghan household or individual with an Iranian counterpart as explained in section 4.1.1 and then compare the heterogeneous impact of economic shocks between the two groups by estimating (1) but without controlling for variables X_{it} and time fixed effects T_t . The identifying assumption of this approach is that in the absence of shocks, the trend of Afghan refugees' outcomes would have been similar to the matched sample of Iranians. This approach is similar to matched difference-in-difference strategy, as described in Heckman et al. (1997, 1998).

5. Results

In this section, we present our key findings. We first discuss the results regarding the heterogeneous effect of economic shocks on the labor market, income, and consumption. Next, we present our findings on social cohesion measures. We then examine the asymmetric effect of negative and positive economic shocks on the outcomes. Finally, we study how inter-community and intra-community inequalities are affected by economic shocks in Iran.

5.1. The unequal effect of economic shocks on the labor market

Panel A of Table 3 presents the regression results of estimating (1) using outcome variables computed from LFS surveys. The coefficient of the Afghan dummy is consistent with the summary statistics in Table 2: Afghan individuals work longer hours, have lower unemployment and layoff rates, and their duration of unemployment is shorter than Iranians. The estimated coefficients for the economic shock index suggest that following a negative shock, people work longer hours and have higher layoff rates. We also find that negative shock leads to a shorter duration of unemployment which can be due to the hardships that motivate individuals to accept job offers that they would not take in normal times. Our coefficient of interest, which is the interaction of the Afghan dummy with economic shock, is only significant when the dependent variable is working hours. According to column (3) of Table 3, one unit increase in shock measure – corresponding to a year-on-year increase in log(USD to IRR rate) by one unit – raises the weekly working hours of Afghan individuals 1 hour and 27 mins more than Iranians.

In panel B of Table 3, we estimate the heterogeneous impact of economic shock using our matching approach. Although we find similar results for the Afghan dummy and the measure of shock, their interaction term becomes insignificant. This finding shows that the impact of economic shocks on labor market outcomes is not significantly different between refugees and host communities when comparing every Afghan individual with an Iranian with very similar characteristics. Therefore, in turbulent times, Iranian employers do not discriminate against Afghan refugees by laying them off, suggesting economic shocks do not reduce social cohesion between employers and Afghan refugees. However, as we only observe employment and not its features such as expropriation, withholding salaries, and harassment, this evidence is incomplete and social cohesion may be weakened in those dimensions.

Table 4 shows the estimation results using two approaches when the dependent variable is the dummy of replacing the sample household with another household next year. Columns (1) and (2) show the results of estimating (1) for all individuals in LFS, and column (3) is for the matched individuals. In all estimations, we find that Afghan individuals have a significantly higher replacement rate. The marginal effect in column (3) implies that being an Afghan refugee raises the probability of replacement by 5.6% compared to the matched sample of Iranians. The coefficients of shock variable are significant in estimations with all

Iranians suggesting that bad economic times increase the movement of individuals perhaps to find better opportunities. Notably, the interaction term of the Afghan dummy with the shock variable significantly increases the probability of replacement in all estimations. According to the marginal effects of matching estimation, one unit increase in shock raises the replacement rate by 0.047, 14.5% of its SD (0.325) in the matched sample.

A higher sample replacement rate for Afghan refugees suggests that in turbulent times the life of the displaced population becomes worse than natives, and thus many of them prefer to leave the host country. Since we cannot track the replaced individuals in the sample, it is not possible to compare their living conditions before and after movement, but column (2) of Table 4 gives us some idea about the characteristics that increase the probability of replacement. Sample replacement is more likely for household heads, females, smaller households, married, young, and less experienced individuals. The education fixed effects, which are not reported in column (2) of Table 4 for better illustration, imply an increasing relationship between years of education and sample replacement rate. Overall, it seems that during bad economic times in the host country, the displaced population with better prospects outside (more educated), more able to move (young, small households), and less attached to the host country labor market (less experienced, female), are more likely to not remaining in the sample next year.

Our finding regarding sample replacement rate is consistent with the aggregate number of Afghan individuals crossing Iran borders. Figure 7 uses the International Organization for Migration (IOM) data about the number of Afghan individuals exiting⁶ from two Iranian borders (Herat and Nimrouz) toward Afghanistan and compares it with our measure of economic shock. We observe that the number of exiting Afghan refugees from Iran increases when the exchange rate sharply increases. This finding sense checks our conclusion from Table 4 that a higher replacement rate of Afghan refugees translates to their higher exit rate from Iran and not only higher mobility within Iran's borders.

We present estimations of equation (1) for the rest of the transition variables in Appendix Table 3, but we do not find much significant coefficient for the interaction term. This outcome is not surprising for two reasons: First, based on the above discussion, the replacement rate of Afghan refugees in the LFS sample is significantly higher than Iranians, creating a bias because the replaced sample is systematically different from remainders. Second, because of the refreshing rotating panel sample frame by SCI in 2013 and 2018 and the unavailability of the survey for 2020, the transition variables are unknown for three crucial years in the period of study in which economic fluctuation was high.

5.2. The unequal effect of economic shocks on expenditure and income

In Table 5, we estimate the unequal effect of shocks on expenditure, income, and wage rate using HEIS data. The coefficient of the Afghan dummy in panel A of Table 5 shows that, on average, Afghan households spend less and have lower total income than Iranians. However, their earned income is higher than Iranians because of higher labor force participation. In the HEIS sample, while 88% of Afghan households' heads are in the labor force (employed or unemployed), this number is 70% for Iranian households' heads. In column (10), we find that the wage rate is also higher for Afghan households, consistent with the anecdotal evidence that they have more labor productivity in unskilled jobs than Iranians.

The effect of economic shocks is negative on expenditure but positive on income and wage rate. Although the positive impact of economic shocks on income and wage is counter-intuitive, our price deflator (CPI index) can be a reason for the positive coefficients. Because the exchange rate shock does not instantly pass through CPI, it perhaps shows its effect on nominal income more immediately than on the CPI price deflator. For expenditure items, our deflator is the monthly price index of the item, and thus the

⁶ IOM data has no information about the movement from Afghanistan toward Iran nor information on exit before 2015. One reason for unavailability of entrance data is that many Afghan refugees enter Iran via human smuggling while there is no restriction for them to exit from the borders.

effect of shock is reflected in the nominal value and its deflator at the same time. Consistent with this hypothesis, in an unreported exercise, when we convert income and wage to dollar values, while other qualitative results remain the same, the effect of shock becomes negative and significant.

The interaction term of the Afghan dummy and shock variable in panel A of Table 5 has a negative and significant coefficient when the dependent variable is total expenditure and wage rate. This result implies conditional on observable characteristics and time fixed-effects, Afghan households' total consumption expenditure and wage rate are more negatively affected by economic shock than Iranians. However, we do not find a significant impact on food expenditure, total income, and earned income. These findings make sense when we put them together with the estimation results of working hours in panel A of Table 3, columns (1) to (3): when the comparison group is *all Iranians*, during turbulent times, Afghan households work longer hours but get lower wages, and as a result, the net unequal effect of shock on earned income and total income is insignificant.

In panel B of Table 5, we set the *matched Iranians* with similar characteristics to Afghan households as the comparison group. These estimations show that being an Afghan household is associated with a higher earned income and wage rate. Moreover, the coefficient of the shock variable is not significant for expenditure variables. The interaction term of Afghan dummy and shock has negative and significant coefficients for the total expenditure and total income, but it is insignificant for earned income, food expenditure, and wage rate. Putting these results together with column (10) of panel B of Table 3, we can interpret as follows: In turbulent times, compared to a similar group of Iranians, Afghan households' work hours, wage rate, and earned income is not different, but their unearned income and consumption expenditure decreases disproportionately.

5.3. The effect of economic shocks on social cohesion

After examining the unequal effect of economic shock on consumption expenditure and income, in this part, we estimate the unequal impact on social cohesion between refugees and host communities. Since our data does not include specific questions on aspects related to social cohesion, we extract components of income and expenditure items that can reflect trust and cohesion between communities. As explained above, for this purpose, we have four variables: **Aid** reflects the monetary aid from charity institutions, **transfer** is the financial help from other households, **free items** is the sum of nonmonetary assistance that the household receives in the form of goods and services, **donation** is the sum of transfer and donations given to other households.

Columns (1) to (8) of Table 6 show the estimation results for the sample of all households. Interestingly, we see that the Afghan dummy is positive and significant for aid, transfer, and free items, implying that Afghan refugees receive more charitable giving and transfer from society compared to an average Iranian and conditional on observable household characteristics. The donation expenditure is, however, lower for Afghan refugees. The positive and significant coefficient of shock variable in all columns also suggests higher benevolence in Iran during bad economic times. The interaction term of Afghan dummy and shock shows that aid from institutions disproportionately increases with shocks for Afghan refugees when we compare them to the sample of all Iranians in columns (1) and (2). The interaction term is, however, not significant for transfer, free items, and donation.

In columns (9) to (12) of Table 8, we report estimations when each Afghan household is matched to a similar Iranian household as the comparison counterpart. Here we find the similar results for the coefficients of the Afghan dummy and shock variable. However, while the interaction term appears with a positive and significant coefficient for aid in column (9), it is negative and significant for transfer and free items. These findings suggest that even though, on average, Afghan refugees receive more charitable giving compared to matched Iranian households, during turbulent times, while they receive higher aid from NGO and charity institutions, they receive less charitable givings from other households. One interpretation of these results is that in bad economic times, Iranian households give their charity to Afghan refugees less than before and

prioritize similar Iranians. An alternative hypothesis would be an intracommunity effect such that Afghan households receive less assistance from other Afghan households. To shed light on the nationality of households who give assistance, in column (12), we estimate the regression using reported spending on transfer and donation to other households as a dependent variable. The estimated coefficient for the interaction term suggests no significant difference between Afghan and Iranian households in giving donations following shocks. The fact that the disproportionate effect of economic shock by nationality is significant only for the recipient household and not households providing assistance suggests that economic shock weakens social cohesion between refugees and host communities.

Figure 8 visualizes the summary of our regression results so far in a bin-scatter graph. We observe that the effect of negative shocks measured by exchange rate growth is unequal between Afghan refugees and Iranians with similar characteristics. While economic shock has a negligible effect on the sample of matched Iranians, it negatively affects both expenditure per capita and free items of Afghan refugees.

5.4. The asymmetric effect of bust and boom cycles

A relevant question about the unequal effect of economic shocks on refugees and the host community is whether there is an asymmetry in the bust and boom cycles. In this part, we want to examine how post-shock recovery affects cohesion and equality of opportunity between refugees and hosts. So far, our measure of shock has been the year-on-year difference in log of the exchange rate, which has high variation in bad shocks but is almost constant during the normal and good economic time. For this reason, we redefine our measure of economic shock to capture both negative and positive economic cycles by applying a Hodrick-Prescott filter to extract the cyclical component of the log of exchange rate. Then, we estimate the following regression to decompose the effect of bust and boom cycles

$$y_{it} = \beta_0 + \beta_1 \text{Afghan}_i + \beta_2 \text{Bad Shock}_t + \beta_3 \text{Good Shock}_t + \beta_4 \text{Bad Shock}_t \times \text{Afghan}_i + \beta_5 \text{Good Shock}_t \times \text{Afghan}_i + \varepsilon_{it} \quad (2)$$

where $\text{Bad Shock}_t = \text{Shock}_t \times (\text{Shock}_t > 0)$ and $\text{Good Shock}_t = -\text{Shock}_t \times (\text{Shock}_t < 0)$. Table 7 and Table 8 report the estimation results only for the matched sample, but we get similar results when using regression with all Iranians.

Table 7 shows the estimation results for expenditure and income variables. In columns with odd numbers, we report estimation of equation (1) with the new shock variable defined as the difference in the log of the cyclical component of the exchange rate for comparison. As expected, we get the same qualitative results as panel B of Table 5. Columns with even numbers show estimations of equation (2) to decompose the impact of bad and good economic shocks. We find that the unequal effect of shock for the total expenditure and total income is significant only because the interaction term of Afghan dummy with good shock plays a role and not with bad shock. In other words, in bad economic times, consumption expenditure and income of Afghan refugees and similar Iranian are homogeneously affected, but in good economic times, the effect is heterogeneous in favor of Afghan refugees.

Table 8 estimates equations (1) and (2) for social cohesion variables using cyclical components of the exchange rate as the measure of economic shock. While we do not find any significant result for aids from institutions, we find a negative and significant unequal effect of shocks on transfer from other households and free goods similar to Table 6. Importantly, when we decompose the impact of good and bad economic shock, we find that unlike Table 7, only the interaction term of Afghan dummy with bad shock is significant. By putting together this finding with the result of Table 7, we can conclude that while in turbulent times, the income and consumption of Afghan refugees and comparable Iranians are similarly damaged by economic shocks, Afghan refugees are disproportionately hurt in terms of social cohesion. In contrast, normal time disproportionately benefits Afghan refugees with regard to consumption and income, whereas the social cohesion variables show no significant difference.

Other anecdotal evidence from Iran also suggests that bad living conditions intensify negative attitude towards refugees. Nasr Esfahani (2020) reports that among Tehran citizens, the opinion that “do you agree to prohibit the residence of Afghan refugees in Tehran?” is responded “yes” much more often in poor districts of the city and among people who stated having problem in their livelihood.

5.5. The effect on inter-community and intra-community inequalities

As the last empirical exercise, we carry on examining how economic shocks affect inter-community and intra-community inequalities. For doing this, we measure inequality in total expenditure per capita using the Theil index, which allows us to decompose inequality into the parts due to inequality within communities and between communities. Specifically, the Theil index can be written as

$$\text{Theil} = \frac{1}{N} \sum_{i=1}^N \frac{x_i}{\mu} \ln\left(\frac{x_i}{\mu}\right) = \underbrace{s_{AF} \ln \frac{\bar{x}_{AF}}{\mu} + s_{IR} \ln \frac{\bar{x}_{IR}}{\mu}}_{\text{between}} + \underbrace{s_{AF} \text{Theil}_{AF} + s_{IR} \text{Theil}_{IR}}_{\text{within}}$$

where μ is average expenditure for the total population, and s_i and \bar{x}_i , respectively, show expenditure share and average expenditure for Afghan and Iran nationality groups.

Using HEIS data, we compute the monthly Theil index and its between and within components. Panel A of Table 9 shows the summary statistics of the measures. As expected, the numbers suggest higher inequality among Iranians (9.85E-4) compared to Afghan refugees (4.95E-4). Moreover, since Afghan refugees comprise a small share of the sample, the between-component of the Theil index is much smaller than the within-component. For this reason, we also use the ratio of between to within components as a dependent variable in the regressions.

After computing monthly inequality measures, we estimate the following regression for between and within components and their ratio

$$INQ_t = \gamma_0 + \gamma_1 INQ_{t-1} + \gamma_2 Shock_t + \epsilon_t \quad (3)$$

Panel B of Table 9 shows the estimation results using both measures of shocks which are year-on-year difference of exchange rate and its cyclical component. We find that both between and within components of inequality are positively associated with the economic shock variables. In addition, columns (5) and (6) suggest that bad economic conditions increase the between-component of inequality more than the within-component. Therefore, in regard to Afghan refugees in Iran, while economic shocks increase both inter-community and intra-community inequalities, they have a stronger effect on inter-community inequality.

6. Policy and program implications

This paper investigates the unequal effect of economic shocks in the host country between refugees and host communities. The macroeconomic fluctuations in Iran in the 2010s provide us an excellent testing ground for this topic. Using different rounds of household surveys, we draw an analogy between Afghan refugees and Iranians in terms of the labor market outcomes, income, and consumption expenditure. The numbers show that while Afghan refugees have lower unemployment and layoff rates, they work in low-status and unskilled jobs. They participate more in the labor market, work longer hours, and are more productive (get higher hourly wages) than similar Iranians. Their earned income is higher on average, but they have lower unearned income and total income than Iranians. The average per capita expenditure of Afghan households is less than Iranians, even though per capita food expenditure is closer between the two communities.

Regarding the unequal impact of economic shocks, our results imply that Afghan refugees exit the country more often during bad economic times in Iran. Comparing Afghan refugees who stay with all Iranians while controlling for observable characteristics suggests that economic shock disproportionately reduces Afghans’ wages while raising their working hours. As a result, the net effect of shocks on their

earned income and total income is not different from Iranians. However, when the comparison group is the sample of matched Iranians with similar characteristics, economic shocks homogeneously affect working hours, wage rate, and earned income of the two groups. Besides, we find that during turbulent times, Afghan refugees disproportionately receive less aid from other households than Iranians. This evidence suggests that economic shock weakens social cohesion between refugees and host communities.

Our findings show that the effects of bad and good shocks are not symmetric. While in bad economic times, the shock homogeneously affects the income and consumption of Afghan refugees and similar Iranians, it has a heterogeneous effect on aid received and hinders social cohesion between communities. In contrast, good shocks disproportionately increase the income and expenditure of Afghan refugees, but it does not significantly affect our measures of trust between the two communities. An important lesson of this finding for policymakers and development organizations is that the economic effect of business cycles on refugees can be quite different from its social effect.

Finally, we find that while turbulent economic times increase both inter-community and intra-community inequalities, they have a stronger effect on inter-community inequality. Although we did not find a disproportionate effect of negative shocks on income and consumption, the fact that inequality within Afghan communities increases with shocks shows that one segment of refugees is hurt more by the economic downturns than others. Taking into account this heterogeneity among refugees is essential for policymaking. For instance, one segment of Afghan refugees in Iran end up working for Iranian families as caretakers, and they often live together. Unless the Iranian family is hit with economic shocks, these refugees have a stable income and a place to live. In contrast, many Afghan refugees come to Iran to look for unskilled labor without a support network among Iranians. This segment of refugees would substantially suffer from economic shocks that cause less construction work or a drought hitting jobs in the agriculture sector. An implication of this result for humanitarian organizations is to develop infrastructure to identify vulnerable refugees from the rest and then target more aid toward them in hard times.

6.1. Recommendations based on expert interviews and reports

In the last section of the paper, we add a set of points and recommendations based on our interview with experts on Afghan refugees in Iran⁷ and studying various reports on this topic. Although these recommendations are not direct results of our quantitative analysis, they enrich the reader's understanding of the development and humanitarian needs of vulnerable Afghan refugees in Iran.

People of Iran and Afghanistan practice the same religion, and together with Tajikistan, they are the only Persian-speaking countries in the world. Ethnolinguistic proximity is an important factor in creating positive attitudes toward refugees (Betts et al., 2021). This cultural proximity and the lengthy shared border make Iran an attractive destination for Afghan refugees now and in the future. Still, a feature of Afghan refugees in Iran is that they are working in low-status jobs with a lack of legal support. On the one hand, this problem is caused by discrimination and institutional constraints hindering opportunities for Afghan refugees in Iran. On the other hand, it is an outcome of the low human capital of Afghan refugees.

The regulations for Afghan refugees in Iran force them to work in specific occupations covering mainly unskilled jobs. Moreover, even though there are no legal restrictions for registered refugees to open a bank account, pursue higher education, etc., in practice, many refugees do not have access to public services, either because of their illegal stay or illiteracy. Lack of legal support makes Afghan refugees prone to be defrauded and creates an asymmetric trust between the two communities. While Iranians typically find Afghan refugees trustworthy and employ them as caretakers or guards for their building, Afghan refugees have a cynical view toward an unknown Iranian.

⁷ We thank Khyber Farahi who was the senior adviser on migration and social development to the Office of the President of Afghanistan from 2017 to 2019, and Amirhossein Chitsazzadeh who is an expert on Afghan refugees and a researcher at Diaran (an NGO working on immigrants living conditions in Iran), for answering our questions.

Despite Iranians' trust toward individual refugees, many view them as a threat to the economy. Nasr Esfahani (2020) reports that while in Tehran, 96% of respondents state they never experienced harassment from an Afghan refugee, 40% believe that they cause unemployment. Importantly, he finds that in Tehran districts where Afghan refugees are more populated, the mostly poor host community perceives them as a bigger threat to job positions, and the negative attitude toward refugees is much more pronounced. This finding is consistent with the literature showing that unskilled labor and poor households without access to productive resources are most at risk from an influx of refugees (Whitaker, 2002; Maystadt and Verwimp, 2014). In the past decade, the US sanctions against Iran have worsened this situation since people in Afghan populated areas might wrongly blame refugees for their economic loss. Luecke and Schneiderheinze (2017) suggest that to preserve the support of the host population for the presence of refugees, vulnerable groups of residents should be identified, and possible negative effects should be mitigated. One way to boost social cohesion between communities is investing in social infrastructure such as cultural centers (which benefit both residents and refugees) within the poorer districts where Afghan refugees are concentrated.

Although removing the barriers and frictions that hamper the labor market outcomes and legal support of Afghan refugees in Iran needs political and diplomatic actions, two caveats must be considered. First, due to the US hostile policies toward Iran in the past decade, a negative perception among Iranian officials has been raised toward international institutions. They blame these institutions for being inclined towards the US interests. Second, one widespread viewpoint in Iran is that international organizations try to make Iran safe for Afghan refugees just to prevent them from moving to Europe and elsewhere. In this regard, donors may consider supporting development at the local level through providing financial assistance to NGOs or development investments in collaboration with district councils.

For the medium term, policies regarding human capital investment can be utilized to move up the social status of Afghan refugees in Iran and prepare them for high-skilled positions. The literature supports the positive effects of financial support on access to higher education for low-income students (e.g. Steiner, 2012 and Nielsen, 2010). Blanco et al. (2021) specifically focus on migrant students and show that aid application was a major roadblock to access higher education in Chile. Aid conditional on education can also reduce child labor among refugees and cause better integration of Afghan children in Iran, promoting social cohesion in the next generations. The current anecdotal evidence confirms higher social cohesion between the second and third-generation Afghan refugees and Iranians.⁸ A critical issue in this regard is that most Afghan refugees who grew up in Iran have no intention to go back to Afghanistan. Since the abrupt US withdrawal and the resurgence of the Taliban, they have just become more reluctant. In the past decade, many of them exited Iran toward Europe due to economic sanctions against Iran. This outflow will continue and possibly increase if the current economic downturn and outlook in Iran persist in the following years.

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⁸ This convergence is noticeable in social networks. As an example, one of the celebrity news in summer 2021 that got warm approval among Iranians in social media was the marriage of Fereshteh Hosseini an Iranian-born actress from an Afghan refugee family and the award winning Iranian actor Navid Mohammadzadeh.

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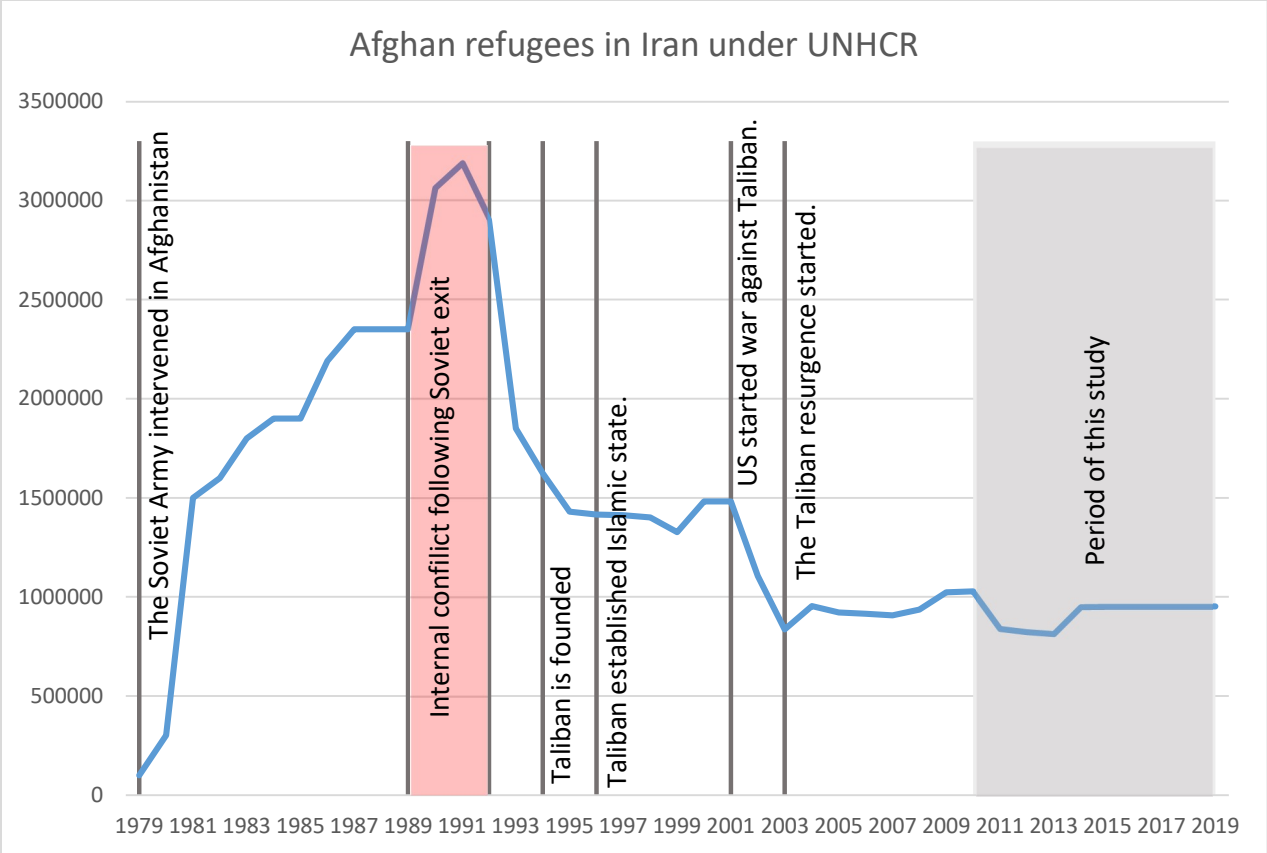


Figure 1 - Number of Afghan refugees in Iran under United Nations High Commissioner for Refugees (UNHCR). Source: UNHCR database available at <https://www.unhcr.org/refugee-statistics> (accessed 21/06/2020).

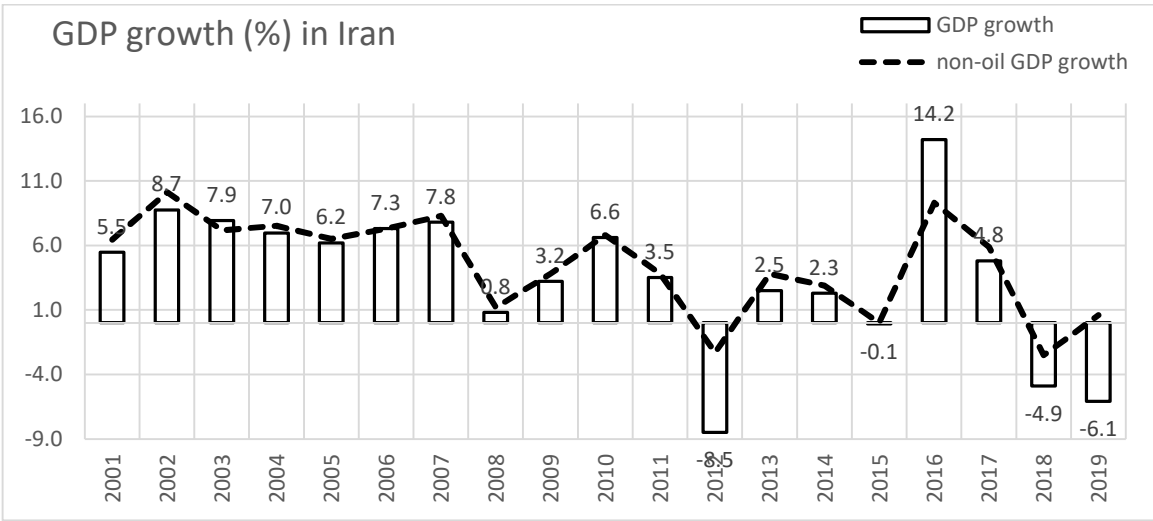


Figure 2- GDP growth rates in Iran. As a result of the conflicts with the international community, the long-lasting period of Iran's positive growth ended in 2011 when GDP growth dropped to -8.5% in 2012. It then overturned in the next years and peaked at +14.2% in 2016, following the approval of the nuclear deal. After the exit of Donald Trump's administration from the deal in 2018, the growth rate again dropped to high negative rates.

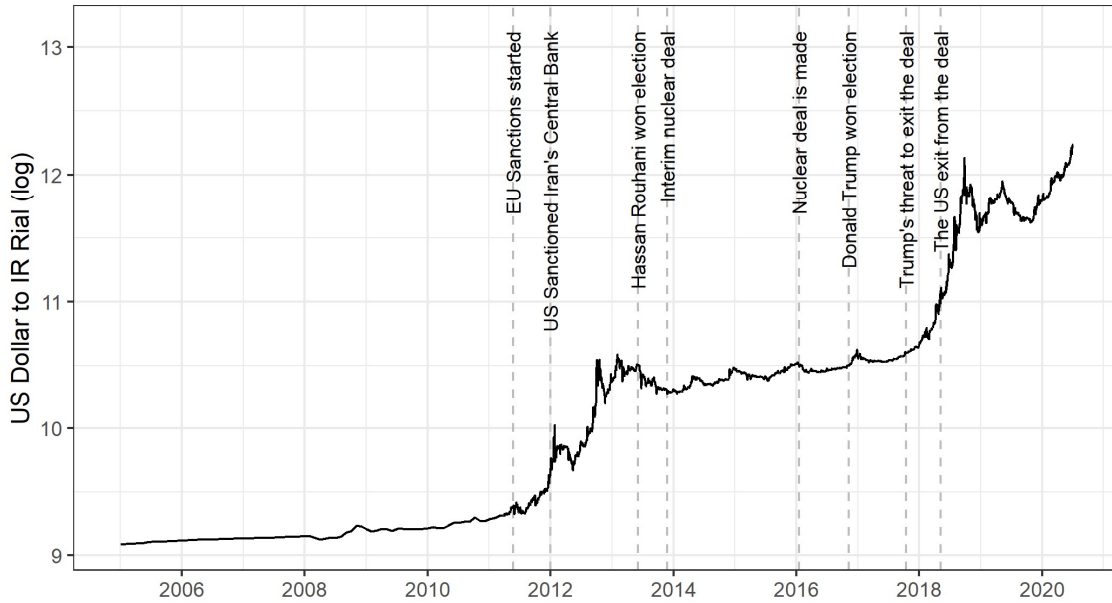


Figure 3 - The timeline of major political events in Iran and their effect on the exchange rate.

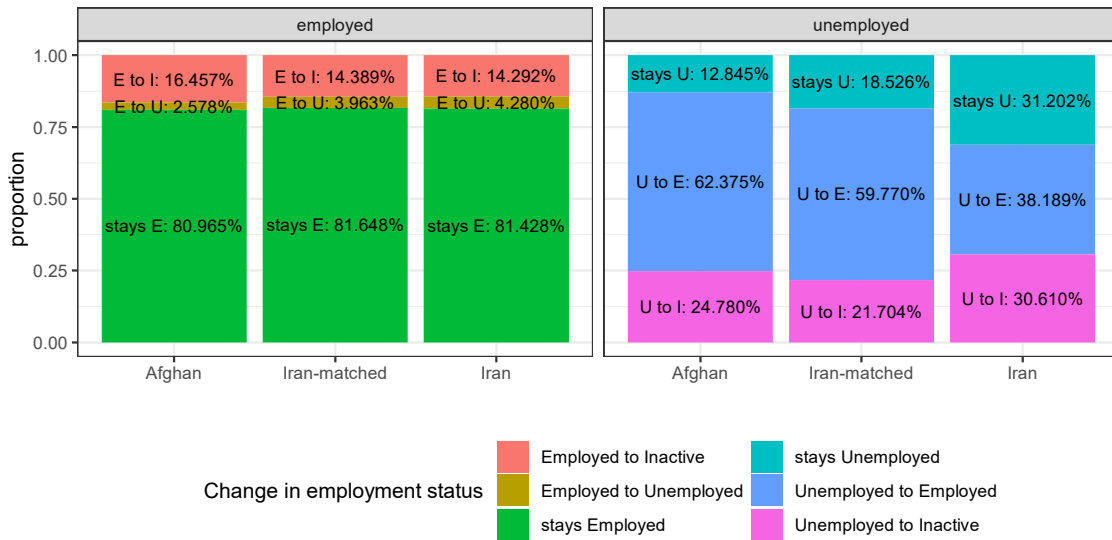


Figure 4 - change in employment status

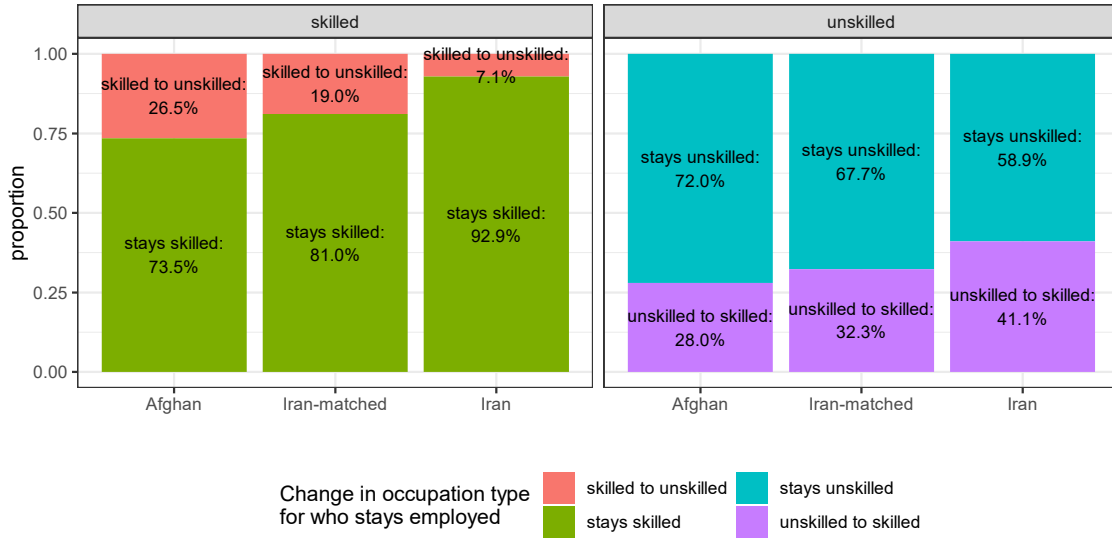


Figure 5 - Change in occupation type among people who stay employed in two consecutive years

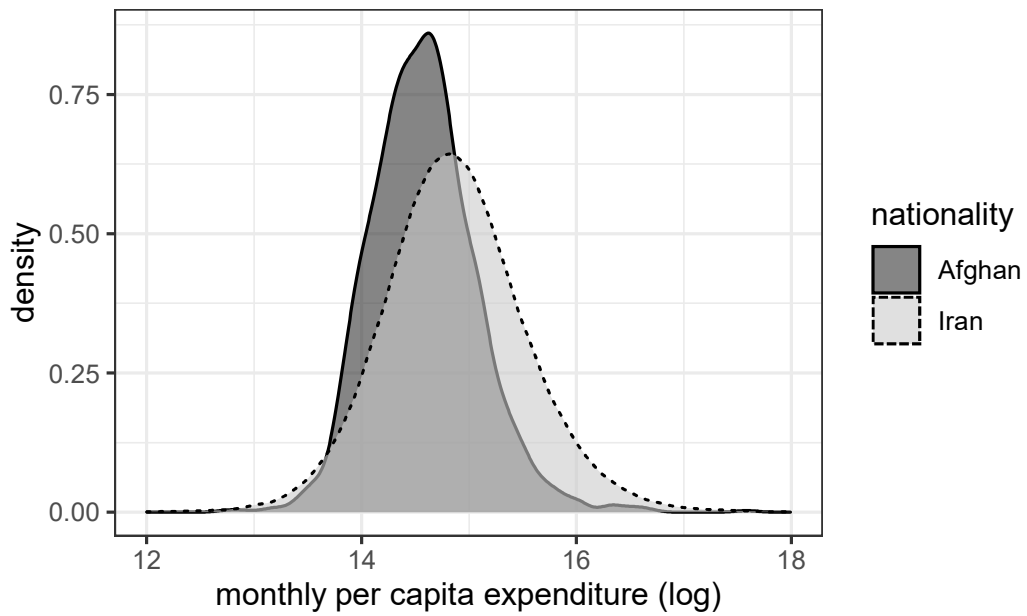


Figure 6 - The distribution of log monthly per capita expenditure by nationality (in fixed IR rials)

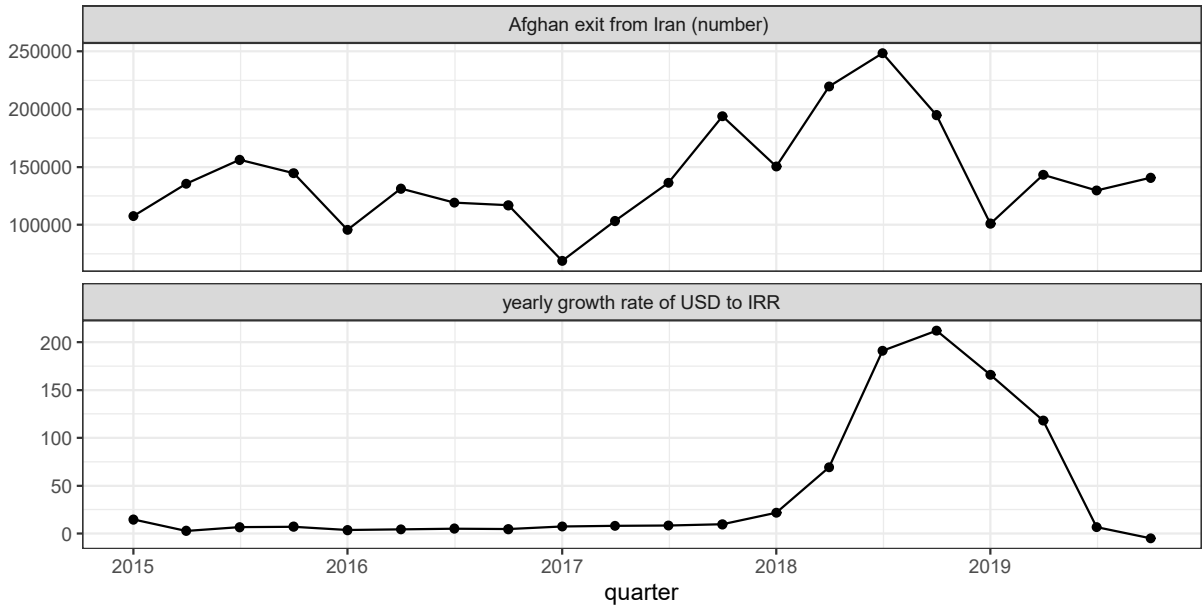


Figure 7 - Economic shock and number of Afghan refugees exiting from Iranian border. The data of Afghan exit from two main borders of Iran (Herat and Nimrouz) is drawn from the website of International Organization for Migration.

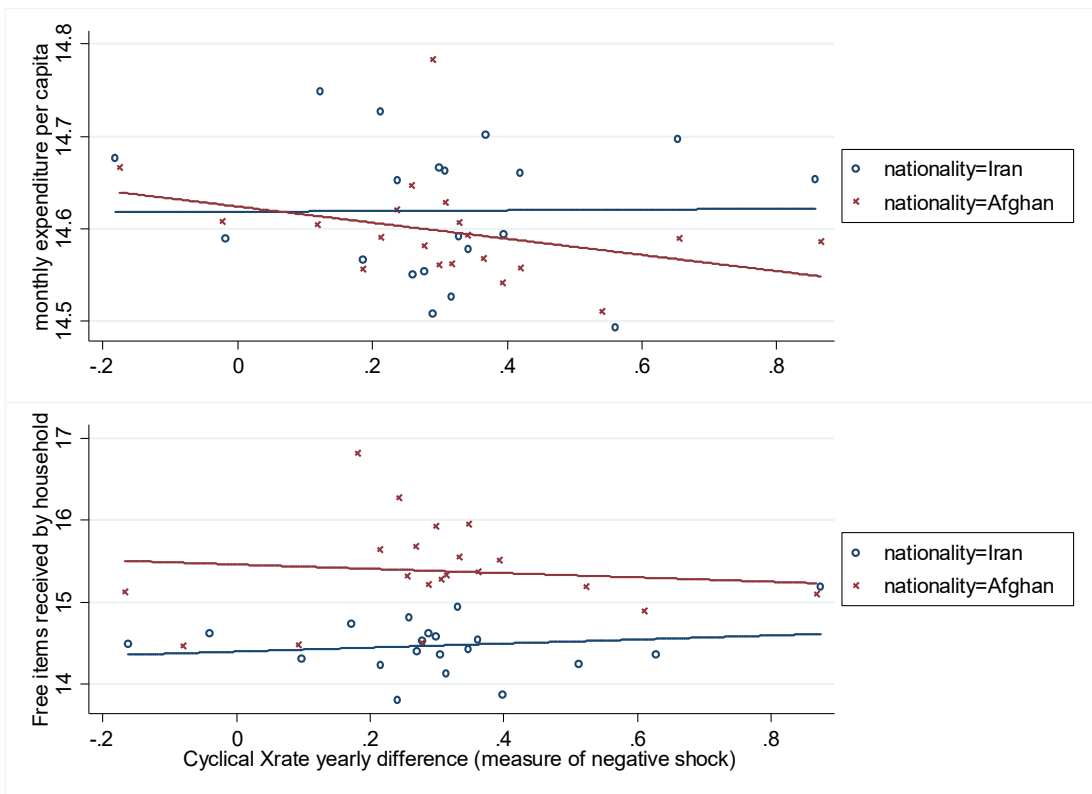


Figure 8 - The bin-scatter graph for regression results of the matched sample. The sample is divided to 20 equalized bins for better illustration.

Table 1 - The list of available surveys and their sample size. Prior to 2010, the nationality of households cannot be identified in HEIS. HH and INDV refer to the number of households and individuals.

Persian year	Year	Labor Force Survey				Household Expenditure & Income Survey	
		Afghan		ALL		Afghan	ALL
		HH	INDV	HH	INDV	HH	HH
1390	2011-12	1415	6641	153812	580694	121	38513
1391	2012-13	1430	6994	151366	560725	157	38192
1392	2013-14	1888	8870	197257	693770	102	38316
1393	2014-15	1960	9087	202942	699952	120	38275
1394	2015-16	2059	9482	205153	701430	141	38252
1395	2016-17	2104	9422	204868	695690	147	38146
1396	2017-18	2323	10428	206349	696032	194	37962
1397	2018-19	2495	11147	212324	709939	214	38960
1398	2019-20	2519	11215	212910	709288	179	38328

Table 2- summary statistics. Mean, standard deviation, number of observations, and difference with Afghan are reported.

LFS variables:		Afghan			Iran-matched				Iran			
		mean	SD	N	mean	SD	N	diff	mean	SD	N	diff
(1)	Working hours per week	48.06	17.11	27956	46.96	17.666	31170	1.1**	46.29	18.32	1467624	1.78***
(2)	Unemployment dummy	0.048	0.213	49166	0.05	0.213	49166	0	0.108	0.31	1902164	-0.06***
(3)	Unemployed due to layoff	0.085	0.278	1704	0.11	0.314	1685	-0.026**	0.110	0.31	115124	-0.03***
(4)	Unemployment length	7.07	10.687	2346	9.65	13.619	2348	-2.6***	19.35	22.80	206983	-12.3***
(5)	Unskilled job	0.51	0.5	49166	0.50	0.5	49166	0.01***	0.15	0.36	1902164	0.36***
Transition dummies (only for rotating panel sample, not available for 2012, 2017, 2019):												
(6)	Replaced (Sample household replaced next year?)	0.129	0.335	12186	0.096	0.295	12812	0.032***	0.037	0.188	536055	0.092***
(7)	Unemployed to employed (For currently unemployed: employed next year?)	0.778	0.416	388	0.701	0.458	415	0.077**	0.546	0.498	37271	0.232***
(8)	Employed to unemployed (For currently employed: unemployed next year?)	0.029	0.167	8538	0.044	0.206	9499	-0.02***	0.045	0.208	395141	-0.02***
(9)	Upward mobility (For unskilled: skilled next year?)	0.255	0.436	4604	0.313	0.464	4891	-0.06***	0.401	0.490	62419	-0.15***
(10)	Downward mobility (For skilled: unskilled next year?)	0.259	0.438	3688	0.195	0.396	4187	0.064***	0.076	0.265	314817	0.183***
HEIS variables:		Afghan			Iran-matched				Iran			
All variables are logs of values at fixed price		mean	SD	N	mean	SD	N	diff	mean	SD	N	diff
(11)	Total expenditure p.c. (past month)	14.67	0.50	1374	14.73	0.59	1374	-0.055**	14.92	0.67	340153	-0.243***
(12)	Food expenditure p.c. (past month)	13.38	0.50	1373	13.39	0.56	1373	-0.009	13.59	0.59	340084	-0.207***
(13)	Total income (past year)	18.12	0.51	1375	18.16	0.53	1375	-0.044**	18.15	0.73	340758	-0.031**
(14)	Earned income (past year)	17.85	0.58	1336	17.65	0.68	1307	0.197***	17.68	0.85	263790	0.171***
(15)	Wage rate (monthly, average over past year)	9.99	0.42	1042	9.92	0.45	930	0.074***	10.01	0.57	120896	-0.018
(16)	Aid received (past year)	16.65	1.37	45	15.19	1.21	142	1.459***	15.02	0.99	56556	1.629***
(17)	Transfers from other households (past year)	16.35	1.18	91	16.20	1.17	79	0.146	15.02	1.55	64636	1.324***
(18)	Free goods/services received (past year)	15.42	1.50	198	14.39	1.67	729	1.027***	14.05	1.73	223442	1.374***
(19)	Donation (past year)	12.04	1.33	927	12.18	1.33	1067	-0.137**	12.99	1.57	272461	-0.948***

Table 3 - The unequal effect of shocks on the labor market. The sample includes individuals in LFS data. The binary dependent variables are estimated using Logit. Shock is measured as the year-on-year difference in log(USD to IRR rate) in each month. Control variables include being householder, gender, marital status, age, household size, job experience, and education fixed effects. Job fixed effects include occupation, job status, having insurance, and firm size dummies. Year and season fixed effects are in all regressions.

Panel A: Regression with all LFS individuals

	Working hours per week			Unemployment		Lay off		Unemployment length	
	OLS			Logit		Logit		OLS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Afghan dummy	1.078*** (0.199)	1.003*** (0.190)	2.588*** (0.177)	-0.888*** (0.038)	-0.839*** (0.040)	-0.354** (0.163)	0.168 (0.166)	-12.123*** (0.850)	-3.217*** (0.776)
Shock	0.193*** (0.073)	0.334*** (0.069)	0.294*** (0.064)	0.022* (0.011)	-0.000 (0.013)	0.153*** (0.045)	0.148*** (0.045)	-0.265 (0.246)	-0.508** (0.223)
Afghan * Shock	2.590*** (0.425)	2.446*** (0.404)	1.465*** (0.375)	-0.016 (0.083)	-0.085 (0.086)	0.131 (0.318)	0.121 (0.323)	-0.251 (1.824)	-1.984 (1.654)
Constant	47.579*** (0.059)	37.393*** (0.112)	50.851*** (1.069)	-2.069*** (0.009)	-2.027*** (0.019)	-2.323*** (0.038)	-3.017*** (0.078)	20.355*** (0.191)	-11.329*** (0.358)
Observations	1481602	1481602	1481602	1926747	1926747	115976	115976	208156	208156
Control variables	No	Yes	Yes	No	Yes	No	Yes	No	Yes
Job FE	No	No	Yes	No	No	No	No	No	No

Panel B: Matching estimation using LFS data. Matching is exact on unemployment status, and thus it is not used as a dependent variable.

	Working hours per week	Lay off	Unemployment length
	OLS	Logit	OLS
	(10)	(11)	(12)
Afghan dummy	1.836*** (0.258)	-0.514** (0.211)	-4.751*** (0.706)
Shock	1.848*** (0.367)	0.480* (0.263)	0.709 (1.071)
Afghan * Shock	0.585 (0.549)	-0.130 (0.414)	-1.624 (1.515)
Constant	45.515*** (0.173)	-1.979*** (0.134)	12.082*** (0.499)
Observations	31158	1683	2348

Table 4 - Sample replacement next year. All regression are Logit estimations, and margins show marginal effects at mean. Shock is measured as the year-on-year difference in log(USD to IRR rate) in each month.

Sample	Is the individual replaced next year in the sample?					
	All individuals				Matched	
	(1)		(2)		(3)	
	Main	Margins	Main	Margins	Main	Margins
Afghan dummy	1.272***	0.045***	1.620***	0.049***	0.626***	0.052***
	(0.048)	(0.002)	(0.051)	(0.002)	(0.076)	(0.006)
Shock	0.149***	0.005***	0.130***	0.004***	-0.061	-0.005
	(0.044)	(0.002)	(0.044)	(0.001)	(0.186)	(0.015)
Afghan * Shock	0.505***	0.018***	0.495***	0.015***	0.570**	0.047**
	(0.137)	(0.005)	(0.140)	(0.004)	(0.230)	(0.019)
Head dummy			0.851***			
			(0.030)			
Male dummy			-0.249***			
			(0.029)			
Married dummy			0.439***			
			(0.026)			
Age			-0.015***			
			(0.001)			
Household size			-0.132***			
			(0.006)			
Job experience			-0.002***			
			(0.000)			
Constant	-3.311***		-2.706***		-2.637***	
	(0.037)		(0.062)		(0.059)	
Observations	542148		542148		12806	
Time FE	Yes		Yes		No	
Education FE	No		Yes		No	

Table 5 - The unequal effect of shocks on expenditure and income. The sample includes households in the HEIS data. Shock is measured as the year-on-year difference in log(USD to IRR rate) in each month.

Panel A: Regression with all HEIS households

	Total expenditure		Food expenditure		Total income		Earned income		Wage rate	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Afghan dummy	-0.217*** (0.023)	0.032 (0.022)	-0.191*** (0.019)	-0.082*** (0.019)	-0.007 (0.025)	-0.048** (0.022)	0.164*** (0.030)	0.181*** (0.029)	0.006 (0.023)	0.131*** (0.023)
Shock	-0.024*** (0.005)	-0.027*** (0.005)	-0.081*** (0.004)	-0.083*** (0.004)	0.059*** (0.006)	0.054*** (0.005)	0.026*** (0.008)	0.024*** (0.007)	0.035*** (0.008)	0.035*** (0.007)
Afghan * Shock	-0.076 (0.047)	-0.073* (0.044)	0.013 (0.039)	0.013 (0.038)	-0.074 (0.051)	-0.035 (0.044)	-0.008 (0.061)	0.019 (0.059)	-0.096** (0.047)	-0.082* (0.046)
Male head		0.084*** (0.005)		0.055*** (0.005)		0.205*** (0.005)		0.282*** (0.011)		0.244*** (0.015)
Literate head		0.503*** (0.003)		0.211*** (0.003)		0.558*** (0.003)		0.431*** (0.005)		0.346*** (0.005)
Married head		0.073*** (0.005)		0.127*** (0.005)		0.114*** (0.005)		0.009 (0.010)		0.033*** (0.011)
Size		-0.075*** (0.001)		-0.032*** (0.001)		0.122*** (0.001)		0.085*** (0.001)		0.007*** (0.001)
Age of head		0.004*** (0.000)		0.003*** (0.000)		0.006*** (0.000)		0.001*** (0.000)		0.006*** (0.000)
Constant	15.293*** (0.005)	14.911*** (0.008)	14.173*** (0.004)	13.842*** (0.007)	18.416*** (0.006)	16.966*** (0.008)	17.849*** (0.008)	16.864*** (0.013)	10.175*** (0.008)	9.324*** (0.017)
Observations	341527	341527	341457	341457	342133	342133	265126	265126	121938	121938
R-squared	0.024	0.141	0.112	0.147	0.017	0.262	0.007	0.084	0.016	0.057
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation FE	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Panel B: Matching estimation using HEIS data

	Total expenditure	Food expenditure	Total income	Earned income	Wage rate
	(11)	(12)	(13)	(14)	(15)
Afghan dummy	-0.022 (0.027)	0.017 (0.026)	-0.017 (0.026)	0.204*** (0.032)	0.063** (0.025)
Shock	0.073* (0.039)	0.024 (0.038)	0.107*** (0.037)	0.080* (0.046)	-0.101*** (0.038)
Afghan * Shock	-0.108* (0.055)	-0.083 (0.053)	-0.090* (0.052)	-0.028 (0.065)	0.040 (0.052)
Constant	14.707*** (0.019)	13.385*** (0.018)	18.129*** (0.018)	17.627*** (0.022)	9.950*** (0.018)
Observations	2748	2746	2750	2643	1972

Table 6 – The effect of shocks on social cohesion measures. The sample includes households in the HEIS sample. Shock is measured as the year-on-year difference in log(USD to IRR rate) in each month.

	Regression								Matching			
	Aid		Transfer		Free items		donation		Aid	Transfer	Free items	donation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Afghan dummy	1.485***	1.471***	1.380***	1.386***	1.449***	1.425***	-0.94***	-0.90***	1.194***	0.443*	1.255***	-0.102
	(0.162)	(0.160)	(0.212)	(0.203)	(0.155)	(0.151)	(0.066)	(0.065)	(0.260)	(0.231)	(0.165)	(0.076)
Shock	0.155***	0.154***	0.074***	0.072***	0.061***	0.053***	0.050***	0.048***	0.048	0.668**	0.541***	0.282**
	(0.017)	(0.016)	(0.028)	(0.027)	(0.017)	(0.017)	(0.014)	(0.014)	(0.295)	(0.291)	(0.165)	(0.111)
Afghan * Shock	0.612*	0.601*	-0.193	-0.058	-0.361	-0.286	0.047	0.058	0.962*	-0.851**	-0.772**	-0.131
	(0.329)	(0.324)	(0.404)	(0.386)	(0.285)	(0.278)	(0.138)	(0.136)	(0.542)	(0.421)	(0.315)	(0.161)
Male head		-0.077***		-0.915***		-0.065***		0.252***				
		(0.015)		(0.020)		(0.018)		(0.016)				
Literate head		-0.089***		-0.073***		0.751***		0.370***				
		(0.010)		(0.016)		(0.010)		(0.008)				
Married head		-0.015		0.499***		0.095***		0.233***				
		(0.015)		(0.022)		(0.017)		(0.016)				
Size		0.087***		-0.099***		0.043***		0.067***				
		(0.003)		(0.004)		(0.002)		(0.002)				
Age of head		0.005***		0.011***		-0.002***		0.010***				
		(0.000)		(0.000)		(0.000)		(0.000)				
Constant	15.515***	14.988***	15.261***	15.305***	14.279***	13.717***	13.32***	11.85***	15.180***	15.967***	14.243***	12.101***
	(0.018)	(0.029)	(0.030)	(0.044)	(0.017)	(0.028)	(0.014)	(0.023)	(0.133)	(0.166)	(0.076)	(0.051)
Observations	56601	56601	64727	64727	223640	223640	273388	273388	187	170	927	1994
R-squared	0.175	0.196	0.006	0.094	0.008	0.057	0.012	0.041	0.221	0.037	0.074	0.007
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Occupation FE	No	Yes	No	Yes	No	Yes	No	Yes	No	No	No	No

Table 7 - The asymmetric effect of good and bad shocks on expenditure and income. Shock is measured as the year-on-year difference in cyclical component of log(USD to IRR rate) in each month. The cyclical component is computed using Hodrick- Prescott filter. Bad shock is defined as shock * (shock > 0) and good shock is defined as - shock * (shock < 0). All regressions are estimated for the matched sample of HEIS households.

	Total expenditure		Food expenditure		Total income		Earned income		Wage rate	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Afghan	-0.050***	-0.160***	-0.006	-0.036	-0.042**	-0.114***	0.196***	0.200***	0.073***	0.058*
	(0.018)	(0.034)	(0.017)	(0.033)	(0.017)	(0.033)	(0.021)	(0.040)	(0.017)	(0.033)
Shock -Cyclical Xrate	0.085**		0.068*		0.142***		0.093*		-0.094**	
	(0.041)		(0.040)		(0.040)		(0.049)		(0.040)	
Bad shock		-0.061		-0.211***		-0.028		0.025		-0.244***
		(0.069)		(0.067)		(0.067)		(0.081)		(0.067)
Good shock		-0.403***		-0.678***		-0.514***		-0.239		-0.217*
		(0.127)		(0.124)		(0.124)		(0.150)		(0.120)
Afghan * Shock	-0.132***		-0.074		-0.102**		-0.004		0.058	
	(0.050)		(0.049)		(0.049)		(0.059)		(0.048)	
Afghan * Bad shock		0.122		-0.001		0.066		-0.013		0.097
		(0.084)		(0.082)		(0.082)		(0.099)		(0.081)
Afghan * Good shock		0.702***		0.206		0.469***		-0.025		-0.002
		(0.157)		(0.153)		(0.153)		(0.185)		(0.148)
Constant	14.727***	14.789***	13.390***	13.509***	18.157***	18.229***	17.649***	17.678***	9.922***	9.985***
	(0.014)	(0.028)	(0.014)	(0.027)	(0.014)	(0.027)	(0.017)	(0.033)	(0.014)	(0.027)
Observations	4122	4122	4119	4119	4125	4125	3979	3979	3014	3014

Table 8 - The asymmetric effect of good and bad shocks on social cohesion. Shock is measured as the year-on-year difference in cyclical component of log(USD to IRR rate) in each month. The cyclical component is computed using Hodrick-Prescott filter. Bad shock is defined as shock * (shock > 0) and good shock is defined as - shock * (shock < 0). All regressions are estimated for the matched sample of HEIS households.

	Aid		Transfer		Free goods		Donations	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Afghan	1.456***	1.610***	0.188	0.306	1.049***	1.149***	-0.139**	-0.112
	(0.213)	(0.425)	(0.180)	(0.364)	(0.132)	(0.255)	(0.060)	(0.114)
Shock (Cyclical Xrate)	0.283		0.781**		0.477***		0.390***	
	(0.312)		(0.307)		(0.180)		(0.119)	
Bad shock		0.654		0.733		0.878***		0.086
		(0.579)		(0.511)		(0.302)		(0.198)
Good shock		0.397		-0.918		0.344		-1.032***
		(0.942)		(1.194)		(0.529)		(0.353)
Afghan * Shock	0.629		-0.888**		-0.826**		-0.116	
	(0.588)		(0.446)		(0.346)		(0.175)	
Afghan * Bad shock		0.253		-1.171		-1.103*		-0.175
		(1.003)		(0.753)		(0.570)		(0.290)
Afghan * Good shock		-1.319		0.351		0.309		-0.046
		(1.783)		(1.536)		(1.125)		(0.531)
Constant	15.199***	15.047***	16.166***	16.195***	14.390***	14.227***	12.176***	12.301***
	(0.105)	(0.224)	(0.131)	(0.278)	(0.060)	(0.116)	(0.041)	(0.077)
Observations	187	187	170	170	927	927	1994	1994

Table 9- Theil index of inequality between and within components and their ratio. For better illustration, standardized beta coefficients are reported. Standard errors are in the parenthesis. Shock 1 is measured as the year-on-year difference in $\log(\text{USD to IRR rate})$ each month. Shock 2 is calculated as the year-on-year difference in the cyclical component of $\log(\text{USD to IRR rate})$ in each month. The cyclical component is computed using Hodrick-Prescott filter.

Panel A: Summary statistics of Theil index

	Theil in Iran	Theil in Afghan	Between	Within	Ratio
Mean	9.85E-04	4.98E-04	1.84E-06	9.81E-04	1.87E-03
SD	6.82E-05	3.73E-04	1.69E-06	6.73E-05	1.71E-03

Panel B: Regressions (standardized coefficients are reported)

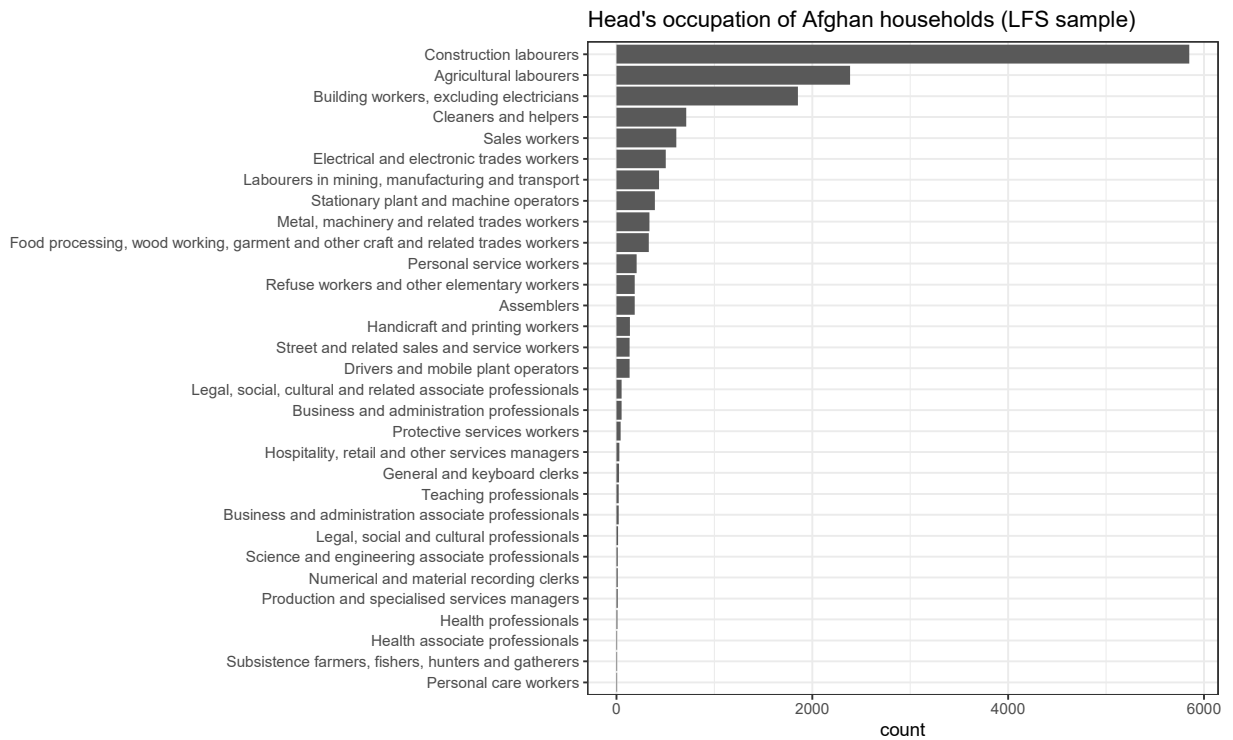
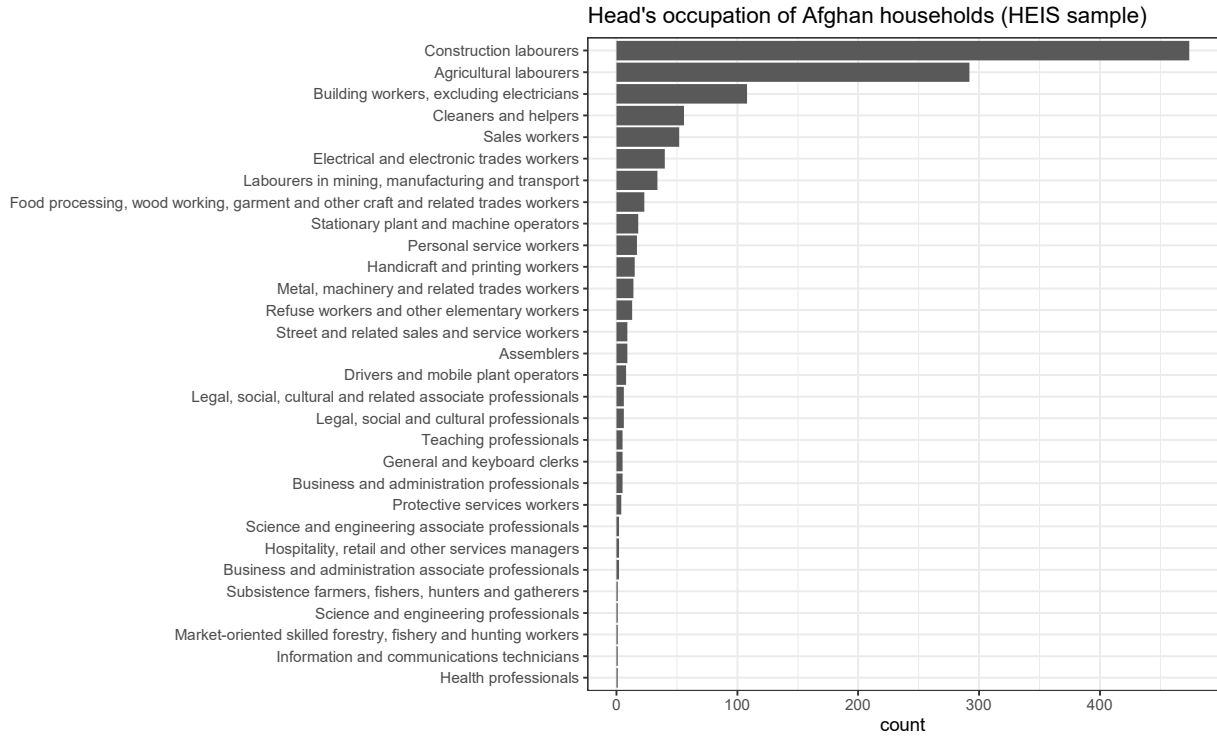
Dep variable:	Between component		Within component		Ratio (Between/within)	
	(1)	(2)	(3)	(4)	(5)	(6)
Lag of dep variable	0.121 (0.099)	0.115 (0.099)	0.515*** (0.083)	0.551*** (0.081)	0.127 (0.099)	0.119 (0.099)
Shock 1: Xrate	0.189* (0.000)		0.207** (0.000)		0.171* (0.000)	
Shock 2: Cyclical Xrate		0.200** (0.000)		0.152* (0.000)		0.187* (0.001)
Observations	107	107	107	107	107	107
R-squared	0.063	0.067	0.394	0.380	0.056	0.061

Appendix

A. Identifying Afghan Households in HEIS

To recognize Afghan households in HEIS, we proceed as follows: One item in the surveys that enables us to separate Iranians from the sample is a cash transfer program that covers only Iranians. In 2010, Iran's government started paying a monthly cash transfer to every Iranian as compensation for the sudden removal of fuel and energy subsidies. Since 2011, the HEIS questionnaire included a new table for the government cash transfer payment details as a source of income. Another yearly expenditure item that is added after 2009-10 to the questionnaire is "Obtaining passport, conscription completion card, or work permit for foreign nationals" (code 127121). To legally work in Iran, Afghan refugees must obtain a work permit and renew it annually, but the first two items of the above expenditure code are solely for Iranians, and nonzero expenditure for this code per se does not identify the nationality of the households. Hence, by combining this item with cash transfer information, we can recognize Afghan households as those who have expenditure code 127121 and do not receive any cash transfer. To further refine the identification of Afghan households, we use the fact that foreign nationals are not allowed to own real estate in Iran. Also, to better exclude Iranians with nonzero expenditure on 127121 code, we exclude households who had a trip abroad by airplane and perhaps for that reason obtained or renewed their passports. Table 1 shows the number of HEIS samples in each round, and Appendix Table 1 shows the details of our filtering to recognize Afghan households.

To examine the robustness of the identification of Afghan households in HEIS, in Appendix Figure 1, we compare the distribution of head's occupation (2-digit ISCO code) in Afghan households of LFS with our recognized Afghan households in HEIS. We observe that in both datasets, construction labor is the main occupation of Afghan households, followed by agricultural laborers, building workers, cleaners and helpers, and sales workers. This resemblance in distributions makes us confident about the correct recognition of Afghan households in HEIS surveys. Table 1 shows the number of Afghan households identified in HEIS and the total sample size each year. While in LFS, about 1 percent of individuals have afghan nationality, we identify less than 0.5 percent of the HEIS sample as Afghan households. There are two reasons for this difference. First, the identification of Afghan households in HEIS is based on obtaining a work permit, and thus it does not consider Afghan refugees who work illegally. As explained above, there is a large discrepancy between the population of Afghan nationals and the number of registered refugees in Iran. Second, in contrast to LFS, most HEIS information is at the household rather than the individual level. In LFS, nationality is inquired at the individual level, but in HEIS, most items are reported at the household level. If a household comprises individuals with mixed nationalities, because Iranians receive cash transfers, the whole household is considered Iranian, and we cannot separate Afghan members in the survey. Hence, in our estimations, we should have in mind that the Afghan nationals in HEIS only take account of the Afghan population registered and work legally, whereas it corresponds to both registered and unregistered Afghan refugees in LFS.



Appendix Figure 1 – distribution of occupation in LFS and HEIS.

Appendix Table 1– Different stages of filtration of HEIS households to recognize Afghan households.

Persian year	90	91	92	93	94	95	96	97	98
all households	38513	38192	38316	38275	38252	38146	37962	38960	38328
without subsidy	1108	833	710	880	1113	1731	1761	2072	2010
without subsidy & homeownership	724	611	508	567	631	785	780	953	876
without subsidy with passport/work permit item	143	176	119	148	211	253	274	304	256
without subsidy & homeownership with passport/work permit item	121	159	105	124	171	186	203	227	189
without subsidy & homeownership with passport/work permit item no trip abroad with tour or airplane	121	157	103	120	141	147	194	215	179

Appendix Table 2 - comparison of different matching techniques. In all columns, matching is exact on year, province, and rural/urban areas. The dummies of all occupations as in Appendix Figure 1 are included in matching, but only the top categories in number are reported.

Matching metric	Mahalanobis		Propensity score			original sample
	Yes One	No One	Yes One	No One	Yes Multiple	
Replacement						
Number of matched controls						
Distance in PS score			0.109574	0.158523	0.10961	
	(1)	(2)	(3)	(4)	(5)	(6)
Male head	-0.00582	-0.00582	-0.00509	-0.00873	-0.00389	0.0736817
Literate head	-0.09891	-0.13236	-0.05309	-0.07564	-0.05425	-0.226961
Married head	-0.00655	-0.00655	0.008	0.006545	0.010036	0.0749
Household size	0.366292	0.388471	0.207677	0.238258	0.221237	0.6956173
Whether own a vehicle	-0.04436	-0.056	-0.00291	-0.00509	-0.00349	-0.291538
Number of students	0.191955	0.207671	0.119551	0.102713	0.133527	0.387476
Number of employed members	0.225982	0.215958	0.03007	0.055584	0.030435	0.4337589
Age of head	-0.06714	-0.07793	0.086383	0.091098	0.097601	-0.604047
Head's occupations (only top categories):						
Construction laborer	0.001455	0.002182	0.044364	0.052364	0.041018	0.2540088
Agricultural laborer	0.000727	0.000727	0.065455	0.064	0.069527	0.0090478
Building workers, excluding electricians	0	0	-0.01891	-0.024	-0.01687	0.0419026
Cleaners and helpers	0.002182	0.002909	0.003636	0	0.004473	0.0165959
Sales workers	0	0	0.002182	0	0.000873	-0.018583
Electrical and electronic trades workers	0	0	-0.01091	-0.01382	-0.01411	0.0137903
Laborer in mining, manufacturing and transport	0	0	-0.00509	-0.008	-0.00305	0.0131132

Appendix Table 3 – The unequal effect of shocks on transition variables. All regressions are logit estimations. Shock is measured as the year-on-year difference in log(USD to IRR rate) in each month.

Panel A: Regression with all LFS individuals

	For unemployed: employed next year?		For employed: unemployed next year?			for employed: unskilled to skilled next year?			for employed: skilled to unskilled next year?		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Afghan dummy	0.959***	0.522**	-0.49***	-0.769***	-1.107***	-0.733***	-0.517***	-0.460***	1.496***	0.863***	0.567***
	(0.206)	(0.215)	(0.111)	(0.113)	(0.113)	(0.059)	(0.060)	(0.061)	(0.064)	(0.067)	(0.069)
Shock	0.047	0.025	-0.055	-0.038	-0.036	0.049	0.044	0.043	-0.091**	-0.098**	-0.090**
	(0.061)	(0.065)	(0.048)	(0.048)	(0.049)	(0.052)	(0.052)	(0.052)	(0.041)	(0.042)	(0.042)
Afghan * Shock	1.091	1.491	0.162	0.144	0.133	0.331*	0.281	0.309*	-0.089	-0.007	-0.029
	(0.883)	(0.932)	(0.345)	(0.347)	(0.347)	(0.184)	(0.185)	(0.186)	(0.200)	(0.204)	(0.209)
Head dummy		0.513***		-0.254***	-0.330***		-0.281***	-0.246***		0.228***	0.278***
		(0.048)		(0.032)	(0.032)		(0.038)	(0.039)		(0.032)	(0.033)
Male dummy		0.738***		0.789***	0.467***		0.344***	0.471***		1.192***	1.025***
		(0.033)		(0.032)	(0.035)		(0.047)	(0.050)		(0.037)	(0.040)
Married dummy		0.242***		-0.689***	-0.577***		0.096***	0.090**		-0.011	-0.002
		(0.039)		(0.029)	(0.029)		(0.036)	(0.036)		(0.030)	(0.031)
Age		-0.004		-0.007***	-0.006***		0.008***	0.010***		-0.02***	-0.015***
		(0.002)		(0.002)	(0.002)		(0.002)	(0.002)		(0.001)	(0.001)
Household size		-0.023***		0.023***	0.029***		-0.035***	-0.032***		0.02***	0.024***
		(0.008)		(0.006)	(0.006)		(0.006)	(0.006)		(0.005)	(0.005)
Job experience		0.001***		-0.003***	-0.002***		0.001***	0.000**		-0.01***	-0.002***
		(0.000)		(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
Having insurance					-0.513***			0.061**			-0.233***
					(0.023)			(0.025)			(0.020)
Constant	0.380***	-0.023	-2.97***	-2.333***	-2.287***	-0.453***	-0.946***	-0.734***	-2.14***	-1.90***	-1.448***
	(0.054)	(0.099)	(0.040)	(0.069)	(0.610)	(0.042)	(0.078)	(0.165)	(0.033)	(0.062)	(0.381)
Observations	37465	37465	399410	399410	399410	64721	64721	64721	316661	316661	316559
Education FE	0.000	1.000	0.000	1.000	1.000	0.000	1.000	1.000	0.000	1.000	1.000
Job FE	0.000	0.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000

Panel B: Matching estimation using LFS data

	For unemployed: employed next year?	For employed: unemployed next year?	For employed: unskilled to skilled next year?	For employed: skilled to unskilled next year?
	(12)	(13)	(14)	(15)
Afghan dummy	0.740***	-0.759***	-0.516***	0.689***
	(0.223)	(0.106)	(0.064)	(0.084)
Shock	1.217**	-0.202	0.282*	-0.236
	(0.600)	(0.236)	(0.157)	(0.223)
Afghan * Shock	0.018	0.294	0.029	0.175
	(0.863)	(0.337)	(0.202)	(0.263)
Constant	0.339**	-2.776***	-0.609***	-1.731***
	(0.169)	(0.071)	(0.049)	(0.070)
Observations	609	13768	7193	6031