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Economic integration of Afghan refugees in the US, 1980–2015

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Abstract: Using 1990 5% Census and American Community Survey data, we examine the economic integration of Afghan refugees to the US, focusing on employment rates and income levels. First-wave Afghan refugees (those arriving 1980–90) have made significant income and employment gains, while poverty rates and reliance on government assistance have decreased dramatically. The most recent wave is not doing as well at comparable points in time. Controlling for factors such as cultural capital, cost of living, and length of residence in the US, Afghan refugees' incomes are the lowest of seven refugee/immigrant comparison groups. This is largely explained by lower employment levels, especially among less-educated Afghan women and highly educated Afghan women and men. Factors explaining this may include Afghans' strong gender division of labour, greater levels of physical and mental disability resulting from pre-migration and migration traumas, and inability to develop occupational niches providing pipelines to jobs for recent arrivals and less-educated women. Highly educated Afghan refugees' lower income is largely explained by the low incomes of those who earned their credentials outside the US. Although unmeasured, we suspect some of the unexplained direct negative effect of Afghan refugees on income is explained by anti-Muslim and anti-Afghan prejudice.

Keywords: Afghan, economic capital, cultural capital, integration, refugee, migration

JEL classification: F22, J15

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1 Introduction

Afghan refugees began arriving in large numbers in the US in the early 1980s, in an era when refugee quotas were increased under the auspices of the Refugee Act of 1980 (Igielnik and Krogstad 2017). Lipson (1993) describes how nearly 40 000 Afghans, a fraction of the exodus of those fleeing the Soviet invasion, resettled in the US, particularly in northern California. Afghans were attracted to this region due to an amenable climate, openness to diversity, and generous welfare system, according to Eigo (2017). Large numbers of Afghans also resettled in the US during the 1990s, a period when Afghanistan was consumed by civil wars and many refugees in Iran and Pakistan could not return home. Since 9/11, 17 000 Afghan refugees have resettled in the US and over 41 000 special immigrant visas (SIVs) have been issued to translators and interpreters working with the US military in Afghanistan (Refugee Processing Centre 2017), a programme established in 2006 to provide protection to such groups. Weighted data from the 2011–15 American Community Survey (ACS) estimate that 100 445 US residents claim Afghan ancestry. Just under 66 per cent of those reporting Afghan ancestry were born outside the US, and 95 per cent of these arrived in the US in 1980 or later (Ruggles et al. 2017).

Studies focusing specifically on the economic integration of Afghans in the US do not exist to the best of our knowledge. Instead, studies of Afghans in the US have predominantly focused on the mental health effects of pre-migration war traumas and of post-migration stressors such as cultural bereavement and acculturation difficulties, as well as financial and unemployment challenges, according to a recent systematic review of this group (Alemi et al. 2014). Existing studies of US Afghans have relied on crude measures of economic wellbeing in predicting mental health outcomes, a relationship that is moderated by poor English language proficiency, cultural barriers such as changes in gender roles, and the fact that welfare agencies find menial jobs for Afghans not fitting their skills and prior training. Therefore, the purpose of this study is to fill gaps in our knowledge of Afghans' economic integration in the US using the 1990 5% Census and the ACS, focusing on employment rates and income levels (Ruggles et al. 2017).

Research on the economic integration of refugees often focuses on how quickly members of a refugee group are able to find employment and how much they rely on government services beyond initial settlement support (Kallick and Methema 2016). We report information addressing these concerns, but also focus on obstacles and challenges Afghans face to full economic integration, which may be influenced by a multitude of underlying social factors related to the notion that US refugee policy is strongly influenced by views on racial inequality and immigration. For example, racial resentments targeting African Americans (Gilens 1999; Parker and Baretto 2013; Tesler and Sears 2010), Latino immigrants (Abrajano and Hajnal 2015), and Muslim refugees are strongly inter-correlated among white Americans (Stempel 2018), some of whom feel they are being passed over culturally and economically (Hochschild 2016), contributing to racialised fears of Muslim refugees. Because Afghan refugees are mostly Muslim, from a country that is associated with the attacks of 9/11 and with fundamentalist Islam,[1] they are likely targets of significant discrimination in the US (Alemi and Stempel, forthcoming), which may influence their economic integration.

[1] Analayis of the 2006–15 ACS shows that over three-fifths (62 per cent) of Afghans in the US racially identify as 'white', with another 32 per cent identifying as either 'white and Asian' or 'white' and another Asian group (Ruggles et al. 2017).

Other factors may influence the economic integration of Afghan refugees, making them an interesting case. First, they are a small refugee group, which may negatively influence their ability to develop and sustain support networks and occupational niches, or to institute pipelines to professions and re-credentialing opportunities. Afghans arrive in the US with relatively high rates of four-year college and advanced degrees. Anecdotal reports and empirical evidence suggest newly arrived highly educated Afghan refugees have difficulty finding employment or training that fits or augments their credentials. Thus, Afghan refugees are a good case for understanding the troubles some immigrant groups face in converting their cultural capital to economic capital (Bourdieu 1986). Also, many Afghans come from regions with more 'traditional' or patriarchal gender orders that likely shape family economic strategies and women's economic integration in the US. Prior research shows that solid majorities of Afghans in the US support more egalitarian gender roles, yet there is a substantial minority of gender traditionalists, and egalitarian female Afghans may be less able to actualise their ideals than other immigrant and refugee groups (Stempel et al. 2016). Finally, while we are focusing on economic outcomes in this study, we should remain cognisant of two-way causality—economic factors (unemployment, low income) may exacerbate Afghans' overall adjustment and mental distress (Bogic, Njoku, and Priebe 2015).

2 Economic integration of Afghans in the US: findings and gaps in the literature

Refugees receive employment authorisation upon arrival to the US and are encouraged to gain employment as soon as possible, mostly in entry-level jobs regardless of skills or education, according to the US Department of State (2017). Unlike voluntary or economic migrants who move to the US with established social resources in place that facilitate employment, refugees often have no time to prepare for settlement in the US by, for example, acquiring English language skills to increase their chances of gainful employment (Chang 2017). This partly explains why refugees are generally more likely to depend on government assistance during the first five years after resettlement in the US; however, the gap in benefits usage between refugees and non-refugee migrants declines with length of residence. In fact, according to 2009–11 ACS data, refugee men are employed at a higher rate than their male US counterparts, and refugee women are employed at the same rate as US women (Capps and Newland 2015). Additionally, subgroups with more working-age refugees and greater language proficiency usually integrate better.

While data from the first wave of the *New Immigrant Survey* found no disparity in employment levels between refugees and non-refugee migrants, refugees still have disproportionately lower hourly wages and occupational levels (rates of skilled occupations), primarily explained by their lower education levels and English proficiency, in that order (Connor 2010). In addition, without controlling for other explanatory factors, the immigrant–refugee gap in occupation and income is modestly explained by different forms of family support, poorer mental and physical health, and residence in zip codes with higher median incomes and higher rates of foreign-born individuals (Connor 2010). Analyses of 2014 ACS five-year data for Somali, Burmese, Hmong, and Bosnians found income disparities between refugees and US-born white males, controlling for education and English ability (Kallick and Mathema 2016). Among refugees with high school degrees who speak English at least 'well', Bosnian males had the highest median income, which was 87 per cent of that of high-school-educated US-born white males. Next closest were Burmese females at 74 per cent. Among the college educated, Somali and Burmese women were closest to US-born white males at 76 per cent and 75 per cent respectively. Interestingly, Burmese and Hmong women at both education levels earned the same as or more than their co-ethnic male counterparts, and college-educated Somali females earned more than college-educated Somali males (Kallick and Mathema 2016).

Studies of Afghans' economic integration in Australia, Canada, and the European Union expand on these findings. Waxman's (2001) study examining the economic adjustment of Afghans (n = 35) and other groups (Iraqis and Bosnians) in Sydney, Australia, found that pre-migration traumas, poor English language proficiency, (short) period of residence in Australia, and residential location negatively influence initial post-resettlement economic adjustment, and that prior work experience and education obtained in their country of origin did not increase refugees' chances of being employed or result in their having a higher propensity to look for work. A longitudinal study in the Netherlands examining a panel of over 33 000 refugees, of which 19 per cent were Afghan, observed that while refugees start out their working careers at a disadvantage when compared with labour migrants, gaps in unemployment between refugees and other migrants close with longer time of residence (Bakker, Davegos, and Engbersen 2017). Interestingly, this study also found that Afghan refugee men were equally likely to be employed when compared with other migrants, while Afghan women were less likely to be employed than their female migrant counterparts, which the authors attribute to cultural values on gender roles and paid labour outside the home. An earlier Dutch study examining labour market integration among a diverse array of refugee groups in the Netherlands (N = 3269), which included Afghans (subgroup-specific sample sizes not reported), reports that education obtained abroad is positively associated with being employed while education obtained in the Netherlands is a much stronger predictor of employment, as is being proficient in Dutch and having Dutch friends ('bridging social capital') (de Vroome and van Tubergen 2010).

3 Data and methods

3.1 Data

We used the 2006–15 ACS and the 1990 5% Census for our analysis (Ruggles et al. 2017). The 2006–15 ACS provided an unweighted sample of 4666 Afghan refugees and 3872 Afghan refugee adults of working age (18–64). Weights adjust those figures to 5613 and 4614 respectively. The 1990 5% Census provided an unweighted sample of 1033 Afghan refugees who arrived between 1980 and 1990,[2] of which 689 were aged 18–64. Weights adjust those figures to 1148 and 770 respectively. All findings reported here use weighted data. In addition to education, English speaking ability, and linguistic isolation (residing in a household with no one speaking English very well), the ACS has a variety of measures of income and economic wellbeing. We selected employment status, individual earned income, family income, and poverty status as our primary measures of economic wellbeing. Other variables we utilise from the ACS and 5% Census are citizenship status among non-native-born, years in the US as a series of dummy variables in five-year intervals, gender, age, marital status, number of family members in the household, race, Hispanic background, and physical and mental disability. Finally, we constructed several variables: age of arrival in the US, number of family members of working age in the household, median home value in Public Use Microdata Area (PUMA), median family income in PUMA, and percentage of foreign-born in PUMA. The ACS does not clearly identify refugees, asylees, or refugee-like immigrants, such as those arriving through the SIV programme described above. Thus, we constructed a category of 'Afghan refugee' that includes Afghan refugees *and* other Afghan immigrants who arrived in the US as part of the Afghan refugee diaspora. Details of our operationalisation and a comparison of ACS with *Yearbook of Immigration Statistics* numbers of Afghan refugees are in Appendix A. Based on this analysis, we concluded that throughout most

[2] We chose 1980 instead of 1979 because year of immigration in the 1990 5% Census codes 1975 through 1979 as 1979.

of the post-1979 migrations, majorities to very strong majorities of Afghan immigrants came under refugee or SIV status. Strong majorities of the remainder came as immediate family members under family reunification. Over time, other family preferences have grown modestly, but, for example, in 2015 the ratio of immediate family members to other family preferences was over 4 to 1.[3] Therefore, *most* Afghans in the US, whether refugees/asylees or not, have been directly influenced by the experiences and special treatment of refugees, as either refugees or refugees' immediate family members.

3.2 Analyses

Since Afghan refugees began arriving to the US in large numbers in 1980, we begin by summarising the social geography of first-wave Afghan refugees in the US using the 1990 5% Census. We then summarise the economic and social characteristics of recently arrived Afghan refugees in both 1990 and 2006–15 to compare the first and most recent waves of Afghan refugees. At the same time, we see how first-wave Afghan refugees (arriving between 1980 and 1990) were doing in 1990 and in 2006–15 to see how the first wave changed over time, and we compare first- and current-wave Afghan refugees (those reporting in 2006–15 that they had immigrated to the US in the past ten years) to the US population as a whole. We then turn to comparing Afghan refugees, on key economic, cultural capital, and social characteristics, with three other refugee groups, three other voluntary immigrant groups, white and black Americans, and the US population as a whole. Many of these initial descriptive analyses demonstrate important ways in which Afghans stand out, helping us identify hypotheses to test in multivariate analyses.

Based on findings in previous research and our initial analyses, we then present a set of regression models aimed at testing the refugee and immigrant group effects on earned income among adults aged 18–64. We selected earned income because it most directly reflects the influence of cultural capital and gender differentiation on income, and looking at all working-age adults allows us to register the influence of employment levels on earned income and then partial out that influence at the end by entering employment as an explanatory factor. We progressively add variables measuring demographic, immigration, cultural capital, and geographic factors, two sets of interactions, physical and mental disability, and finally employment status. A central logic of our analysis is to identify evidence of important challenges to the economic integration of Afghan refugees and then test these in regressions controlling for a wide range of possible confounding variables. If, after including controls and key interactions, there remains an 'Afghan refugee effect', this may be evidence of unmeasured factors explaining Afghan outcomes, such as group size/concentration, differences in gender order, or experiences with discrimination.

4 Results

4.1 Descriptive results: social and economic geography of Afghan refugees in the US

Table 1 shows that in 1990, California had by far the largest share of Afghan refugees in the US (44 per cent), followed by Virginia (18 per cent) and New York (14 per cent). Afghans were most concentrated in the cities of Hayward and Fremont between Oakland and San Jose, California; Alexandria, Falls Church, and Fairfax, Virginia, all of which are suburbs of Washington, DC; and

[3] It appears that the only exception to this pattern of Afghan arrivals being mostly refugee/SIV or immediate family members is in 2008–09 when, just prior to the opening of SIV opportunities, a relatively large number arrived under a special worker status to fill low-paying jobs in high tech.

the Borough of Queens in New York City. Hayward, California, had the strongest concentration of Afghan refugees, who made up less than 1.5 per cent of Hayward's population. Appendix B contains details of the racial/ethnic make-up, and education and income levels, of the cities and PUMAs with the greatest concentration of Afghan refugees, and the incomes of Afghans living in those cities and PUMAs. To summarise, the cities Afghans settled in had significantly higher median family incomes than the national median, and they contained substantially more foreign-born residents than the national rate. Racially, Afghans lived in cities or neighbourhoods with many more Asian Americans and fewer African Americans than the national rate. Afghan refugees were small minorities in all of the cities they lived in, and their family incomes were significantly lower than the local medians. Importantly, there were substantial geographic differences in Afghan family incomes. The Hayward-Fremont, California, Afghans had the lowest incomes and the Afghans in the Virginia suburbs of Washington, DC, had the highest, with the Queens, New York, Afghans in between.

Table 1 provides a window on the changes and continuities in the geographic location of Afghans between 1990 and 2011–15. California continued to have by far the largest Afghan refugee population (44 per cent), while percentages of the Afghan population in Virginia and New York declined significantly. Nevertheless, over two-thirds (68 per cent) of Afghan refugees continued to live in those three states, and no other state contained more than 4 per cent of the Afghan population. The Afghan refugee populations grew most in Maryland, New Jersey, and Florida, but all of these gains were modest, and the populations in the first two of these states likely grew as a result of Afghans moving from Virginia and New York.

Table 1: States with largest populations of Afghan refugees, 1990 and 2006–15

1990*		2006–15**	
California	44.3%	California	44.3%
Virginia	18.2%	Virginia	14.1%
New York	13.8%	New York	9.2%
Texas	4.4%	Texas	3.8%
Illinois	2.3%	New Jersey	3.1%
New Jersey	2.3%	Georgia	2.7%
Nebraska	1.7%	Maryland	1.9%
Georgia	1.6%	Washington	1.9%
Washington	1.5%	Florida	1.7%
Colourado	1.2%	Connecticut	1.5%
n =	1149	n =	3412

Notes: *1990 5% Census, arrived in US 1980–90; ** ACS, 2006–15, arrived in US 1979–2015.

Source: Authors' illustration based on 1990 5% Census; ACS, 2006–15 (Ruggles et al. 2017).

Table 2 compares Afghans in 2006–15 across states by income, employment, poverty, education, and food stamp reliance. It shows that the Virginia Afghans' greater economic success has persisted, while the California Afghans have passed the New York Afghans in both family and earned income. California Afghans have average incomes close to national averages. New Jersey and Maryland Afghans are doing the best economically, we suspect because many are high-income migrants from New York and Virginia respectively. Maryland Afghans' high rate of holding four-year college degrees (59 per cent) is likely an important source of their high incomes, while the New Jersey Afghans have among the highest family incomes (but not earned incomes) and the lowest rates of poverty and food stamp reliance, in part as a result of having the most adults of working age in the family ($\overline{x} = 3.2$).

Table 2: Selected economic, social, and educational characteristics of Afghan refugees, by state, 2006–15

State	Total family income*		$\overline{x}$ Age 18–64 in family	Food stamps	At/below poverty	% of total	College degree plus**	Employed**	Personal earned income*		% of total**
	Median	Mean							Median**	Mean**	
California	$50 304	$73 046	2.2	20.6%	26.8%	44.8%	33.5%	57.9%	$13 391	$32 346	45.1%
Virginia	$70 197	$93 393	2.3	19.8%	17.1%	15.2%	36.8%	73.4%	$25 467	$40011	15.0%
New York	$35 548	$62 682	2.6	28.9%	33.2%	10.7%	24.2%	57.8%	$12 210	$21 553	11.3%
Texas	$29 027	$60 950	2.1	24.3%	34.9%	3.2%	26.1%	63.6%	$19 200	$28 692	3.3%
New Jersey	$87 406	$97 554	3.2	15.4%	16.4%	2.8%	27.9%	68.7%	$18 344	$31 333	3.2%
Georgia	$28 035	$51 906	2.4	47.2%	54.5%	2.7%	31.8%	52.4%	$8020	$38 146	2.3%
Maryland	$80 000	$98 019	2.1	10.9%	5.5%	1.8%	59.2%	71.4%	$50 177	$48 944	1.7%
Arizona	$42 075	$59 285	2.9	45.9%	31.0%	1.7%	27.8%	56.2%	$12 126	$24 466	1.7%
Missouri	$36 750	$42 331	2.0	67.1%	33.1%	1.6%	26.8%	53.9%	$16 807	$24783	1.2%
Florida	$29 101	$55 549	2.5	37.9%	52.7%	1.5%	33.4%	64.7%	$15 587	$21 787	1.3%
Other states	$45 052	$65 111	2.0	28.9%	32.5%	14.1%	29.8%	57.7%	$15501	$31 009	13.8%
US Afghans	$50 000	$73 110	2.3	25.0%	27.2%	100.0%	32.2%	60.8%	$16281	$31 990	100.0%
US, all	$59 621	$81 046	1.9	14.1%	14.6%	-	30.5%	72.6%	$27 732	$40 052	-
n =	5552	5552	5613	5552	5558	5552	4051	4051	4051	4051	4051

Notes: * 2015 US dollars; ** ages 25–65.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

The first two data columns of Table 3 report measures of cultural and economic capital among first-wave Afghan refugees, who arrived between 1980 and 1990, in 1990, and in 2006–15. They indicate how the first wave was doing early in their US settlement process and then again 26–35 years later. Columns 4 and 5 allow comparisons with non-Afghan US residents in 1990 and 2006–15. Compared with non-Afghan US residents, in 1990 Afghan refugees were educationally bifurcated, with higher rates possessing a college degree, and higher rates having less than a high school degree, than their US counterparts. Afghan refugees were much more likely to live at or below the poverty level and they lived in larger families, including having more family members of working age (18–64), potentially contributing to family incomes. Importantly, Afghan refugees had much lower average family and personal earned incomes, as measured in several ways.

By 2006–15, first-wave Afghan refugees' economic and educational capital had improved by all measures. While still educationally bifurcated (relative to US rates), their rate of holding four-year college degrees increased by 8 percentage points, and the percentage of first-wave Afghan refugees with less than a high school degree dropped 8 per cent. Their employment rate increased, as did their family and personal earned incomes. In constant dollars, their median earned income nearly quadrupled, their mean earned income more than doubled, and their median family income per adult family member doubled. This is considerable economic progress. By 2006–15, first-wave Afghans had median family incomes that were significantly higher than the US median, although this difference largely disappears when controlling for the number of working-age adults in the family. Median personal earned incomes of first-wave Afghans were nearly identical to the US median. Finally, levels of poverty among first-wave Afghans declined by 45 per cent and by 2006–15 their rate of reliance on food stamps was identical to that of their non-Afghan US counterparts.

Overall, the picture of first-wave Afghan refugees is one of significant economic progress between 1990 and 2006–15. Yet there is also evidence that many first-wave Afghan refugees are not doing well economically. First-wave Afghans' rate of employment is nearly 5 percentage points lower than the employment rate for non-Afghans. First-wave Afghans have higher rates of poverty than US rates and nearly equal incomes to national averages, despite living in areas with a high cost of living. Based on the Cost of Living Index (COLI), in 2010 the costs of living for Queens, New York; Washington, DC/Alexandria, VA/Arlington, VA; and Oakland, CA (Alameda County) were 159 per cent, 140 per cent, and 139 per cent of the national average respectively (Council for Community and Economic Research 2010). Further, analysis of the ACS shows that the median of the median family incomes in Afghan respondents' PUMAs is nearly $10 000 higher than the national median ($66 824 compared with $56 982), and the median of the median home price in respondents' PUMAs is $95 000 higher for Afghan refugees than for non-Afghans ($275 000 to $180 000, 2015 dollars). The means of the median family incomes and median home values for PUMAs are $71 580 (US $\bar{x}$ = $60 769) and $322 744 (US $\bar{x}$ = $219 138) respectively. Thus, the earned incomes for Afghans are lower than US averages when accounting for local costs of living. Likewise, adjusting for cost of living would raise first-wave poverty rates significantly, and they are higher than US rates without adjusting for cost of living.

One way to measure relative income levels is to divide each respondent's earned incomes or family incomes by the medians for their PUMA. First-wave Afghans refugees' (ages 18–64) ratio of earned incomes to their PUMA medians is 0.86, compared with 1.00 for the US as a whole. For family incomes, the ratio for Afghans is 0.91, compared with 1.00 for the US, and this is without adjusting for Afghan refugees having more adult earners in their families. The relative incomes for first-wavers are even lower when we look at the high-earning ages 40–59, which make up 55 per cent of this ageing cohort. The median ratio of earned income to median earned income in PUMA of first-wavers aged 40–49 is 0.95, compared with 1.49 for US adults aged 40–49, and the median

ratio for first-wavers aged 50–59 is 0.72, compared with 1.34 for US adults aged 50–59. These are significant gaps.

Turning to recent arrivals, column 3 of Table 3 shows figures for Afghan refugees who in 2006–15 had arrived in the last ten years, making them comparable to the first wave in 1990 in terms of length of residence in the US. Recent arrivals have slightly lower rates of English competence and four-year college degrees than their 1990 counterparts did. However, because of demographic changes in the US, the current waves' rate of college degrees is now lower than the US rate and their rates of possessing less than a high school degree are higher relative to the US population (24 per cent to 13 per cent). Thirty-two per cent of recently arrived Afghan women have less than a high school degree. Further, their employment rate is 6 percentage points lower and their poverty rates are 8 percentage points higher (41 per cent to 28 per cent) than those of the first wave in 1990. Forty-one per cent of the current wave of Afghan refugees receive food stamps, compared with 14 per cent for the whole US. Median family incomes for the current wave of Afghan refugees are about $8000 lower than first-wavers' family incomes in 1990, and the current wave's earned incomes are roughly comparable to those of first-wavers in 1990.

Table 3: Afghan cultural and economic capital by wave of migration, compared with non-Afghans, 1990 to 2006–15

	Afghan, arrived 1980–90 1990 5% Census	Afghans, arrived 1980–90, 2006–15 ACS	Afghans, arrived 0–10 years ago, 2006–15 ACS	US non-Afghan, 1990	US non-Afghan, 2006–15
% Speaks English, very well/only	43.9% (1123)	57.3% (2274)	40.8% (1882)	93.9%	91.4%
% College degree or higher **	27.1% (654)	35.6% (2181)	25.8% (1100)	20.3%	28.8%
% < High school degree**	27.7% (653)	19.8% (2181)	23.5% (1100)	20.1%	12.8%
% Employed*	54.7% (767)	65.7 (1985)	48.7% (1375)	72.6%	70.2%
% Poverty or less	32.2% (1132)	17.7 (2264)	40.7% (1847)	13.2%	15.0%
% Receive food stamps	Not available	14.1% (2274)	40.6% (1881)	Not available	14.1%
Median family income	$42 885 (1133)	$67 189 (2260)	$34 847 (1847)	$62 326	$59 621
Median family income ÷ adult family members in household	$16 568 (1118)	$33 328 (2263)	$14 000 (1810)	$32 402	$31 536
Median earned income*	$4765 (770)	$22 145 (1985)	$4900 (1375)	$24 530	$22 428
Mean earned income*	$17 673 (770)	$39 030 (1985)	$16 653 (1375)	$34 233	$35 655
Mean family members in household	4.6 (1148)	4.0 (2274)	4.7 (1881)	3.3	3.2
Mean adult family members in household	2.6 (1148)	2.0 (2274)	2.5 (1881)	1.9	1.9

Notes: *Ages 18–64; **ages 25 and over; all income in 2015 dollars.

Source: Authors' illustration based on 1990 5% Census; ACS 2006–15 (Ruggles et al. 2017).

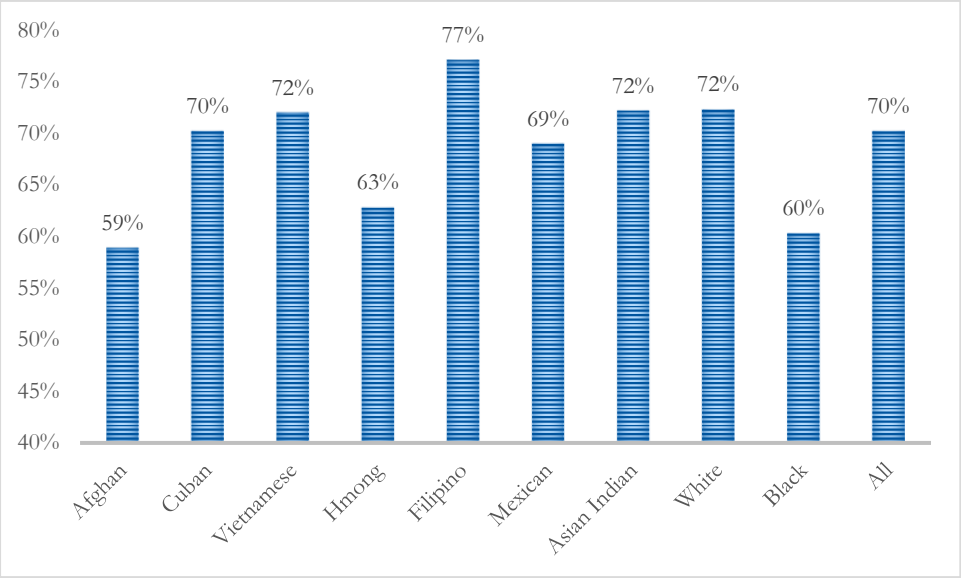
In summary, the first wave of Afghan refugees have made significant gains in their economic and cultural capital since 1990. When comparing them with all US residents they appear to have largely 'caught up' economically. However, Afghans disproportionately live in areas with a high cost of living. Accounting for cost of living shows that first-wave Afghan refugees are significantly behind other individuals and families in their communities in terms of income and poverty status. First-

wave Afghan refugees who are aged 40–59, which are normally high-earning ages, are considerably behind non-Afghan age-mates in their communities. Current-wave Afghan refugees are not doing as well economically as first-wavers were at a comparable stage of settlement in the US. This may indicate that the first-wavers have not been able to provide enough support for recent arrivals, and other factors such as the effects of untreated long-term exposure to trauma.

4.2 Comparing Afghan refugees with selected US refugee, immigrant, and racial groups, 2006–15

Figure 1 graphs the rates of employment for nine US refugee, immigrant, and racial groups (hereinafter 'comparison groups'), for adults aged 18–64. The employment rate of Afghan refugees (59 per cent) is 11 percentage points lower than the national rate (70 per cent), and Afghans have the lowest employment rate among the nine comparison groups. In addition, of our comparison groups, Afghans have the second-highest unemployment rate (9 per cent), second to African Americans, and the highest rate of working-age adults not in the labour force (32.6 per cent).

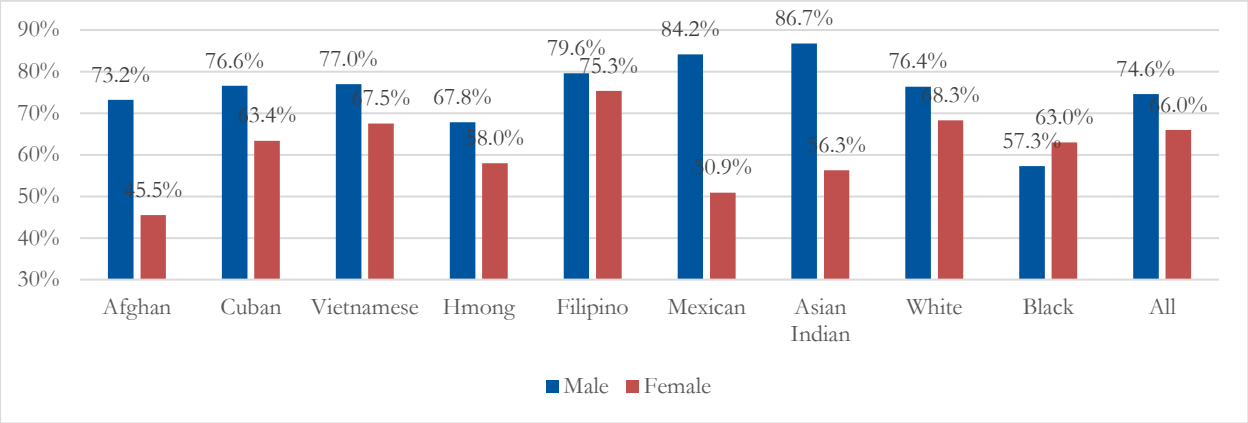
Figure 1: Per cent employed, selected groups, ages 18–64



Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Figure 2 graphs employment rates by gender. It shows that Afghans' low employment rate is highly influenced by gender. Afghan men's employment rate, at 73 per cent, is only modestly less than the national rate for men of 75 per cent, and is higher than that of both Hmong refugees (68 per cent) and African American men (57 per cent). However, Afghan women's employment rate of 46 per cent is 20 percentage points lower than the national rate for working-age women (66 per cent), and more than 5 per cent lower than that of any of the comparison groups. Afghans have among the largest gender gaps in employment rates (nearly 28 per cent), just behind Mexican and Asian Indian immigrants, 33 per cent and 30 per cent respectively, both of whom have very high rates of male employment. Thus, for 'high gender division of labour' groups, Afghan refugee males have low employment rates.

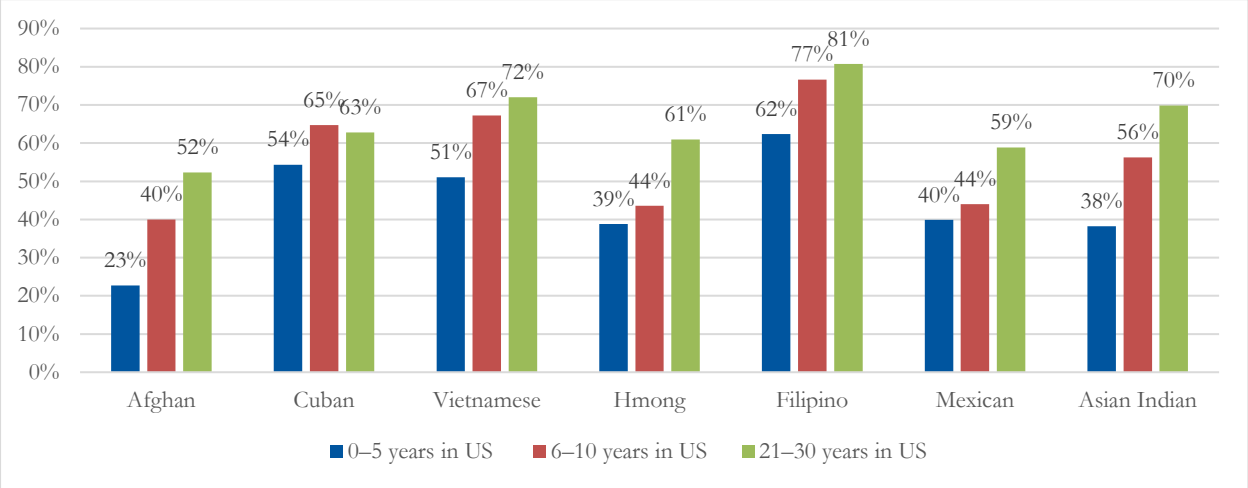
Figure 2: Employment rates, ages 18–64, by gender



Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Afghan women's employment rate is particularly low shortly after arriving. Figure 3 shows that, among recent arrivals (0–5 years in US), Afghan women have by far the lowest employment rate (23 per cent). Afghan women's employment gap with other immigrant women decreases with time in the US, but even for women who have been in the US for 21–30 years, Afghan women's rate of employment (52 per cent) is more than 6 per cent less than that of Mexican American women (59 per cent), who are the next lowest group.

Figure 3: Female employment rates, ages 18–64, by years in US



Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Table 4 compares Afghan employment rates with US employment rates for adults aged 18–64, controlling for gender, education, and length of residence in the US. It shows that for all but one gender-education category (men with four-year degrees) Afghans' employment rates increased with time in the US. The changes for the least- and most-educated women were the most dramatic, whereas for women at the middle levels of education and for men of all education levels, the increases were more modest.

Among Afghan women who have been in the US for 20 years or less, those with less than a high school degree and those with advanced degrees have strikingly lower rates of employment. Only 14 per cent of Afghan women aged 18–64 with less than a high school degree who have been in the US 20 years or less are employed. Their next closest counterparts (not shown) in our comparison groups are Asian Indian women (34 per cent), Mexican women (38 per cent), and

Hmong women (41 per cent). A similar picture is found for the relatively small number of Afghan women with advanced degrees (<21 years in US), with only 42 per cent employed compared with 81 per cent of US women with advanced degrees. Their next closest counterparts (not shown) were Mexican women (60 per cent) and Asian Indian women (61 per cent). Interestingly, Afghan women with advanced degrees who have been in the US for 21 or more years are employed at a much higher rate (84 per cent), actually surpassing the overall rate for US women with advanced degrees (81 per cent; ns, $p > .05$). However, Afghan women at the other three education levels (21+ years in US) are employed at lower rates than US women with comparable educations (all significant at $p < .001$).

Turning to the men, recently arrived Afghan males with less than a high school degree are employed at a rate 15 per cent higher than comparable US males. Yet, Afghan men with college and advanced degrees are employed at lower rates than comparable US men, even among Afghan men residing in the US for 21 years or more. The latter difference is not significant at $p < .05$ ($p = .089$), but the difference for college-educated men is significant at $p < .01$ ($p = .001$). Employment rates for highly educated Afghan men are also somewhat lower than for men in the immigrant comparison groups. Looking at men with a college degree (not including those with advanced degrees) in the US for 21 years or more, Afghan men's employment rate is 79 per cent, while the next lowest employment rates are among Hmong (85 per cent), Cubans (87 per cent), and Asian Indians (87 per cent).

In summary, Afghan women's employment levels are lower than the US average and those of other immigrant comparison groups. This pattern remains after controlling for education and years in the US, and employment rates are particularly low for recently arrived women at the lowest and highest education levels. Afghan males with college degrees or higher have lower employment rates than their US and immigrant group counterparts. Appendix D compares the employment rates and incomes of all of the refugee and immigrant groups by gender, education, and years in the US.

Table 4: Employment rates, ages 18–64, by gender, years in the US, and education, 2006–15

	Afghans, ages 18–64								*US adults, ages 18–64*			
	0–20 years in US				21+ years in US							
	Females		Males		Females		Males		Females		Males	
Education	%	n =	%	n =	%	n =	%	n =	%	n = *	%	n = *
< High school degree	16.1	299	69.3	153	30.9	136	73.7	118	40.1	995	54.0	1241
High school degree, some college	48.5	654	68.3	543	55.9	374	76.6	410	64.4	5715	71.6	5515
Four-year college degree	56.0	182	80.0	170	67.0	206	79.1	234	75.6	1832	86.4	1581
Advanced degree	47.4	76	82.5	137	84.0	75	83.8	105	80.7	1009	89.0	892

Notes: * n reported in thousands.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

4.3 Descriptive results: cultural capital—education, English ability, and linguistic isolation

As noted above, education and speaking the host language are two of the most influential factors on income and occupational prestige among refugees. Thus, we want to understand differences in these key factors before turning to measures of income, poverty, and welfare. Table 5 shows that both Afghan men and Afghan women have higher rates of English ability than Cuban, Vietnamese, and Hmong refugees, and Mexican immigrants. Both Filipino and Asian Indian immigrants have higher rates of English ability. This pattern repeats itself in both formal education and linguistic isolation.

Afghan men have substantially higher rates of possessing college degrees or higher (38 per cent) than the other refugee groups and Mexican immigrants, with Vietnamese men the next closest at 26 per cent. Filipino men have somewhat higher rates of college degrees (46 per cent), although Afghan men are more likely than Filipino men to have advanced degrees, 14 per cent to 8 per cent (not shown). Afghan women's 27 per cent rate of having a college degree is also the highest among the refugee groups. Afghan women's relatively high rate of earning less than a high school degree stands out as not fitting the aforementioned pattern, matching Cuban women at 27 per cent. One other pattern is noteworthy here. Of the comparison groups, Afghans have the largest gender gap in education and English ability. Compared with Afghan women, Afghan men are 11 percentage points more likely to speak English very well, 11 percentage points more likely to have a college degree, and 12 percentage points less likely to not have a high school degree. Next closest are Asian Indians, whose men are ten percentage points more likely to have a college degree and 6 percentage points more likely to speak English very well.

In summary, Afghan refugees possess more cultural capital than other refugee groups and Mexican immigrants, but less than Filipino and Asian Indian immigrants. If education levels and English ability are key factors explaining income levels, we would expect Afghan refugees to have significantly higher incomes than the other refugee groups.

Table 5: English ability, education and linguistic isolation, 2006–15

		Afghan	Cuban	Vietnamese	Hmong	Filipino	Mexican	Asian Indian	White	Black	All US
Males	% Speaks English, very well/only	58%	39%	35%	41%	69%	29%	78%	99%	99%	91%
	n =	2658	45 422	50 915	4272	68 488	607 183	109 756	9 577 528	1 538 740	14 079 894
	% College degree + *	38%	20%	26%	17%	46%	5%	76%	32%	15%	29%
	% < High school *	15%	27%	26%	32%	7%	60%	6%	10%	19%	15%
	n =	2175	40 529	44 823	3380	58 967	495 073	95792	6 770 998	944 280	9 793 548
Females	% Speaks English, very well/only	47%	36%	31%	36%	71%	28%	70%	99%	99%	91%
	n =	2867	46 574	56 292	4437	100 815	527 094	99 907	9 886 580	1 708 780	14 636 467
	% College degree + *	27%	21%	22%	12%	52%	6%	66%	30%	20%	29%
	% < High school *	27%	27%	34%	52%	9%	59%	12%	9%	16%	14%
	n =	2332	41 961	49 984	3550	91 646	437 736	87 211	7 210 475	1 129 201	10 548 093
All	Linguistic isolation	20%	39%	37%	25%	10%	37%	11%	1%	1%	5%
	n =	5612	92 297	107 827	8745	169 979	1 140 175	212 463	20 769 704	3 523 287	30 694 936

Note: * Age 25 and older.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Table 6: Family income measures for Afghan refugees and comparison groups, 2015 dollars

	Family income			Median family income (MFI)						Median ratio of median family Income to:				
	Median	Mean	n =	<21 years in US	n =	21+ years in US	n =	Ratio MFI 21+/<21	MFI in PUMA	Mean, age 18–64 in family	PUMA MFI	n =	# age 18–64 in family*	n =
Afghan	50 000	73 110	5552	40 507	3394	68 151	2158	1.68	71 024	2.6	0.68	5552	20 707	5376
Cuban	41 293	60 667	90 569	37 646	48 916	48 000	41 653	1.28	59 423	1.9	0.73	90 569	21 950	78 647
Vietnamese	61 900	81 666	106 493	54062	59 487	74 085	47 006	1.37	66 435	2.5	0.92	106 493	25 808	102 658
Hmong	49 280	60 802	8646	37 023	3871	60 309	4775	1.63	61 052	3.0	0.79	8646	18 004	8555
Filipino	90 660	105 481	167 748	86 349	92 885	96 553	74 863	1.12	67 277	2.4	1.31	167 748	38 800	157 883
Mexican	38 264	49 463	1 122 812	33 770	714 242	47 315	408571	1.40	58 842	2.5	0.64	1 122 812	16 586	1 096 743
Asian Indian	97 955	125 844	210 337	92 283	155 403	116 703	54 934	1.26	69 314	2.2	1.35	210 337	46 303	204 463
White**	65 443	87 350	20 251 154						59 668	1.8	1.04	20 251 154	35 875	17 903 052
Black**	38 754	53 878	3 346 847						59 800	1.8	0.64	3 346 847	22 608	3 153 804
All US	59 621	81 046	29 860 055						59 874	1.9	0.95	29 860 055	31 536	26 995 034

Notes: * Excludes families with zero adults ages 18–64; **US-born.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Table 6 compares Afghan refugees with other US refugee, immigrant, and racial groups by several measures of family income. It provides good evidence of Afghans refugees' economic success, but also evidence that they are not doing as well when we account for cost of living and their larger number of working-age adults in the family.

Columns 1 and 2 show that Afghans' median and mean family incomes are $8000 to $9000 lower than national averages and middling in relation to those of the comparison groups. Among refugee comparison groups, Afghan family incomes are lower than those of Vietnamese refugees, which is somewhat surprising given Afghans' higher levels of cultural capital. Further, their median income is nearly the same as that of Hmong refugees, who have much lower levels of cultural capital. Their mean and median family incomes are lower than those of Filipino and Asian Indian immigrants and US-born whites, but higher than those of Mexican immigrants and US-born African Americans.

Columns 4 and 6 show that Afghan refugees are in the same middle position among immigrant groups in terms of median family income when comparing within recent arrivals (0–20 years in US) and within longer-term residents (21+ years in US). Controlling for length of residence in the US, Afghans continue to have lower incomes than Vietnamese refugees, although the gap closes somewhat for those who have been here 21 years or more. Column 8 divides column 6 by column 4 to create a ratio for each group of family income among longer-term members to that of recent arrivals. Afghans have the highest ratio, perhaps indicating that their earning power increases over time in the US more than it does among other groups, although it may also reflect the lower earning power of their recent arrivals.

Earlier we saw that Afghans tend to reside in areas with a high cost of living. Column 9 of Table 6 shows that Afghans live in PUMAs with higher median family incomes than those of the comparison groups. Of course, it may also measure a greater tendency for Afghans to live in wealthier neighbourhoods. However, recall that Afghans generally do not live in the most expensive central cities (e.g. Manhattan, San Francisco) of the metropolitan areas they reside in, and an analysis of California in Appendix B shows Afghans shifting population to more affordable locations since 1990. Column 11 reports for each of the comparison groups the median ratio of the respondents' family incomes to the median family income of the PUMA they reside in. Afghans' ratio of 0.68 is close to the lowest (0.64), shared by Mexican immigrants and US-born African Americans. Thus, relative to their surrounding communities and compared with other immigrant and refugee groups, Afghans' family incomes are quite low. Column 13 reports the median ratio of respondents' family income divided by the number of working-age adults in the family for each comparison group. Again, Afghans rank near the bottom, with only Mexican immigrants and Hmong refugees with lower incomes per working-age adult. Both Mexican immigrants and Hmong refugees have substantially lower average education levels than Afghans, and both Cuban and Vietnamese refugees rank higher on this income measure despite their lower levels of education and English ability.

Turning to personal earned income for working-age adults, aged 18–64, allows us to see more clearly the influences of gender divisions of labour on income for the different groups. (Earned income includes wages, salaries, and business earnings for self-employed.) Table 7 presents median and mean personal earned income for each comparison group, and then presents earned income by gender. Afghans have the lowest median earned income, but their mean earned income is in the middle and well above those of Hmong refugees, Mexican immigrants, and African Americans. Afghan men are in the middle of the comparison groups in terms of both median and mean earned incomes, while Afghan women have the lowest median and second-lowest mean earned income. Not surprisingly, we see the same gender division we saw for employment rates, with Afghan men earning considerably more than Afghan women. Continuing a theme, Afghan incomes are lower

than incomes for Vietnamese refugees and roughly equal to those of Cuban refugees despite Afghans' higher levels of cultural capital.

Table 7: Personal earned income for Afghan refugees and comparison groups, ages 18–64, 2015 dollars

	Earned income, all			Earned income, males			Earned income, females		
	Median	Mean	n =	Median	Mean	n =	Median	Mean	n =
Afghan	12 210	29 331	4614	24 776	41 846	2231	2548	17 619	2384
Cuban	18 066	28 770	64 801	23 354	35 743	33 472	13 505	21 320	31 329
Vietnamese	20 646	32 833	89 506	28 491	40 928	42 324	15 000	25 571	47 182
Hmong	17 219	21 667	7439	22 428	25 676	3666	12 000	17 771	3773
Filipino	30 526	40 656	131 079	33 762	43 683	52 880	28 491	38 608	78 199
Mexican	15 944	19 967	979 780	22 195	26 974	532 062	5088	11 639	447 718
Asian Indian	36 631	57 555	178 683	64 045	78 891	93 658	12 401	34 054	85 025
White*	25 808	39 236	12743 357	34 934	50 013	6 363 330	18 316	28 487	6 380 026
Black*	13 843	23 535	2 174 534	13 214	24 693	1 029 381	14 372	22 495	1 145 153
All US	22 428	35 656	19 263 987	30 000	44 903	9 568 225	16 018	26 531	9 695 762

Note: * US-born.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Table 8 reports earned incomes as ratios of the median income in respondents' PUMAs for all working-age adults of the comparison groups and then broken down by gender for working-age adults who have been in the US 21+ years. Of course, means of these same ratios are influenced more by high earners. Thus, Table 8 compares incomes of long-term residents in the US, controlling for local economic conditions. Overall, Afghans' median ratio (0.83) is the second-lowest after that of African Americans (0.61), indicating that Afghans have among the lowest incomes compared with others in their PUMA. However, their mean ratio is nearly identical to the US mean, and is higher than Hmong refugees, Mexican immigrants, and African Americans, indicating that Afghans have more high earners that other low-income groups. Still, Afghans' median and mean ratios are lower than those of both Cuban and Vietnamese refugees, whether comparing men, women, or men and women combined. Among those who have been in the US for 21+ years, Afghan women have the lowest median ratio, and the third-lowest mean ratio. Afghan men have the third-lowest median ratio, just above that of Hmong males and far above that of African American males. Afghan males' mean ratio is in the middle. Treating these ratios as earned incomes controlling for cost of living, we can summarise that among working-age adults who are long-time residents of the US, Afghans have among the lowest earned incomes of our comparison groups. This is true for both Afghan men and women, although Afghan men rank a little higher and Afghans have substantially more high-earning males than other low-income groups (Hmong, Mexicans, African Americans).

Table 8: Median and mean ratios of earned income to median incomes in PUMA, 21+ years in the US, ages 18–64

	All			Males			Females		
	Median	Mean	n =	Median	Mean	n =	Median	Mean	n =
Afghan	0.83	1.51	1876	1.23	1.96	974	0.43	1.02	902
Cuban	1.18	1.83	25 768	1.43	2.23	13 333	0.95	1.41	12 435
Vietnamese	1.25	1.79	40 668	1.58	2.11	21 748	0.92	1.41	18 920
Hmong	0.99	1.17	4395	1.20	1.37	2221	0.79	0.95	2174
Filipino	1.58	2.02	55 409	1.72	2.17	23 138	1.47	1.91	32 270
Mexican	0.96	1.26	356 371	1.30	1.63	194 990	0.51	0.81	161 381
Asian Indian	1.76	2.86	43 290	2.53	3.81	22 792	1.03	1.80	20 498
White*	1.11	1.66	12 741 571	1.50	2.12	6 362 343	0.79	1.21	6 379 228
Black*	0.61	1.06	2 173 935	0.58	1.11	1 029 013	0.63	1.02	1 144 922
All US	0.98	1.52	19 261 394	1.29	1.91	9 566 752	0.70	1.14	9 694 642

Note: * US-born.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Table 9 presents several additional measures of economic wellbeing, focusing on both higher and lower income levels. Columns 1 and 2 report rates of total family incomes in the top quintile and top decile of US family incomes. The percentage of Afghans with family incomes at or above the 80th and 90th percentiles are lower than US rates and in the middle of the comparison groups. Yet Afghans have much higher rates of high-income families than Hmong, Mexicans, and African Americans, higher rates than Cubans, and close to the same rates of upper-income families as Vietnamese refugees, a group that has considerably higher median family income. At the other end of the income distribution, columns 3 and 4 report rates of poverty and two times poverty. Afghan refugees' poverty rate (27 per cent) and two times poverty rate (50 per cent) are much higher than national rates (15 per cent and 33 per cent respectively). Afghans' poverty rate is near the bottom of the comparison groups. However, their rate of poverty is much lower (17 per cent) among those who have been in the US 21 years or more, placing them in the middle of the comparison groups.

Table 9: Higher and lower income levels among comparison groups

	Family income at or above		At or below		At or below poverty		Food stamps	
	80%	90%	Poverty	2X poverty	0–20 years US	21+ years US	0–20 years US	21+ years US
Afghan	16%	9%	27%	50%	34%	17%	32%	14%
Cuban	13%	6%	20%	47%	23%	17%	40%	23%
Vietnamese	17%	9%	15%	37%	18%	11%	17%	10%
Hmong	7%	2%	29%	59%	42%	19%	52%	27%
Filipino	26%	12%	6%	17%	7%	5%	6%	5%
Mexican	5%	2%	26%	61%	31%	18%	21%	17%
Asian Indian	39%	25%	8%	19%	9%	5%	4%	5%
White*	23%	12%	12%	28%		12%**		11%**
Black*	11%	4%	27%	51%		27%**		31%**
All US	20%	10%	15%	33%		15%**		14%**

Note: * US-born.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Levels of reliance on 'welfare' and how much levels decline by length of residence are widely used measures of economic integration. Columns 7 and 8 of Table 9 report rates of reliance on food stamps by time in the US. Afghans' rate of food stamp use is 32 per cent among recent arrivals, declining to 14 per cent for those in the US for 21 years or more. Afghans who are long-time US residents use food stamps at the same rate as the country as a whole, and rank in the middle of the comparison groups.

4.4 Descriptive results: converting cultural capital to economic capital

A key finding thus far is that, compared with other refugee groups, Afghans have high levels of cultural capital, yet on various economic measures they fare worse than Vietnamese refugees and sometimes Cuban refugees, both of which have less cultural capital. And by some measures Afghan incomes are similar to those of Hmong refugees and Mexican immigrants, who have much lower levels of cultural capital. These patterns are especially strong when controlling for cost of living.

One of the problems with ACS data is that they do not distinguish between schooling completed in Afghanistan and schooling in the US, or some other place. To address this, we used age at arrival in the US among those with college degrees or higher as a proxy, assuming that people who arrive in the US at age 21 or younger and who have a college degree earned it in the US and that most of those who arrive at age 30 or older earned their college degrees in Afghanistan. Of course, age of arrival is an imperfect proxy because younger arrivals generally do better economically for reasons other than where they earned their college degree. Nevertheless, our findings suggest that there is an independent negative effect for college and advanced degrees earned outside the US.

Table 10 shows that among those who have less than a college degree, those that arrived at age 30+ have a median income of about $11 000 less than those who had arrived by age 21. However, among those with a college degree or higher this same gap is about $32 000 for both men and women. While age of arrival certainly matters, we suspect that the larger income gap among the college educated results from the fact that they had trouble converting or augmenting their education into well-paying jobs. This interpretation is not without problems, and once again

gendering the analysis is essential. Table 11 shows that Afghan men arriving after age 30 with a college degree have only moderately lower employment rates (7 per cent) than their counterparts who had arrived by age 21, while the gap for non-college-educated Afghan men is greater (13 per cent). The pattern is reversed and more dramatic for Afghan women, with those arriving with a college degree after age 30 having an employment rate fully 30 percentage points lower than their counterparts who arrive by age 21. The age-of-arrival gap for non-college-educated Afghans is substantially smaller, at 19 per cent. Thus, the employment and income patterns for Afghan women shown in Tables 10 and 11 fit and refine our earlier interpretation that college-educated Afghan women face the greatest obstacles converting their higher educational credentials to economic capital. Keeping in mind that there are independent age-of-arrival effects, summarised by the gaps among those without college degrees, the patterns for Afghan males suggest that, for them, arriving with a college degree rather than earning one in the US does not affect their employment rates but does substantially lower their ability to secure employment that pays commensurate with their education.

Table 10: Median income of employed Afghan refugees, By gender, education, and age of arrival, ages 25–64, 2015 dollars

	Female				Male			
Age of arrival	< College	n =	College +	n =	< College	n =	College +	n =
0–21	$26 913	287	$57 954	209	$37 939	448	$77 424	224
30+	$15 501	99	$25 892	60	$26 000	174	$45 578	197
Difference	$11 412		$32 062		$11 939		$31 846	

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Table 11**:** Employment rate of Afghan refugees, by gender, education, and age of arrival, ages 25–64

	Female				Male			
Age of arrival	< College	n =	College +	n =	< College	n =	College +	n =
0–21	45%	632	72%	290	76%	418	85%	263
30+	26%	376	42%	143	63%	278	78%	253
Difference	19%		30%		13%		7%	

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

4.5 Economic niches

Another important finding thus far is that despite Afghans' higher levels of cultural capital, Vietnamese refugees, and to a lesser extent Cuban refugees, have performed better on several measures of economic integration. Less-educated and female Afghans who recently arrived in the US have particularly low employment and income levels. Developing niche occupations and businesses is one way immigrant groups create pipelines to employment for co-ethnic recent arrivals. Larger immigrant groups may have more resources to create occupational niches and replicate them in new locations. Thus, the small size of the Afghan refugee population may contribute to their lesser economic success, particularly among their less-educated members.

To explore the institution of occupational niches we compared Afghan with Vietnamese refugees. The latter is a much larger refugee group, about 20 times the size of the Afghan group in the US. We expected to find that Afghans have not developed occupational niches to the same extent that Vietnamese refugees have. Tables 12 and 13 report occupational concentrations for Vietnamese and Afghans. The lists include all occupations with 1 per cent or more of the group's working-age adults in the occupation and with at least a 2:1 ratio between the percentage of the refugee group and the percentage of the rest of the US population in the occupation. We made an exception to our ratio rule for first-line supervisors of sales workers because this occupation fitted with other retail sales occupations that were included. We also included occupations held by less than 1 per cent of the group's working-age adults if there was at least a 5:1 ratio. If similar, more specialised occupations grouped together reached the 1 per cent threshold and 2:1 ratio we grouped them under a general occupational title. It turned out that the one case of this was engineers of different types among the Vietnamese.

Table 12: Vietnamese refugees' high-concentration occupations, ages 18–64, 2006–15

	non-Vietnamese	Vietnamese
4520 Personal appearance workers, nec	0.1%	12.5%
7750 Assemblers and fabricators, nec	0.6%	2.6%
1320–1530 Engineers, all types	1.0%	2.5%
4510 Hairdressers, hairstylists, and cosmetologists	0.4%	1.7%
8965 Other production workers including semiconductor processors	0.7%	1.6%
7720 Electrical, electronics, and electromechanical assemblers	0.1%	1.3%
8220 Metal workers and plastic workers, nec	0.3%	1.2%
8740 Inspectors, testers, sorters, samplers, and weighers	0.5%	1.2%
1550 Engineering technicians, except drafters	0.2%	1.0%
8320 Sewing machine operators	0.1%	0.9%
4320 First-line supervisors of personal service workers	0.1%	0.8%
3050 Pharmacists	0.1%	0.8%
4400 Gaming services workers	0.1%	0.5%
8350 Tailors, dressmakers, and sewers	0.0%	0.5%
n =	19 174 488	89 511

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Table 13: Afghan refugees' high-concentration occupations, ages 18–64, 2006–15

	non-Afghan	Afghan
4760 Retail salespersons	2.1%	5.5%
4720 Cashiers	2.2%	4.8%
4700 First-line supervisors of sales workers	2.4%	3.9%
9140 Taxi drivers and chauffeurs	0.2%	2.5%
310 Food service and lodging managers	0.6%	1.9%
120 Financial managers	0.6%	1.5%
2860 Media and communication workers, nec	0.1%	1.4%
4610 Personal care aides	0.6%	1.2%
3930 Security guards and gaming surveillance officers	0.6%	1.1%
n =	19 259 364	4618

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

The findings on Vietnamese refugees reflect their large niche in nail salons ('personal appearance workers, nec [not elsewhere classified]') and hairdressers-cosmetologists, which, combined, employ fully 14.2 per cent of Vietnamese refugees aged 18–64. A closer look found that this occupational niche especially employs recently arrived Vietnamese women with less than a college degree. Among recently arrived Vietnamese women (0–10 years in US) with less than a college degree, fully 29 per cent (n = 10 737) work in these occupations compared with 13 per cent of the many fewer (n = 1617) recently arrived Vietnamese women with a college degree. Among all working-age Vietnamese refugee women, 25 per cent without a college degree work in these occupations, while 5 per cent of their college-educated counterparts do. Thus, this occupational niche particularly supports recently arrived, less-educated Vietnamese women and provides long-time careers for many of them.

Afghan refugees' clearest occupational niche is taxi drivers/chauffeurs, who are almost all males (97 per cent), 55 per cent self-employed, and 18 per cent college educated. Virginia Afghans are the most likely to be taxi drivers/chauffeurs, with 13 per cent of working-age Afghan males in that state working as taxi drivers/chauffeurs, as do 4 per cent of New York Afghan males and 5 per cent of California Afghan males. Although the ratios are only a little more than 2:1, it may make sense to treat retail sales workers, cashiers, and first-line supervisors or sales workers as niche-like. Nearly two-thirds of Afghan refugee cashiers are male (64 per cent) and 70 per cent of first-line supervisors of sales workers, while 50 per cent of retail salespersons are male. Thirty per cent of Afghan sales supervisors have a college degree, as do 26 per cent of retail salespersons and 20 per cent of cashiers. Afghan sales supervisors are most concentrated in auto dealerships (13 per cent) and grocery stores (12 per cent), retail salespersons are most concentrated in auto dealerships (28 per cent) and department stores (23 per cent), and cashiers are most concentrated in gas stations (24 per cent), restaurants/bars (19 per cent), and grocery stores (17 per cent). Thirty-seven per cent of Afghan sales supervisors are self-employed, as are 17 per cent of retail salespersons (only 4 per cent of cashiers), indicating that a substantial amount of this type of employment is built around Afghan-owned businesses. While these occupations are important concentrations for Afghan refugees, it does not appear that they constitute a niche that offers ready-made employment for new arrivals. Recently arrived Afghan refugees are only slightly more likely than longer-term Afghan residents to work as cashiers, no more likely to work as taxi drivers, and less likely to work as retail salespersons or their supervisors. Further, the occupational concentrations

Afghans have developed are primarily for males. Thus, this evidence suggests that Afghans in the US have not developed significant occupational niches that support the employment of recent arrivals or women.

4.3 Testing hypotheses with multivariate analysis

We conducted a set of eight Ordinary Least Squares regressions explaining logged personal earned income (2015 dollars) for US adults aged 18–64. Table 14 includes Models 1–4, which provide the main effects of controls, immigration variables, cultural capital, and cost of living. We expected that in Model 4, controlling for immigration factors, cultural capital, and cost of living, Afghan refugees would be most negatively associated with earned income among the comparison immigrant and refugee groups. Table 15 reports Models 5–8, which add interaction terms and additional factors that we expected to contribute to the Afghan refugee and other refugee effects in Model 4.

Regression results

Note that, because of the large sample size, virtually all of the relationships are significant at $p < .001$ until we get to the detailed interaction effects. Thus, it is important to look at the relative strength of effects. Because income is logged, we can interpret b (unstandardised beta) as close to the proportion change in predicted earned income for a one-unit increase in the independent variable. Thus, for example, net of other effects, Model 1 in Table 14 predicts that those who are married, with spouse present, will earn 46 per cent more income than those who have never been married (the reference). Likewise, women would earn 32 per cent less than men, and African Americans would earn 16 per cent less than whites. Model 1 shows there are substantial gender, race, and marital status effects on personal income. Combined, the background variables explain 12 per cent of the variation in personal earned income.

Model 2 adds migration and migrant factors: years in the US, naturalised citizenship, and dummy variables for each of the seven comparison immigrant and refugee groups. As expected, we see that recent arrivals to the US (0 to 5 years in US) are predicted to earn 22 per cent less than people born in the US. In addition, immigrants who have become naturalised citizens earn 12 per cent more than native-born Americans (with controls, including years in the US) and 16 per cent more than immigrants who have not become citizens. Importantly, net of controls but before controlling for cultural capital and geographic variables, Afghans and Hmong refugees have the strongest negative effects on income (−26 per cent and −27 per cent respectively). However, Mexican immigrants' incomes (−14 per cent) are close behind when we include the −11 per cent effect for also being Hispanic, and Hmong refugees have an additional −3 per cent effect of being Asian or Pacific Islander. Recall that about one-third of Afghans identify as more than one race, a category which has a −6 per cent effect in this model.

Table 14: OLS regression explaining log of earned income in 2015 dollars, for US adults, ages 18–64

	Model 1		Model 2		Model 3		Model 4	
	b	*t*	*b*	*t*	*b*	*t*	*b*	*t*
(Constant)	10.30	9736.24	10.32	9625.18	9.69	3675.35	9.45	3312.33
Gender (female)[1]	−0.32	−624.15	−0.32	−628.73	−0.35	−749.78	−0.35	−750.28
Age	0.00	100.45	0.00	75.98	0.00	88.04	0.00	81.90
Black[2]	−0.16	−208.98	−0.17	−212.72	−0.09	−117.35	−0.08	−113.90
Native American	−0.24	−87.37	−0.25	−88.78	−0.14	-52.91	-0.12	-48.07
Asian, Pacific Islander	0.02	18.29	−0.03	−17.54	−0.08	−55.11	−0.11	−76.53
Other/mixed race	−0.06	−57.33	−0.06	−54.76	−0.02	−24.49	−0.03	−28.80
Hispanic[3]	−0.15	−195.63	−0.11	−117.66	0.03	36.90	0.02	22.18
Family size	−0.03	−190.14	−0.03	−189.46	−0.01	−61.96	−0.01	−73.02
Married, spouse present[4]	0.46	658.50	0.46	660.23	0.35	534.40	0.36	540.97
Married, spouse absent	0.12	68.53	0.14	78.92	0.13	83.97	0.14	86.63
Separated	0.15	87.28	0.15	89.02	0.19	121.68	0.19	125.33
Divorced	0.25	264.17	0.25	263.81	0.25	280.87	0.25	287.62
Widowed	0.00	0.90	0.01	3.35	0.06	32.29	0.07	35.90
0 to 5 years in US[5]			−0.22	−81.88	−0.27	−108.94	−0.27	−108.15
6 to 10 years in US			−0.04	−17.23	−0.07	−27.26	−0.07	−27.61
11 to 15 years in US			0.00	−0.45	−0.02	−8.22	−0.02	−9.22
16 to 20 years in US			0.02	6.73	0.01	2.51	0.00	1.42
21+ years in US			0.04	19.83	0.03	18.06	0.03	15.56
Naturalised citizen[6]			0.12	51.79	0.10	50.32	0.09	41.13
Not naturalised citizen			−0.04	−18.33	0.05	24.33	0.04	17.95
Afghan refugee[7]			−0.26	−16.63	−0.16	−11.39	−0.19	−13.75
Cuban refugee			−0.10	−22.31	−0.08	−20.07	−0.09	−22.39

Vietnamese refugee		−0.13	−32.51	0.09	26.10	0.10	28.63
Hmong refugee		−0.27	−21.45	−0.03	−2.21	0.03	2.64
Filipino immigrant		0.08	25.07	0.09	28.44	0.10	32.34
Mexican immigrant		−0.14	−90.45	0.04	23.64	0.05	35.18
Asian Indian immigrant		0.22	74.67	0.04	16.00	0.05	19.48
Grade 7– 9[8]				−0.06	−32.07	−0.06	−31.13
Grade10–12				−0.07	−39.62	−0.07	−41.52
HS degree, GED				0.19	120.23	0.18	116.49
< 1 year college				0.25	143.03	0.24	137.60
1+ years college				0.30	184.06	0.29	176.96
Associates degree				0.48	279.07	0.47	272.32
4-year degree				0.74	453.67	0.71	438.59
Master's degree				0.94	532.27	0.92	516.48
Professional degree				1.29	544.88	1.26	532.34
PhD				1.20	435.15	1.17	427.23
English speaking				0.05	102.85	0.06	106.96
Linguistic isolation[9]				0.05	36.29	0.06	38.63
Median family income, PUMA						0.00	150.71
Median home value, PUMA						0.00	14.29
% foreign-born in PUMA						0.20	84.88
R^2 / Change R^2	12.4 / 12.4	13.0 / 0.6		25.9 / 12.9		26.3 / 0.4	

Notes: Reference categories: 1 = male; 2 = white; 3 = not Hispanic; 4= never married; 5 = born in US; 6 = citizen by birth; 7 = not in seven immigrant groups; 8 = grade school or less; 9 = not linguistically isolated or in group quarters. All changes in R2 are significant at $p < .001$.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

Model 3 adds cultural capital measures: education, English speaking ability, and linguistic isolation. Comparing education measured as a series of dummy variables to education measured as years of education showed that the former is substantially more explanatory (explaining over 3 per cent more variance in income with controls), so we used dummy variables for education. Based on findings above on Afghan's lower cultural-to-economic-capital conversion rates, we expected that with these controls the Afghan refugee effect would be greater than effects for the other immigrant groups. The Afghan refugee effect stands out as negative and stronger than the other immigrant group effects, with a predicted income of 16 per cent lower than US adults who are not members of one of our seven refugee/immigrant groups. Next closest are Cuban refugees at −8 per cent and Hmong refugees at −3 per cent. Adding in their respective race effects, those figures change to −5 per cent and −11 per cent respectively.

Model 4 adds geographic controls for the median family income in respondent's PUMA, median home value in PUMA, and percentage of foreign-born residents in PUMA. The first two variables control for cost of living, and the percentage of foreign-born may positively influence the economic opportunities for refugees. Because Afghans live in higher-income and higher-housing-cost areas, controlling for these variables increases the negative Afghan effect to a predicted income of −19 per cent less than the reference. Cuban refugees are next closest at −7 per cent. Adding the racial effects to immigrant group effects, the next closest to Afghans in terms of lower predicted income are Hmong refugees at −8 per cent. Afghan refugees having the strongest negative effect in Model 4 fits our expectations based on earlier findings about lower employment rates, conversion troubles, and low incomes after accounting for cost-of-living effects. Note that these effects are net of controls, including length of time in the US, which continues to have strong negative effects for recent arrivals (−27 per cent for those in US 0–5 years and −7 per cent for those in US 6–10 years).

Models 5–8 are presented in Table 15. To limit clutter, Table 15 reports only the coefficients of the immigrant variables, the newly added variables, and three relevant racial variables. The coefficients for the remaining variables change little except in Model 8 when we add employment. Model 5 adds two-way interaction terms for each refugee group by gender (female), recent arrival in the US (0–10 years), and three education levels (less than high school, college degree, advanced degree), and a three-way interaction for each refugee group by female and less than a high school degree. We selected these education levels based on the low employment and income levels of less-educated Afghan women and the conversion troubles of Afghans with college and advanced degrees. We expected to find a negative Afghan × gender (female) effect larger than that among the comparison groups, a negative Afghan × 0–10 years in the US effect, and negative effects for each of the Afghan–education level interactions.

Results for Model 5 show that the Afghan refugee effect remains the largest negative effect of the refugee groups at −11 per cent, although Hmong refugees have 17 per cent less earned income when you include their −11 per cent Asian and Pacific Islander effect. As expected, given earlier findings, the Afghan female effect is negative (−9 per cent). The other three refugee groups show a positive effect for women, with Hmong women at +25 per cent, Vietnamese women at +8 per cent, and Cuban women at +3 per cent. However, these are on top of a −35 per cent overall female effect.

To address the strong gender divide among Afghans without a high school degree we included terms for 'Afghan × less than high school' and 'Afghan × female × less than high school'. The strong gender divide for Afghans is apparent in the coefficients for these two terms in Model 5. Afghans with less than a high school degree earn 21 per cent *more* than others without a high school degree (not including the other three refugee groups), but Afghan women without a high school degree earn 24 per cent less than Afghan men, or slightly less than other working-age adults with

less than a high school degree. No other refugee group has such a strong gender difference among those with less than a high school degree.

It is interesting to compare female Afghans with female Vietnamese refugees with less than high school degrees after our earlier findings about the latter's occupational niche. In Model 5, Vietnamese women earn 8 per cent more than other females (keep in mind the −35 per cent female effect), Vietnamese without a high school degree earn 15 per cent more than others without high school, and the 'Vietnamese women with less than high school' term is non-significant. Combined, these illustrate how much better Vietnamese women without a high school degree are doing than their Afghan counterparts.

Also as expected, Model 5 shows that Afghans have negative college degree and advanced degree effects, −25 per cent and −12 per cent respectively. Cubans also show strong negative college degree and advanced degree effects of −21 per cent and −25 per cent. Hmong and Vietnamese refugees have non-significant college and advanced degree effects. Finally, our expectation that recently arrived Afghans would have lower incomes than other recently arrived immigrants was not supported. With controls, they do not have statistically significantly lower earned incomes than other recent arrivals.

Model 6 adds a proxy variable for having college and advanced degrees earned outside the US—arriving to the US at age 30+ and currently possessing a college degree or higher. We also added an interaction term for each refugee group times the proxy variable (e.g. 'Afghan × arrived in the US at age 30+ with a college degree or higher'). Model 6 strongly supports our expectation that the strength of the negative 'Afghan × college degree' and 'Afghan × advanced degree' coefficients would be reduced when entering these controls. In Model 5 they were −25 per cent and −12 per cent respectively, but with the new controls they are reduced to −4 per cent and +1 per cent, with neither significant at $p < .05$. This strongly supports the validity of this proxy. Thus, accounting for our proxy for college and advanced degrees earned outside the US, other Afghans with college and advanced degrees earn at average US levels. It is interesting to note that in addition to the −22 per cent effect of arriving in the US after turning 30 and having a college degree, the Afghan three-way interaction of this term has the strongest negative effect (−32 per cent) on earned income among the refugee groups. It is also interesting to compare Afghan refugees with Cubans, who also had strong negative college and advanced degree effects in Model 5 that were substantially reduced (but not erased, as with Afghans) through controls in Model 6.

Model 7 adds a small index of mental and physical disability created by summing two binary items asking if the person has difficulty walking or climbing stairs, or difficulty remembering, concentrating, or making decisions. The two items are moderately strongly correlated ($r = .33$) and a principle components analysis found one component with an eigenvalue over 1.0, explaining 67 per cent of the variance. We used these items as weak measures of the psychological distress and health problems many refugees experience because of traumas experienced in their country of origin, while fleeing, or during displacement.

It is hard to fully assess how much mental and physical disability mediates the relationship between Afghan refugees (or other refugees) and earned income because 'Afghan refugee' is part of several terms. However, the main Afghan refugee coefficient went from −12 per cent to −10 per cent in the expected direction. In a separate test we added the mental/physical disability variable to Model 2 and compared the regression coefficients for Model 2 and Model 2 plus physical/mental disability. Afghans' regression coefficient did decrease in intensity modestly in the expected direction from −.256 to −.232 (9.5 per cent). Although this is weak mediation (Afghan refugee status is positively related to memory and physical difficulties, and these difficulties are negatively

associated with earned income), it is a stronger mediation than for any of the other groups except Hmong refugees, whose coefficient improved from −.279 to −.212, or 24.2 per cent.

Model 7 is our final model explaining underemployment effects on earned income, along with other factors. We see that Afghans have the largest main effect of the refugee groups at −10 per cent, followed by Hmong at −5 per cent, although Vietnamese and Hmong have a −10 per cent Asian and Pacific Islander effect. Because the Asian and Pacific Islander and Hispanic racial/ethnic groups are broad umbrellas, we reran Model 7 without race and ethnic dummy variables. Hmong refugees had the highest refugee group main effect at −11 per cent, followed by Afghans at −8 per cent, Cubans at −6 per cent, and Vietnamese at −5 per cent. The effects of the Afghan refugee interactions remained the same.

In Model 7, Afghan females have a −11 per cent effect, compared with positive effects for the other refugee females. There is also a +15 per cent effect for Afghans with less than high school, with Afghan females in that group having a −19 per cent effect. Thus, with controls, Afghan men with less than high school earn more than their counterparts, while Afghan women earn slightly less than their female counterparts. Finally, on top of a −20 per cent effect for all people arriving in the US at age 30 or older who currently have a college degree or higher, Afghans in this category have an additional −33 per cent effect.

Model 8 adds employment. This removes the effects on earned income of employment levels in the different categories. Thus, by comparing Models 7 and 8 we can see how much underemployment affects the patterns in Model 7. For example, the effects in Model 7 that are removed in Model 8 can be attributed to underemployment in that category. Afghan refugees' main effect in Model 8 is −2 per cent and non-significant. Likewise, the Afghan female effect is +2 per cent and non-significant. Thus, the substantial negative effects for these terms in Model 7 are caused by the underemployment of Afghan refugees, particularly Afghan women. After controlling for cultural capital, immigration factors, mental and physical health, and a proxy for earning higher education degrees outside the US, there is no statistically significant direct Afghan refugee effect or Afghan female effect. The direct effects of the other three refugee groups only slightly diminished or were increased by adding employment. Interestingly, after controlling for employment on earned income, the situation of Afghans with less than high school degrees flips in terms of gender. In Model 8, Afghans with less than high school have a −8 per cent effect, while Afghan women without a high school degree have a +15 per cent effect, meaning that among employed men, Afghan men earn 8 per cent less than average, while among employed women without a high school degree, Afghan women earn 7 per cent more. This flip makes sense when we recall that Afghan women in this category had extraordinarily low employment rates, while Afghan men in the same category had higher-than-average rates of employment. Finally, the proxies for having college and advanced degrees earned outside the US are reduced modestly, but remain quite strong. Thus, these effects primarily reflect reduced income among those who are employed (e.g. a medical doctor in Afghanistan working as a grocery store manager) and to a much lesser extent they reflect underemployment of this group.

Table 15: OLS regression explaining log of earned income in 2015 dollars, for US adults, ages 18–64

	Model 5		Model 6		Model 7		Model 8	
	b	*t*	*b*	*t*	*b*	*t*	*b*	*t*
Asian, Pacific Islander[1]	−0.11	−76.36	−0.10	−74.89	−0.10	−75.44	−0.03	−26.80
Other/mixed race	−0.03	−28.67	−0.03	−29.63	−0.02	−20.72	−0.02	−24.09
Hispanic[2]	0.02	22.95	0.02	23.45	0.02	18.44	−0.01	−8.30
Afghan refugee[3]	−0.11	−4.11	−0.12	−4.37	−0.10	−3.91	−0.02	−0.93
Cuban refugee	−0.09	−12.29	−0.12	−16.23	−0.10	−14.42	−0.08	−15.56
Vietnamese refugee	0.03	4.29	0.01	1.44	0.01	2.10	−0.05	−9.22
Hmong refugee	−0.06	−3.00	−0.07	−3.57	−0.05	−2.31	−0.06	−3.65
Afghan × female	−0.09	−2.98	−0.12	−3.73	−0.11	−3.45	0.02	0.88
Afghan × < high school	0.21	3.63	0.20	3.45	0.15	2.70	−0.09	−2.23
Afghan × college degree	−0.25	−4.96	−0.04	−0.64	−0.02	−0.42	−0.02	−0.56
Afghan × advanced degree	−0.12	−3.11	0.01	0.32	0.03	0.66	0.04	1.44
Afghan × 0–10 years US	0.00	0.03	0.01	0.16	0.00	0.13	0.00	−0.03
Cuban × female	0.03	3.41	0.03	3.41	0.03	3.82	0.07	10.57
Cuban × < high school	0.05	3.36	0.05	3.64	0.03	2.54	−0.01	−1.16
Cuban × college degree	−0.21	−18.47	−0.04	−3.14	−0.03	−2.46	0.00	−0.33
Cuban × advanced degree	−0.25	−15.47	−0.10	−6.02	−0.10	−5.87	−0.05	−4.19
Cuban × 0–10 years US	0.07	8.14	0.09	10.72	0.08	9.48	−0.01	−1.94
Vietnamese × female	0.08	10.01	0.08	10.00	0.07	9.58	0.04	7.68
Vietnamese × < high school	0.15	12.18	0.15	12.52	0.11	9.77	−0.02	−2.38
Vietnamese × college degree	0.01	0.85	0.04	4.48	0.06	6.78	0.11	15.47
Vietnamese × advanced degree	0.02	1.77	0.06	4.24	0.09	6.33	0.12	11.57
Vietnamese × 0–10 years US	−0.05	−5.53	−0.04	−5.42	−0.04	−5.33	−0.03	−5.21
Hmong × female	0.25	8.91	0.25	8.95	0.25	9.02	0.18	8.58

Hmong × < high school	−0.02	−0.45	−0.01	−0.33	0.00	−0.02	0.01	0.39
Hmong × College degree	−0.06	−1.49	−0.07	−1.82	−0.05	−1.36	−0.06	−2.32
Hmong × Advanced degree	0.03	0.54	0.01	0.15	0.03	0.44	−0.06	−1.25
Hmong × 0–10 years US	−0.03	−0.89	−0.05	−1.42	−0.07	−1.93	0.04	1.44
Afghan × female × < high sch.	−0.24	−3.22	−0.22	−2.91	−0.19	−2.59	0.15	2.84
Cuban × female × < high sch.	−0.01	−0.66	−0.02	−0.80	−0.01	−0.39	0.08	5.17
Vietnamese × female × < high sch.	0.02	1.00	0.01	0.89	0.00	0.19	0.05	4.35
Hmong × female × < high sch.	−0.10	−1.95	−0.10	−1.96	−0.09	−1.90	−0.01	−0.39
Arrive US age 30+ × college+			−0.22	−99.56	−0.20	−94.65	−0.14	−84.57
Afghan × arrive US age 30+ × college+			−0.32	−5.50	−0.33	−5.73	−0.31	−7.20
Cuban × arrive US age 30+ × college+			−0.19	−10.78	−0.19	−11.26	−0.20	−15.58
Vietnamese × arrive US age 30+ × college+			−0.11	−5.22	−0.13	−6.45	−0.14	−9.44
Hmong × arrive US age 30+ × college+			0.54	2.79	0.54	2.89	0.33	2.37
Physical & mental disability					−0.48	−725.63	−0.13	−248.07
Employment							1.10	2776.49
R^2 / Change R^2	26.3 / 0.0		26.4 / 0.1		30.2 / 3.8		60.9/30.8	

Notes: Reference categories: 1 = white; 2 = not Hispanic; 3 = not in seven immigrant groups. All changes in R2 are significant at p < .001.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

5 Conclusion and discussion

Economic integration is central to the wellbeing of refugees. Here we examined the economic integration of Afghan refugees, a small refugee group whose country of origin has experienced political violence almost uninterrupted since 1979. The case of Afghan refugees is valuable for several reasons which may influence their economic integration. Many Afghan refugees arrive in the US with a gender order featuring a strong gender division of labour, many possess advanced degrees and strong English skills that they have trouble converting into commensurate jobs and training, and they are vulnerable to racialised anti-Muslim and anti-Afghan prejudice and discrimination.

We found that first-wave Afghan refugees, who arrived between 1980 and 1990, have improved since 1990 on all measures of cultural and economic capital. Their median family incomes, personal earned incomes, and employment levels, and the percentage of adults with college degrees have all grown substantially. Yet, controlling for cost of living, length of time in the US, and cultural capital, Afghan refugees' earned income is significantly lower than that of several comparison refugee and immigrant groups (as displayed in Model 4, Table 14). Our data indicate that Afghans' lower earned income is largely explained by their lower employment levels. Afghan underemployment is greatest among Afghan women, especially those with low and high levels of education. However, highly educated Afghan men also have lower-than-expected levels of employment.

After controlling for employment, we found that Afghan refugees have earned incomes commensurate with their gender, length of time in the US, education level, and English ability. One clear exception to this statement is the much lower earned incomes of Afghan refugees who arrive in the US after turning 30 and who currently possess a college degree or higher, our proxy for degrees earned outside the US.

Possessing unrecognised educational and professional credentials is a common problem for highly educated immigrants, especially those from 'less-developed' countries whose education system is not highly regarded in the US. We found considerable evidence that this is a significant problem among Afghan refugees. It is tempting to attribute their troubles converting cultural capital to commensurate jobs and incomes to lower educational standards in Afghanistan, but there is reason to believe that a more effective process of assessing and augmenting credentials among newly arrived immigrants would improve the economic outcomes for Afghan and other refugees arriving with college degrees. In their comparison of income levels among refugees in Canada and Sweden from Afghanistan, Iraq, Iran, and the former Yugoslavia, Bevelander and Pendakur (2012) found that Afghans had relatively higher incomes and employment rates in Sweden than in Canada, as did all refugees with graduate degrees. Further, in Sweden employment rates among refugees with graduate degrees are 11 per cent higher for women and 13 per cent higher for men, while having a graduate degree in Canada does not boost employment levels among refugees. A crucial difference between Canada and Sweden is that refugee integration in the latter entails 1.5 years of training in a newcomer programme which includes providing 'immigrants with equivalencies for their schooling obtained outside Sweden' (Bevelander and Pendakur 2012, 8). Based on anecdotal evidence of Afghans in the US, we believe that a similar equivalency assessment, with the opportunity for training to supplement existing skills, would significantly improve the employment rates and income levels of Afghans, especially Afghan women and both men and women who arrive with college degrees. The large population of highly educated Afghans and Iraqis with SIVs in Sacramento, California, is fertile ground for a pilot programme to test the effectiveness of this approach in the US.

It is noteworthy that among the four refugee groups we looked at, only Afghans have a negative female interaction effect on earned income. This finding parallels Bakker, Dagevos, and Engberson's (2017) findings for Afghan refugees in the Netherlands (see also Frank and Hou 2015). Women in the other three refugee groups (Cubans, Vietnamese, Hmong) earned *more* than expected, controlling for other factors (including a strong overall negative female gender effect). The pattern of Afghan female employment, which is lowest among the least- and most-educated Afghan women, calls for further research, with a special focus on recent arrivals with the lowest and the highest levels of cultural capital. This research should be sensitised by studies on the patriarchal family cultures and structures in Afghanistan (Grima 1992; Zulfacar 1998) and refugee women's 'bargains with patriarchy' (Kibria 1993), and an appreciation for the economic benefits of extended family strategies that include more adult earners in the household and utilising females with lower education levels as homemakers. The New Jersey Afghans appear to have most successfully adopted an extended family economic strategy and might be a location of special interest for researchers. Given the stark differences we found between Afghans and Vietnamese in the prevalence and gendering of economic niches, research should also focus on efforts by Afghan female refugees with low cultural capital to network around employment and opportunities for schooling and English training, and obstacles to their success.

How do we explain the overall lower employment levels of Afghans (e.g. the negative direct Afghan refugee effects in Models 5–7, which include gender and education interactions)? Three possible explanations are the small size of the Afghan population in the US, the negative effects of long-term exposure to trauma, and their greater exposure to discrimination. Although we compare only four refugee groups, the two smallest, Afghans and Hmong, have the strongest negative effects on earned income. The differences in occupational niches we found between Vietnamese and Afghans may also reflect group size, with the larger Vietnamese group having a strong occupational niche that supports recently arrived and less-educated women. Regarding exposure to trauma, the modest mediating role of physical and mental disability on the negative Afghan refugee effect on earned income may be found to be larger with better measures of psychological distress. Likewise, the Afghan refugees' lower employment levels may reflect higher unmeasured levels of discrimination. We plan a follow-up study using data from our 2008 survey of Afghans in Alameda County, California, which includes measures of employment, discrimination, and psychological distress that may illuminate these patterns.

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Appendix A: Operationalizing Afghan refugee+ using the American Community Survey and 5% Census

We define 'Afghan refugee+' as those individuals indicating the following on the ACS:

1. Born in Afghanistan
2. Does not answer the citizenship question 'born outside country of American parents'
3. Arrives in the US 1979 or later, *and*
4. *One* of a, b, or c below are true:
    a. Names 'Afghan' as either first or second ancestry. A strong majority of those born in Afghanistan do this.
    b. Does not name any codeable ancestry. This is a small but substantial group, increasing the sample by about 10 per cent.
    c. Names an ancestry of an ethnic group in Afghanistan that is not the nationality of another country (e.g. Pashtun, Hazara, Tajik, Baluchi, but *not* Iranian). It turned out that none of the respondents in either ACS or the 5% Census identified their ancestry as one of these ethnic groups.

In addition, we included as Afghan refugee+ people who were NOT born in Afghanistan, but who arrived in the US in 1979 or later, and list Afghan as their first ancestry. This category consists of individuals born in countries their families escaped to as a result of civil strife in Afghanistan, such as Pakistan, Iran, Russia, etc., who then resettled in the US directly from these countries. Thus, we are leaving out some people born in Afghanistan who name ancestries other than Afghan or other Afghan ethnic group. Of the 5355 individuals born in Afghanistan and arriving after 1979, 669 are not included as Afghan refugee+ because they name other ancestries (and not Afghan) or were born of American parents living abroad. Of the 669, for their first ancestry 77 name European nationalities, 16 Uzbek, 123 Iranian, 50 Middle Eastern, 3 Arab, 14 African nationalities, 72 Asian Indian, 7 Pakistani, 138 Asian, 34 white/caucasian. Very few (of this 669) name a second ancestry and, as noted above, we include them if they name 'Afghan' for second ancestry. Through a careful analysis of this group of Afghanistan-born, non-Afghan-ancestry respondents we concluded this exclusion was justified. We realise we may be excluding, for example, some respondents who name their ancestry as 'Iranian' that were born in Afghanistan, whose family fled to Iran, where they did some growing up, and then came to the US—thus fitting an Afghan refugee profile. However, for people of this type with information available, we checked their parents' ancestries and for almost 90 per cent, their parents' ancestries are the same as those of the respondents—Iranian in this example. (If they answered 'Persian' we would include them, based on our rules above.) It is likely we are excluding some people who were born in Afghanistan who come to identify with a country they escaped to and lived in for a number of years (and later left for the US). We know from Stempel (2009) that many US Afghans lived a number of years in countries like Iran, Pakistan, Germany, and Russia before coming to the US. The 1990s may have been when they started to arrive in the US in large numbers. However, Pakistan is probably the most common transit country, but *very few name Pakistani ancestry*. As mentioned in the text, quite a few name an Iranian ancestry, but it is our understanding that treatment in Iran is as harsh and marginalising as in Pakistan. Thus, given the significant number who report being born in Afghanistan of 'American parents', we made the conservative decision to view the ancestry questions as a crude test for excluding non-Afghans who were born in Afghanistan, whose experiences were thus far different from most Afghans.

To test our operationalisation, we compared ACS estimates based on our definition of 'Afghan refugee' to the *Yearbook of Immigration Statistics* (US Immigration and Naturalization Service 2000, 2010). Table A1 reports numbers generated from ACS using our current definition of 'Afghan

refugee+' and a simpler approach of Afghanistan birthplace (person weights applied), and Yearbook figures on arrivals granted legal residence and refugee/asylees. For the ACS 2000–10 estimates, we used only 2006–10 cases; other years used 2006–15 cases.

Table A1: Comparing American Community Survey estimates and Yearbook statistics

	ACS		Yearbook	
Arrival year	Born Afghanistan	'Afghan refugee+'	Arrivals from/legal residence granted to people born in Afghanistan	Refugee/asylees born in Afghanistan granted legal residence
1981–1990	22 485	21 218		22 946
1991–2000	15 486	12 724	17 409	9725
2000–2010	16 371	17 117	24 264	10 459

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017); US Immigration and Naturalization Service 2000, tables 3 and 30, and 2010, tables 3, 10, and 14.

Table A1 shows that in the 1980s most Afghans arrived as refugees/asylees. We were unable to find figures for overall arrivals, but expect the figure is not much higher (~25 000) than the figure for refugees, with immediate family member status starting to grow in the late 1980s. Mortality and outmigration may explain the modestly lower figures for ACS.

In the early 1990s, the pattern of a very high proportion of refugees continues, but by 1995, refugee arrivals drop off and the majority of arrivals are immediate family members. The disparate figures for 1991–2000 are a result of the fact that ACS underestimates Afghanistan-born arrivals by a little over 10 per cent; starting in the mid-1990s, ACS 'Afghan refugee+' includes a significant number of family reunification immigrants; and a little over half of Afghan arrivals in the 1990s were refugees/asylees. We cannot fully explain the gap of over 2700 between ACS estimates of our 'Afghan refugees' and those born in Afghanistan. This suggests that we may be being too conservative by not including those who were born in Afghanistan but who name other nationalities as their ancestries. Comparing the 1991–2000 Afghan refugee+ numbers (n = 12 724) to Yearbook refugee/asylees granted asylum (n = 9725) shows that we are including many family reunification cases in Afghan refugee+.

In 2001–10, the proportion of family reunification immigrants increases, with a burst of refugees post-9/11. The Yearbook figures are a little misleading because there are about 1600 employment-based migrants that arguably should be counted in the refugee category—they received special treatment and some had jobs waiting for them. Also, a few with SIVs started arriving in 2009 and 2010 that are not counted in the refugee category. Counting these two groups as refugee-like, a little over half of the 2001–10 arrivals had refugee-like status. The gap between ACS estimates and Yearbook reports of arrivals continues to be substantial (but no longer the gap between the two ACS measures), further showing that our operationalisation underestimates/excludes a significant number of Afghan immigrants, while at the same time including many non-refugee Afghan immigrants. The big change in the 2010s (not shown) is the rapid growth of SIVs. By 2015 about three-quarters of arrivals had SIV status.

Appendix B: The social geography of US Afghan refugees in 1990

Analysing Public Use Microdata Areas (PUMAs), geographic areas of no less than 100 000 residents, shows that in Virginia over 90 per cent of Afghans were in two contiguous PUMAs (#1000, #1100) containing parts of Alexandria, Falls Church, and Fairfax, all of which are suburbs of Washington, DC. Eighteen per cent of all residents in these two PUMAs were foreign-born, 4 per cent were at or below the poverty level, and the median family income was $108 642. Afghan refugees in these PUMAs had a median family income of $69 713 (n = 176), well below the local median, but well above the median for Afghan refugees in the US as a whole ($42 885, n = 1133).[4] Afghan refugees made up 0.36 per cent of the two PUMAs, which were 80 per cent white, 10 per cent African American, 8 per cent Asian or Pacific Islander, and 6 per cent Hispanic (2 per cent Salvadoran).

In New York State, Afghan refugees were concentrated in New York City's Borough of Queens, with 72 per cent of Afghans in New York State residing there. Brooklyn was a distant second, with just under 7 per cent of New York State Afghans. None of the Afghan refugees in the 1990 5% Census lived in Manhattan. Afghan refugees in Queens were concentrated in two contiguous PUMAs (#5407, #5408) whose residents had high rates of birth outside the US (41 per cent), 8 per cent were at or below the poverty level, and these PUMAs had a median family income of $78 489, well above the national median of $62 326. Afghan refugees in these PUMAs had a median family income of $42 885 (n = 80). Afghan refugees made up 0.45 per cent of these PUMAs, which were 67 per cent white, 8 per cent African American, 20 per cent Asian or Pacific Islander (8 per cent Chinese), and 14 per cent Hispanic (3 per cent Puerto Rican, 3 per cent Colombian).

Alameda County, across the bay from San Francisco, had 36 per cent of the 509 California Afghan refugees in the 1990 5% Census. Most of these were located in the south Alameda County cities of Hayward, Fremont, and Union City/Newark, in that order. The greatest concentration of Afghan refugees in California (and the US) was in the PUMA containing most of Hayward, where 17 per cent of California Afghans resided. Nevertheless, Afghans made up just 1.5 per cent of the residents in the Hayward PUMA. In 1990, compared with national US figures, Hayward had a lower rate of poverty (9 per cent to 13 per cent), a lower rate of college educated adults age 25 or older (17 per cent to 20 per cent), a higher rate of foreign-born residents (24 per cent to 9 per cent), and more racial diversity, with the exception of African Americans. Hayward's racial make-up was 62 per cent white, 15 per cent Asian or Pacific Islander, 10 per cent black, and 1 per cent American Indian. The median family income in Hayward was $72 428, $10 000 greater than the national median, whereas Hayward Afghan refugees' median family income was $28 950 (n = 87), well below Afghan refugee's national median family income of $42 885.

The second-greatest concentration of Afghans in California was another south Alameda County PUMA consisting of much of Fremont, where 9 per cent of California Afghans lived, making up just over 0.5 per cent of the Fremont PUMA. In 1990, Fremont was home to a large NUMMI Motors auto manufacturing plant and burgeoning high-tech parks. Fremont's median family income was $98 636, it had a poverty rate of only 4 per cent, and 19 per cent of Fremont's residents were foreign-born. Fremont's racial make-up was 74 per cent white, 16 per cent Asian or Pacific Islander, 4 per cent black, and 1 per cent American Indian. Afghan refugees' median family income in Fremont was $27 561 (n = 43). The 1990 5% Census included only two Afghan respondents in Oakland, CA, the largest city in Alameda County, and only two Afghan respondents in San Francisco, the regional financial and cultural centre. The other significant concentration of

[4] All dollar amounts in this section are reported in 2015 dollars.

Afghans in northern California was in Contra Costa County, contiguous with Alameda County to its north and east. Seven per cent of California Afghan refugees lived in Contra Costa County and half of these resided in a PUMA that held much of Concord.

Afghans were more dispersed in southern California, with 16 per cent of California's Afghan refugees in Los Angeles County, 13 per cent in San Diego County, 10 per cent in Orange County, 3 per cent in San Bernardino County, and 3 per cent in Ventura County. The two southern California PUMAs (#3308, #3309) with the highest concentrations of Afghans consisted of suburbs east and north of San Diego, including La Mesa and surrounding towns of Spring Valley, El Cajon, and Lemon Grove. Another concentration was in National City, south of San Diego. Continuing the pattern, no Afghans in the 1990 sample resided in San Diego proper. None of the San Diego County PUMAs consisted of more than 0.25 per cent Afghan refugees.

Appendix C: Changing residential patterns of Afghan refugees in California, 1990–2015

Mapping over time the populations of Afghan refugees in California counties shows them moving to more affordable, inland counties near established Afghan populations. This pattern is particularly clear in northern California. Tables C1 and C2 show that the percentage of California Afghans in Alameda County dropped 16 percentage points to 20 per cent. The percentage of California Afghans in Contra Costa County grew from 7 per cent to 11 per cent and Santa Clara County grew from less than 2 per cent to 4 per cent, but the biggest changes were in the Central Valley counties of San Joaquin and Sacramento, which, combined, are now home to 16 per cent of California Afghans. San Joaquin County contains Tracy and Stockton, which have more affordable housing and long commutes to many Bay Area jobs. Sacramento also has more affordable housing, and is home to a growing population of SIVs. In southern California, Los Angeles and San Diego counties also experienced relative declines of their Afghan refugee populations, with the inland Riverside County growing the most.

Table C1: California counties with 2 per cent+ of California Afghan refugees, 1990

	Frequency	%
Alameda	184	36.1
Los Angeles	84	16.4
San Diego	66	12.9
Orange	51	10.0
Contra Costa	36	7.1
San Bernardino	16	3.2
Ventura	15	2.9
n =	509	88.5

Source: Authors' illustration based on 1990 5% Census (Ruggles et al. 2017).

Table C2: California counties with 2 per cent+ of California Afghan refugees, 2011–15

County	Frequency	%
Alameda	296	20.4
Los Angeles	174	12.0
Contra Costa	157	10.9
Orange	157	10.8
Sacramento	128	8.9
San Joaquin	108	7.5
San Diego	108	7.5
Riverside	72	5.0
Santa Clara	58	4.0
San Bernardino	37	2.5
Ventura	36	2.5
Yolo	35	2.4
n =	1448	94.4

Source: Authors' illustration based on ACS 2011–15 (Ruggles et al. 2017).

Appendix D: Afghan refugees' troubles converting cultural to economic capital

Converting cultural to economic capital may be harder for small immigrant groups, like Afghans, who are less able to develop re-credentialing networks and pipelines into professions and higher management positions. And it may be more of a problem for highly educated Afghan women than their male counterparts if the Afghan gender order does not support their re-credentialing and job-seeking efforts, or throws up obstacles to those efforts. Anecdotal evidence suggests that many Afghans who arrive with college degrees, advanced degrees, and professional credentials find their degrees and credentials much less valued than they expected and have difficulty finding or qualifying for opportunities to augment them. Failed efforts to gain recognition for their cultural capital may forestall a more 'realistic' search for available employment and add to frustrations and insecurities—a 'demoralisation' response. Alternatively, conversion troubles may lead to successful investments in additional education, temporarily lower rates of employment and lower incomes, and ultimately some success in conversion through augmenting cultural capital—an 'augmentation' response.

Table D1: Employment rates for comparison groups by years in the US and education; males, ages 18–64, 2006–15

0–10 years in US	< High school		High school, some college		College degree		Advanced degree	
	Employed	n =	Employed	n =	Employed	n =	Employed	n =
Afghan	59%	118	67%	376	69%	92	73%	74
Cuban	70%	2235	78%	6975	84%	1480	80%	540
Vietnamese	67%	2234	65%	4204	71%	818	86%	351
Hmong	44%	195	56%	146	*	*	*	*
Filipino	56%	897	71%	6805	81%	5834	84%	958
Mexican	85%	92 305	86%	61 267	88%	5725	89%	2130
Asian Indian	65%	1918	69%	6527	86%	16 137	94%	18 577
US total**	58%	1 365 654	73%	5 735 674	87%	1 611 962	89%	854 934
11–20 years in US	< High school		High school, some college		College degree		Advanced degree	
	Employed	n =	Employed	n =	Employed	n =	Employed	n =
Afghan	68%	251	71%	846	78%	357	80%	182
Cuban	61%	4989	77%	14 375	86%	3410	87%	1794
Vietnamese	69%	6667	76%	14 265	86%	6052	90%	2370
Hmong	47%	671	74%	1402	85%	393	86%	105
Filipino	60%	2000	76%	19 356	83%	13 459	87%	2818
Mexican	82%	204 487	85%	133 951	88%	13 170	88%	4817
Asian Indian	68%	3284	74%	12 320	87%	22 382	93%	27 964

Notes: * < 20 cases; ** all US males, ages 18–64.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

If conversion troubles are more common among a particular group, we would expect that their highly educated new arrivals would have lower-than-expected rates of employment during their first ten years in the US. If after ten years in the US lower employment rates continue among the highly educated, this may be evidence of demoralisation. Tables D1 and D2 report employment rates among the refugee and immigrant comparison group disaggregated by gender, years in the US, and education levels. Starting with men in the US for ten years or less, we see that Afghan men with a high school degree or less do not stand out—their employment rates are in the middle of the comparison groups. Afghan men with college degrees or advanced degrees have the lowest employment rate among the comparison groups. In some instances, these are not large differences from the comparison groups. Among the college-educated, Vietnamese men's 71 per cent employment rate is not a statistically significant difference at $p < .05$ from Afghan men's 69 per cent, and the 80 per cent employment rate for Cuban men with advanced degrees is not a statistically significant difference from Afghan men's 73 per cent, but the other differences are significant at $p < .01$. In addition, Afghan men with college and advanced degrees have employment rates lower than the rates for all US males with college and advanced degrees, respectively, that are significant at $p < .001$.

Turning to immigrant men who have been in the US 11–20 years, we see that Afghan men's employment rates are higher than those of recently arrived Afghan men for all education levels. However, nearly the same patterns continue that we found for men in the US 0–10 years. Afghan refugee men with less than a high school degree have an employment rate in the middle of the comparison groups and greater than the employment rate of all US working-age men at the same level of education. Afghan men with college and advanced degrees in the US for 11–20 years have lower employment rates than comparable men in the comparison groups, and the differences are statistically significant at $p < .05$, with the exception of the difference between employment rates of Afghan (80 per cent) and Hmong men (86 per cent) with advanced degrees. In addition, highly educated Afghan men's employment rates are lower than rates for comparable US working-age males at $p < .001$. However, Table D1 also shows that Afghan men residing in the US for 11–20 years with a high school degree or some college have employment rates *lower* than those of their peers in the comparison groups. Their differences with Hmong men and Asian Indian men are not significant at $p < .05$, and neither is their difference from all US working-age men at the same education level. Nevertheless, this pattern suggests that something other than troubles converting cultural capital is influencing the lower employment rates of Afghan men, especially when we recall that the Afghan gender division of labour appears to emphasise men's employment more than is the case for some of the comparison groups.

Turning to immigrant women 0–10 years in the US (Table D2), we see that Afghan women have the lowest employment rates across education levels, and that this pattern is especially strong among women with less than a high school degree (12 per cent; the next lowest is 29 per cent) and advanced degrees (31 per cent; the next lowest is 52 per cent). This pattern fits a strong patriarchal gender order effect, where family strategies focus on keeping women in the home. Arguably, the 42 per cent employment rate of both high-school-educated and college-educated women means that college-educated women are comparatively more constrained than the high-school-educated women, as evidenced by the higher employment rates of college-educated compared with high-school-educated women in other immigrant groups and the US as a whole. Combining this with the extraordinarily low rates of employment among women with advanced degrees suggests that, in addition to or in concert with the gender order effect, highly educated Afghan women refugees face significant difficulty converting their cultural capital to economic capital in the US. Thus, it is possible that for Afghan women, possessing little cultural capital means one has few of the resources, support, or inclination needed to seek and find work, and having high cultural capital

means one faces the discrediting of one's credentials, which is harder to overcome because of the patriarchal gender order.

Bringing in immigrant women in the US for 11–20 years, we see that Afghan women with college and advanced degrees have the biggest increases in employment rates compared with their '0–10 years in US' counterparts. Afghan women at all education levels continue to have among the lowest employment levels, with the least- and most-educated continuing to stand out with employment levels 25 and 17 percentage points lower than those of comparable women in other immigrant groups. Less- and most-educated Afghan women also have the largest employment rate gaps with their male counterparts, −52 and −27 percentage points respectively. This pattern is consistent with both a strong traditional gender order effect that weighs most heavily on the least-educated Afghan women, and troubles converting cultural capital that, aided by the gender order constraints, are more challenging for Afghan women with advanced degrees than their Afghan male counterparts.

Table D2: Employment rates for comparison groups by years in the US and education; females, ages 18–64, 2006–15

0–10 Years in US								
	< High school		High school, some college		College degree		Advanced degree	
	Employed	n =	Employed	n =	Employed	n =	Employed	n =
Afghan	12%	211	42%	372	42%	85	31%	45
Cuban	42%	1932	60%	6897	69%	1750	71%	622
Vietnamese	55%	4002	60%	6735	64%	1225	62%	392
Hmong	34%	313	51%	141	*	*	*	*
Filipino	45%	1258	63%	9432	76%	11,701	77%	1825
Mexican	39%	69 952	46%	48 400	49%	6458	52%	1955
Asian Indian	29%	3088	44%	7390	43%	14 993	53%	14 639
US total **	41%	1 103 340	65%	5 824 831	76%	1 820 792	81%	946 800
11–20 years in US								
	< High school		High school, some college		College degree		Advanced degree	
	Employed	n =	Employed	n =	Employed	n =	Employed	n =
Afghan	16%	162	52%	424	68%	141	53%	41
Cuban	44%	1217	67%	4887	76%	1145	83%	443
Vietnamese	62%	4971	70%	7857	78%	2471	85%	608
Hmong	45%	495	66%	542	74%	69	86%	20
Filipino	58%	1033	73%	9376	85%	9844	86%	1459
Mexican	44%	87 891	57%	64 316	68%	5900	70%	1456
Asian Indian	41%	2136	55%	6743	67%	7931	76%	7608

Notes: * < 20 cases; ** all US females, ages 18–64.

Source: Authors' illustration based on ACS 2006–15 (Ruggles et al. 2017).

If Afghans' low rates of employment emerge early in their settlement process and are sustained well after their arrival, what about the earned income of those who find employment? To test this, we compared the median of the ratios of earned income with the median earned income of

employed people in their PUMA ('median earned income ratios') and compared these across immigrant groups among those in the US 0–10 years and those in the US 11–20 years, controlling for education (not shown, available upon request). To maintain high enough numbers we divided education into two categories: those with less than a college degree and those with a college degree or higher.

Compared with other immigrant groups of the same gender, employed Afghan men and women in the US 0–10 years have the lowest or among the lowest median earned income ratios at their education level. However, among men in the US 11–20 years with less than a college degree, Afghan men have the highest median earned income ratio of the seven immigrant groups, and college-educated Afghan men in the US 11–20 years are in the middle, higher than Cuban, Hmong, and Mexican men but lower than Vietnamese, Filipino, and Asian Indian men.

Further, for each education-ethnicity-gender category we computed a percentage increase (or decrease) between the ratios of those in the US 11–20 years and those in the US 0–10 years (e.g. (0.87–0.52)/0.52 = 66 per cent increase in the ratio of earned income to median earned income in PUMA for Afghan men with less than a college degree) and found that Afghan men with less than a college degree had by far the greatest difference among comparable immigrant men, and college-educated Afghan men had the second-greatest difference (54 per cent), second to Vietnamese men (58 per cent). Thus, it appears that Afghan men who find employment, after struggling economically during their first decade in the US, do comparatively quite well economically in their second decade in the US.

Afghan women also have the highest percentage increase in their median ratio of earned income between those in the US for 0–10 years and those in the US for 11–20 years. (Hmong women were excluded because the number of college-educated Hmong women in the US 0–10 years is too low.) However, even after these substantial increases in earned income, college-educated and non-college-educated Afghan women in the US for 11–20 years still have the lowest or equal to the lowest ratio of earned income to median income in their PUMA.