How Mass Immigration Affects Countries with Weak Economic Institutions: A Natural Experiment in Jordan

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How Mass Immigration Affects Countries with Weak Economic Institutions:
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Abstract

Saddam Hussein's unexpected 1990 invasion of Kuwait forced $300,000$ Kuwaitis of Palestinian descent to flee into Jordan. By 1991, this large exogenous population shock increased Jordan's population by about 10 percent. Jordanian law allowed these refugees to work, live, and vote in Jordan immediately upon entry. The refugees did not bring social capital that eroded Jordan's institutions. On the contrary, we find that Jordan's economic institutions substantially improved in the decade after the refugees arrived. Our empirical methodology employs difference-in-differences and the synthetic control method, both of which indicate that the significant improvement in Jordanian economic institutions would not have happened to the same extent without the influx of refugees. Our case study indicates that the refugee surge was the main mechanism by which Jordan's economic institutions improved over this time.

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1 Introduction

The economic benefits of immigration are large. According to the lower-end estimates, native-born Americans reap an annual short-run economic benefit equal to about 0.5 percent of GDP from immigration while the median marginal immigrant from a developing nation to the United States can expect a 4.11 fold increase in income (Blau and Mackie 2016, 141; Clemens 2011; Clemens, Montenegro, and Pritchett 2009, 41; Powell 2015). Persistent global wages differences for observably identical workers indicate that economic efficiency losses from immigration barriers are gargantuan and one or two orders of magnitude larger than barriers on trade and capital flows (Clemens 2011, 84).

However, immigrants could alter destination countries' economic institutions that are vital causes of economic development and the source of the vast observed differences in worker productivity between nations (Acemoglu and Robinson 2012; Dell 2010; Rodrik, Subramanian, and Trebbi 2004). Focusing on the developed world, economist George Borjas argued that the "the entry/exit of perhaps hundreds of millions of people" would likely have a negative impact on the institutions of developed countries perhaps even to the point of wiping out all of the expected efficiency gains from immigration (Borjas 2015, 961, 969, 972). Borjas then challenged economists by declaring that "remarkably little is known about the political and cultural impact of immigration on the receiving countries, and about how institutions in these receiving countries would adjust to the influx" (Borjas 2014, 169). Paul Collier also worries that immigrants might import social capital that could replace economic institutions in the developed world with less productive ones (Collier 2013, 34). Collier offers only anecdotes from his native United Kingdom. According to Borjas and Collier, the efficiency gains from liberalized immigration to the developed world hold only if the immigrants do not import negative social capital to the extent that it overwhelms and degrades the destination-country institutions (Clemens and Pritchett 2016).

Much research has subsequently examined how immigration affects economic institutions in destination countries. The first by Clark, Lawson, Nowrasteh, Powell, and Murphy (2015) examines how an initial stock of immigrants and subsequent flows affected institutional quality in a cross section of 110 countries from 1990 to 2011. They find a positive and statistically significant relationship between both initial stocks and flows of immigrants with improvement in the economic freedom score. A one standard-deviation higher immigrant stock in 1990 improves the quality of economic institutions by 0.34 points 20 years later, thus increasing long-term growth rates (Gwartney, Lawson, and Hall 2015). There is not a single instance of a negative and statistically significant relationship between immigration and the quality of economic institutions in their 32 reported regressions.

Clemens and Pritchett went further by building a novel epidemiological model that assumes immigrants bring stagnation factors with them (Clemens and Pritchett 2016). There are three components to their model. The first is transmission, which is the degree to which origin-country total factor productivity (TFP) is embedded within the immigrants. The second is assimilation, which is the degree to which immigrants' productivity become like natives' over time in the destination country. The third is congestion, which is the degree to which transmission and assimilation alter when immigrant stocks are higher. In their model, there is a point that maximizes the economic gains from immigration relative to its negative impact on TFP. A dynamically efficient immigration would imply a relaxation of current restrictions but would stop short of open borders.

Powell, Clark, and Nowrasteh (2017) examine a natural experiment whereby Israel absorbed an exogenous shock of Jewish refugees from the Soviet Union that was equal to about 20 percent of its population. They use the synthetic control method (SCM) which is an empirical technique that weights pre-surge economic institutional quality scores in various countries to create a Synthetic Israel that can then be compared against Real Israel (Abadie and Gardeazabal 2003; Abadie, Diamond, and Hainmuller 2010; Abadie, Diamond, and

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Hainmuller 2015; Peri and Yasenov 2017). Powell et al. (2017) find that economic freedom in Israel increased dramatically after the surge of Soviet refugees. Israel went from having an economic freedom score similar to other Middle Eastern and North African countries in 1990 to having a score similar to other OECD nations.

The existing research mentioned above is primarily focused on the impact of immigrants on developed nations that have robust economic institutions conducive to economic growth. This paper expands the literature by examining immigration's impact on a country with much weaker economic institutions that were less conducive to economic growth at the time of the initial immigrant surge: Jordan.

In 1990 and 1991, about 300,000 Palestinians were expelled from Kuwait by Saddam Hussein's invasion and could not return after the war (van Hear 1992, 5; Colton 2002). These Kuwaiti-Palestinians were forced to Jordan where, due to a quirk of Jordanian law, they arrived as citizens who could vote, work, own property, and otherwise influence the political and economic system of Jordan even though most of them had never lived in Jordan before. The surge of 300,000 Kuwaiti-Palestinians was equal to about 10 percent of Jordan's pre-surge population. If such a proportionally large, sudden surge of immigrants entered the United States in 2015, it would be as if 31.6 million immigrants entered in a single year. To make it more challenging, the Kuwaiti-Palestinians arrived in the midst of a severe recession in a country with far weaker economic institutions. While this example does not speak directly to emigration from the developing world to the developed world, it does provide another example of how institutions change under migratory stress.

Natural experiments like these are valuable because they remove concerns about endogeneity and are more convincing than large cross-sections of many countries. Economists have successfully used natural experiments to study how exogenous immigration shocks affect labor markets (Card 1990; Hunt 1992; Carrington and de Lima 1996; Angrist and Krueger 1999; Friedberg 2001; Lach 2007; Kugler and Yuksel 2008; Alix-Garcia and Saah

2009; Cohen-Goldner and Paserman 2011; van der Vlist, Czamanski, and Folmer 2011; Glitz 2012; Ceritoglu, Yunculer, Torun, and Tumen 2017; Balkan and Tumen 2015; Borjas 2015). We turn these empirical methods to understanding how an exogenous surge of immigrants affects institutions.

This paper uses two methods to measure how much Jordan's institutions changed after the surge of Kuwaiti-Palestinians. The first is difference-in-differences, an econometric technique that calculates the effect of an exogenous shock on a treated unit by comparing the average change over time of the treated unit to the average change of a control group. The second is the Synthetic Control Method (SCM), a technique based on the idea that a weighted combination of countries provides a better control group than any single one (Abadie and Gardeazabal 2003; Abadie et al. 2010; Abadie et al. 2015; Peri and Yasenov 2017). SCM allows us to weight pre-surge economic institutional quality scores in various countries to create Synthetic Jordan which is a counterfactual. The Synthetic Jordan's economic institutional quality score is charted after 1990 as if no refugee surge occurred and provides a comparison to Real Jordan. The refugee surge can thus plausibly explain the difference between Real Jordan and Synthetic Jordan after the intervention date.

The next section provides a brief history of institutions in Jordan and the 1990-1991 exogenous surge of Kuwait-Palestinian refugees. Section 3 focuses on the upsides and downsides of using Jordan as a natural experiment. Section 4 makes the simple empirical case that Jordan's economic freedom scores improved after 1990. Section 5 explains the results from difference-in-difference and SCM. Section 6 provides robustness checks. Section 7 discusses how the difference-in-differences and SCM results are consistent with the Jordanian history of institutional change. Section 8 concludes.

2 Jordan's Institutional History and the Refugee Surge

Jordan is a young country created by the British government from the remains of the Ottoman Empire in the aftermath of World War I. Jordan, initially named Transjordan, became an emirate and protectorate of the United Kingdom in 1921 and fully independent in 1946. The nation was renamed the Hashemite Kingdom of Jordan in 1950 following King Abdullah's annexation of the Palestinian West Bank after Israel gained its independence. The original inhabitants of the Hashemite Kingdom of Jordan are called Transjordanians or East Bank Jordanians. Jordanians built a functional state bureaucracy and military out of a tribal society in a remarkably short period of time (Piro 1998, 19).

2.1 Organization of the Jordanian Government and Economic Institutions Prior to the Surge of Kuwaiti-Palestinians

The Jordanian government is an authoritarian monarchy advised by a strong cabinet with a parliament that swings between extremes of total acquiescence to the monarchy and partial openness (Chemonics International 1993). In practice, the Jordanian monarch is more constrained by parliament and a wide governing coalition than other Middle Eastern monarchies have been (Alon 2007). That wide governing coalition includes religious and ethnic minorities who were also part of a proto-parliament called the Legislative Council (Piro 1998, 21). Jordan's 1952 constitution created a bicameral assembly and judiciary, but the King maintained considerable power.

The King shared power with a cabinet and a periodically elected parliament that the King could unilaterally dissolve (Chemonics International 1993). The King outlawed political parties and declared martial law in 1957. The government held elections in 1989 in the midst of an economic crisis, the Palestinian Intifada in neighboring Israel, and domestic unrest in opposition to loan conditions from the International Monetary Fund and World Bank (Lucas

2003). The Jordanian government published a National Charter in July 1991 to gradually introduce democratic reforms, include Palestinians in the governing coalition, support free-market economic reforms, and protect private property (Knowles 2005, 80; Maktabo 1998; Chemonics International 1993, 9; Brynen 1992, 92; Sütalan 2006, 92-93; Robinson 1998, 393-394). Political reforms in 1993 scheduled an election later that year, created a one man, one vote system, and redrew political district boundaries to under-represent Palestinians and over-represent Transjordanians (Amis 2012, 40; Robinson 1998, 397). Elections were also held in 1997 under this new system but the 2001 elections were postposed until 2003 (Ryan 2003).

Jordanian Kings created a larger and more stable governing coalition over time by increasing participation of growing minority and interest groups (Lucas 2003; Chemonics International 1993, iii). Palestinians who arrived as refugees in 1949 earned citizenship but the government denied them access to many state benefits, employment in state owned enterprises (SOE), and employment by the state itself (Brynen 1992, 81).

Jordan followed an Import Substitution Industrialization (ISI) economic development policy after 1950. The cornerstones of this development strategy were large SOEs combined with generous government subsidies for consumption goods and employment in state agencies and the military for Transjordanians (Piro 1998, 53). Palestinians paid high taxes, were overregulated, and could not access credit due to government financial favoritism for large SOEs and favored monopolies. Few Palestinians were part of the governing coalition by the 1980s and never in proportion to their numbers (Sütalan 2006, 45). The distinction between the governing Transjordanians who received government benefits and the Palestinians who worked in the private economy had produced a politically tense situation by 1990.

Foreign loans, foreign aid, monopoly rents, high taxes on the small Palestinian-dominated private sector, and the taxation of worker remittances propped up the underperforming Jordanian economy until the late 1980s (Knowles 2005, 72). By then, poor growth due to

inefficiencies in the SOEs, the failure of ISI to stimulate industrialization (Bel-Air 2007), a decline in workers remittances from the end of the Arab oil boom (Gelos 1995, 9-10)[1], and cuts in economic aid (Brynen 1992, 80; Piro 1998, 65), caused an economic crisis. An economic crisis began in 1989 when chronic inflation produced a 60 percent devaluation of the Jordanian currency as the government was already perilously close to defaulting on several international loans (Kanaan and Kardoosh 2002, 3; El-Sakka 2014, 2; Amerah 1993, 6). Jordan called in the International Monetary Fund (IMF) and the World Bank for assistance.

The goals of the first IMF agreement were to reduce Jordan's budget deficit, reform taxes, reduce inflation, institute more prudent debt management, and reduce protectionism in an effort to stimulate export-based development (Chemonics International 1993, 8). In exchange, the IMF rescheduled $573 million in debts (U.S. Department of State 1995). Shortly thereafter, the First Gulf War and deepening recession significantly worsened the situation (Swaidan and Nica 2002, 4-7). Jordanian exports to Iraq fell by 60.6 percent between 1989 and 1992, while Saudi Arabia terminated oil subsidies (Piro 1998, 43). Unemployment rose dramatically and the economy shrunk rapidly. In response, the IMF delayed the first agreement when it realized how much political strain the reforms placed on the Jordanian government. In 1991, a second IMF agreement approved a temporary moratorium on Jordan's debt payments in exchange for fewer economic reforms (Chemonics International 1993, 8-9). The World Bank also suspended loans with similar conditions until 1992 (The World Bank Group 1995, 13).

From 1975 to 1990, Jordan fell from the 49th freest economy in the world to the 54th according to the economic freedom score (Gwartney et al. 2015). During the same time Jordan's chain-linked economic freedom score rose from a low of 5.37 in 1975 to 5.65 in 1990. The shrinking economy, regional political instability, war, and a precarious situation with foreign lenders made it a terrible time to absorb a massive surge of refugees or reform

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[1]Jordanians worked in the oil industry in neighboring countries.

economic institutions (Gelos 1995, 10; Troquer and al Oudat 1999, 40; Mruwat, Adwan, and Cunningham 2001, 651; Overseas Development Institute 1991, 2).

2.2 Refugees in Jordan

Jordan has absorbed many waves of refugees. Large numbers of Palestinian refugees arrived after the Arab-Israeli War ended in 1949 and the Six Day War in 1967. The United Nations Relief and Works Agency for Palestinians (UNRWA) counts the Palestinian refugees and their descendants born afterward as refugees so it is difficult to estimate the total number of Palestinians who entered Jordan in surges after 1949. According to one estimate, there were a total of 100,000 Palestinian refugees on the East Bank of the Jordan River in 1949, roughly equal to a quarter of Jordan's population at the time (Piro 1998, 29). Jordan also extended its sovereignty over the West Bank which brought Jordan's total Palestinian population to over 500,000 (Migration Policy Center 2013, 4).

Jordan integrated the Palestinian refugees in several innovative ways. First, Jordan granted citizenship to Palestinians living in its territory in 1954 and to all Palestinians living in the West Bank and their descendants – an action with important ramifications when the Kuwaiti-Palestinians began to arrive in 1990 (Maktabo 1998). In 1988, Jordan relinquished territorial claims on the West Bank and adjusted citizenship laws to exclude Palestinians from the West Bank who had 2-year Jordanian passports from claiming Jordanian citizenship, thus limiting citizenship to Palestinians living in Jordan and Palestinians with 5-year Jordanian passports (British Refugee Council 1994, 2). Palestinians who lived in Kuwait held the 5-year Jordanian passport.

Saddam Hussein's unexpected invasion of Kuwait on August 2, 1990 created two waves of refugees to Jordan. The first lasted from August 3 to November of that year during which nearly 1.2 million refugees from Iraq, Kuwait, and other states travelled to Jordan (van Hear 1992, 16; Mruwat et al. 2001, 653; United Nations Disaster Relief Organization (UNDRO)

1990, 4). About 800,000 refugees were repatriated within two weeks of arrival but about 230,000 were Kuwaiti-Palestinians with 5-year Jordanian passports (United Nations Disaster Relief Organization (UNDRO) 1990, 7; Mruwat et al. 2001, 654). A second wave of about 65,000 Kuwaiti-Palestinians arrived in Jordan from March to August 1991 (van Hear 1992, 10; Troquer and al Oudat 1999, 37). The first wave of Kuwaiti-Palestinians fled Saddam Hussein's invasion but the second wave fled when the reinstated Kuwaiti government pushed them out with a coordinated campaign of harassment, abuse, torture, mass cancellation of work permits, school closing, and making it illegal for Palestinians to access the Kuwaiti government healthcare system (van Hear 1992, 5; Haddad 2010; Kuttab 2005, 289). The King of Kuwait said that removing the Kuwaiti-Palestinians would be a "cleansing" in revenge for Palestinian support of Saddam Hussein's invasion (Haddad 2010; Kuttab 2005, 288-289; Ibrahim 1991; Rosen 2012, 77).

Many of the Kuwaiti-Palestinian refugees had been working and living in Kuwait for decades and the majority had never lived in Jordan. They moved to Kuwait from the West Bank in two waves from the 1940s to the 1970s and over 90 percent had been out of the West Bank for more than 10 years, 43 percent for more than 20 years, and nearly a quarter had emigrated prior to 1960 (Troquer and al Oudat 1999, 37-38). Thus, Kuwaiti-Palestinians only had the faintest connection to Jordan because Jordan's grant of citizenship did not require actual residence (van Hear 1995, 353). As a result, "[t]he majority ... were unfamiliar with Jordanian culture and were economically maladapted to a country in which most have never lived" (Troquer and al Oudat 1999, 37). Despite their unfamiliarity with Jordanian culture and its political system, the refugees could immediately work, live, vote, lobby the government, and affect Jordan's economic institutions (van Hear 1995, 364).

Anti-Palestinian sentiment in Jordan was strong during the 1980s and early 1990s. "They have their own country; let them go and live there" was a common Transjordanian sentiment (Mruwat et al. 2001, 651). Many Palestinians considered their displacement from Kuwait as

the "third wave" of Palestinian refugees equivalent in its personal and socio-economic impact to the displacements of the Arab-Israeli War and after the Six Day War (van Hear 1992, 17). Yasser Araft, head of the Palestinian Liberation Organization, said, "What Kuwait did to the Palestinian people is worse than what has been done by Israel to Palestinians in the occupied territories" (Rosen 2012, 76). Kuwaiti-Palestinians, faced with circumstances as bad as anything Palestinians had experienced in the past, fled to a new country with unfamiliar culture and institutions.

3   Jordan as a Natural Experiment

The movement of Kuwaiti-Palestinians into Jordan was an exogenous shock, and thus an excellent candidate for a natural experiment, because it was caused by outside actions and not by changes in the Jordanian economy, policy, or institutions.

First, Saddam Hussein's invasion of Kuwait was unexpected by Jordan, Kuwait, the Kuwaiti-Palestinians, and the rest of the world. The surge of refugees was so sudden that they began to leave Kuwait for Jordan the day after the invasion (United Nations Disaster Relief Organization (UNDRO) 1990, 5). In September 1990, the Jordanian government did not even realize that many of the refugees were Jordanian citizens and they had no idea how many would arrive during the first wave (UNDRO 1995, 6; UNDRO 1990, 18). Likewise, the second wave of Kuwaiti-Palestinians was a calculated and intentional Kuwaiti government expulsion that Jordan did not cause or anticipate (van Hear 1998, 84). The Palestinians in Kuwait were a large, well-established, and long-settled community that was equal to approximately 20 percent of that country's population in 1990 and there was little expectation that it would be permanently uprooted (van Hear 1998, 142-143). The Kuwaiti-Palestinians moved because they were forced to (Colton 2002, 67).

Second, there was no change in Jordanian policy that attracted the Kuwaiti-Palestinians.

The 1988 reform to citizenship laws did not affect the Kuwaiti-Palestinians who already held 5-year Jordanian passports. Jordan was poorer than Kuwait and in the midst of a serious economic contraction, so the Jordanian economy did not attract them. Kuwaiti-Palestinian salaries in Jordan were approximately 30 percent of average monthly pay in Kuwait (Colton 2002, 75). The economic crisis in Jordan actually worsened during the Gulf War, providing even less of an economic reason for Kuwaiti-Palestinians to move (Gelos 1995).

Third, the number of Kuwaiti-Palestinian refugees was about 10 percent of Jordan's pre-Gulf War population. By contrast, the surge of *Marielitos* to Miami in 1980, a frequently cited natural experiment in the immigration literature, was just over 7 percent of Miami's pre-Mariel population. Unlike the *Marielitos*, the Kuwaiti-Palestinians could not leave Jordan in the same way that some *Marielitos* eventually left Miami and moved to areas of the United States with more favorable economic conditions (Peri and Yasenov 2017, 5).

Fourth, Kuwait also had a lower quality of economic institutions compared to Jordan in 1990. Kuwait had the 70th freest economy in the world in 1990 compared to Jordan's rank of 54 so the Kuwaiti-Palestinians were not going to bring experience of superior economic institutions with them (Gwartney et al. 2015). While this limits this paper's application to studying institutional change in the developed world as a result of immigration, it does show that nations with weaker institutions can be substantially improved by sudden surges of migration.

Another positive feature of this natural experiment is that there was a substantial population of Palestinians already living in Jordan. A big population of co-ethnics could weaken the case for an exogenous shock, but in this case, the Kuwaiti-Palestinians also faced lower transactions costs to enter established political and economic networks occupied by their co-ethnics. Instead of spending time figuring out the local institutions, the Kuwaiti-Palestinians had an immediate impact on Jordanian economic institutions facilitated by networks of their longer-settled co-ethnics (van Hear 1998, 158). This is similar to how the large population of

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Cubans living in Florida in 1980 helped facilitate the rapid economic integration of *Marielitos* into the labor market.

An additional upside to studying Jordan is that refugee surges tend to upset ethnic balances and produce governing tensions, especially when the refugees possess ethnic ties with large groups in the host country. The surge's upsetting of ethnic balances and the governing coalition likely explain Jordan's subsequent economic reforms. The frequent result of such refugee surges in developing countries are terrorism, civil war, and the spread of conflict but did not occur in Jordan (Buhaug and Gleditsch 2008, 215; Salehyan and Gleditsch 2006, 343).

The last and best feature of this sudden exogenous surge is that the Kuwaiti-Palestinians had full legal, political, and economic rights immediately upon entering Jordan, a situation unique in the Arab world (Zureik 1994). There were few barriers to the Kuwaiti-Palestinians immediately affecting Jordanian economic institutions.

However, three features of this exogenous shock make it less useful as a natural experiment. The first is that the Kuwaiti-Palestinians were overwhelmingly Sunni Muslims, the same as 90 percent of Jordan's population. Although there were ethnic differences between the two groups, religious similarities may have helped smooth integration. The second is that Jordan did not have a democracy like other nations that accepted large numbers of immigrants. Although Jordanians voted in the 1989 elections and expected future elections, they were unsure of their democratic rights and their power to influence state policy. Perhaps the institutions of Jordan's government limited the influence of the Kuwaiti-Palestinians by virtue of also limiting the political power of Transjordanians. Third, Jordan did not have a welfare state comparable to those of the developed world (Brynen 1992, 81).

4 Institutional Change in Jordan

We use the Gwartney et al. (2015) Economic Freedom of the World (EFW) to measure changes in Jordan's economic institutions. The EFW index is a reasonable proxy for economic institutions and has been used in hundreds of peer-reviewed papers that finds greater improvements to economic freedom are associated with higher levels of income, growth, and a host of other improved economic outcomes (Hall and Lawson 2014). The EFW index incorporates 42 variables across five broad areas including the size of government, legal structure and property rights, access to sound money, freedom to trade internationally, and regulation of credit, labor, and business (Powell et al. 2017). At its most basic level, the EFW index measures the degree of government interference with individual and private groups' freedom to buy, sell, trade, invest, and take risks. To score high on the EFW index, a nation must keep taxes and spending low, protect private property rights, maintain stable money, keep the borders open to trade and investment, and exercise regulatory restraint (Powell et al. 2017). Before 2000, the EFW was computed in 5-year intervals, for which we use a cubic spline interpolation method to expand to the yearly level.[2]

Jordan's absolute economic freedom score was 5.43 in 1990 and rose rapidly to 6.14 in 1995 and then 7.06 by 2000 (Figure 1). It also increased relative to the average economic freedom score for all non-developed, OECD, and Organization of Islamic Cooperation (OIC) nations after 1990 (Figure 1). Relative to all non-developed nations, Jordan went from having an absolute economic freedom score of 0.5 above all non-developed countries in 1990 to 1.1 points above in 2000. Relative to Organization of Islamic cooperation countries, Jordan went from 1 point ahead in 1990 to 1.5 points ahead in 2000. It also closed the gap with OECD countries from 1.3 in 1990 to around 0.5 in 2000. Jordan's economic freedom score was slightly above those of the non-OECD world in 1975, but it converged with the

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[2]Although this process introduces a systematic source of serial autocorrelation, we compute standard errors clustered at the country level to ensure proper statistical inference.

economic freedom score of the OECD nations by the early 2000s (Figure 1). Relative to the OECD mean, Jordan's economic freedom score gap widened from 0.50 points to 1.12 points from 1980 to 1990 but then narrowed to 0.57 in 2000 and 0.44 in 2002 (Figure 2). Jordan's economic freedom score climbed from one similar to the average of the non-OECD world in 1980 to one much closer to the OECD mean in 2002.

5   Methodology

Our goal is to estimate the difference between the observed economic freedom score in Jordan after 1991 compared to what the score would have been without the surge of Kuwaiti-Palestinian refugees. We collect data for countries' economic characteristics from the World Bank to control for aspects of a country's economic performance, population characteristics, and degree of development and globalization. These time-varying controls include a country's GDP in current US dollars, population, fraction living in urban areas, international migrant stock, and foreign direct investment. Any missing values in these economic time series were interpolated using a cubic spline. Additionally, we control for country institutional characteristics using the polity index and the executive constraints measure from the Polity IV dataset from the Center for Systemic Peace. We restricted our sample to 1980 through 2002. Data availability forced us to start in 1980 and the American invasion of Iraq in 2003 forced us to end in 2002 to avoid the potential confounding effects of the renewed refugee surge to Jordan that began as a result of that conflict.

First, we use difference-in-differences, which is a technique that calculates the effect of a treatment by comparing the average change over time of the treated unit to the average change of a control group. This makes it useful where controlled experiments are not possible. Difference-in-differences requires panel data that includes treated and untreated cross-sectional components and time periods before and after the treatment. This method

requires us to assume that the treated unit and control group will follow parallel trends over time, calculate the difference-in-the differences between the groups before and after treatment in order to estimate a treatment effect, and check whether the treatment effect is statistically significant. In practice, this involves estimating a model in the form:

$$EFW_{it} = \alpha_i + \varphi_{rt} + \delta D_{it} + \mathbf{X}'_{it}\beta + \varepsilon_{it} \tag{1}$$

where EFW_{it}^j is the economic freedom score j for country i in year t. $\mathbf{X}_{it}$ is a vector of control variables for GDP and population growth, fraction of the population living in urban centers, growth in the international migrant stock, infant mortality rate, and measures of political institutions from the Polity IV dataset. α_i and φ_{rt} are country and interacted region-year fixed effects to absorb time-invariant country effects and yearly factors affecting countries on a regional basis, respectively. We are interested in the coefficient δ, which measures the estimated effect of the Jordanian immigration shock on indexes of economic freedom. Standard errors are clustered at the country level.

Second, we use the Synthetic Control Method (SCM) to create a synthetic counterpart to Jordan based on a weighted average of the economic freedom scores and other institutional measurements of countries that are similar to Real Jordan. The weights are based on the similarity of indicator variables of these countries to the same variables for Jordan. SCM places more weight on explanatory variables that influence the outcome variable more significantly (See Abadie et al. 2010, Abadie et al. 2015 for a more technical discussion). This method creates a control group by synthesizing changes in a group of countries similar to Jordan to create a "Synthetic Jordan" that represents the policy outcomes the country would have experienced if its economic freedom was a weighted average of other governments in the control group.

SCM developed in Abadie and Gardeazabal (2003) is applicable to measure the effects

of an exogenous shock on policy. The SCM has been used to study reactions to numerous policy changes such as terrorism in Spain (Abadie and Gardeazabal 2003), whether California's tobacco control program affected cigarette purchases (Abadie et al. 2010), how Hugo Chavez's policies affected economic outcomes in Venezuela (Grier and Maynard 2016), how the unification of East Germany and West Germany affected the latter's economic growth (Abadie et al. 2015) and how immigration to Israel impacted Israel's economic institutions (Powell et al. 2017).

SCM requires a group of countries or a "donor pool" similar to Jordan in order to construct the synthetic version. We built a donor pool from members of the Organization of Islamic Cooperation (OIC). The donor pool needs to be restricted to a subset of countries with similar economic processes, history, or geography to avoid statistical overfitting that can occur from including the idiosyncratic variations from a large number of unrelated countries (Abadie et al. 2015). OIC countries prevent such overfitting because they have similar economic institutions due to their common historical origins, cultural, governmental, and religion.

6 Empirical Results

In this section we present our estimates for the impact of the Jordanian refugee shock on the country's economic freedom. This section proceeds as follows: first, we present results for difference-in-differences regressions for the impact of the Jordanian immigration shock on the economic freedom index under multiple conditions; next, we consider the SCM to estimate the effect of the immigration shock by creating a synthetic Jordan as a weighted combination of related OIC countries; finally, we present multiple robustness tests for both our regression specifications and SCM analyses.

6.1 Results – Difference-in-Differences

We first present difference-in-differences estimates for the treatment effect of Jordan's immigration shock on measures of economic freedom. Results for these fixed effects regressions are presented for the total freedom index in Table 1 under multiple specifications. Column 1 shows results of a naïve one-way fixed effects specification, including only country fixed effects and a set of time-varying controls. Although the estimated coefficient δ indicates an increase in the total economic freedom index of only 0.17 of one point, this specification does not account for trends in economic freedom over time and necessitates the addition of controls for temporal factors. In Columns 2 and 3, we include a linear time trend and year fixed effects; however, their inclusion yields the same pattern of statistical insignificance. Finally, Column 4 presents our preferred specification with interacted region-year fixed effects. This specification allows us to net out trends in economic freedom affecting countries within a common geographic region over time. Under this specification we estimate an increase in Jordan's average freedom score of nearly 0.5 points as a result of the immigration shock in 1990, significant at the 5% level.

Similarly, we consider the individual components of the economic freedom index to gain a clearer picture of what aspects of the index drove Jordan's rise in economic freedom. Using our preferred specification, which includes country and interacted region-year fixed effects, we estimate Model 1 for each index component and present results for these specifications in Table 2. Our results indicate substantial gains in Jordan's score for its legal system and for sound money. These improvements amount to nearly 1.5 points on the legal system scale and 1 point on the sound money scale, significant at the 1% and 5% levels respectively. This substantial improvement in Jordan's legal system score indicates that the arrival of Kuwaiti-Palestinians as Jordanian citizens yielded significant, positive changes in the country's legal system. Similarly, improvements in the score for sound money indicate that the surge in Kuwaiti-Palestinian migration provided a stabilizing effect for the Jordanian economy, as the

Jordanian economy itself was in the midst of a recessionary period at the time of their arrival. This estimated economic stabilization is consistent with results presented by Storesletten (2000), who finds that increases in immigration populations in the United States stabilizes government finances.

Next, we consider the sensitivity of our estimates to varying country subsamples, including the omission of OECD countries, OECD countries plus Jordan, and OIC countries only. Results for these regressions are presented in Table 3. First we exclude the OECD countries from our sample, as shown in Panel A. We find the same pattern of improvement in Jordan's total economic freedom score of nearly 0.6 points – almost 10% higher than the full sample estimate. Furthermore, we also find the same significant improvements in Jordan's legal system and sound money scores of 1.3 and 1.2 points, respectively. Most notably, our estimates for the impact of Jordan's immigration shock on its total freedom score and sound money score are higher when we exclude the OECD countries which typically possess more stable monetary and financial systems.

Additionally, we consider a subsample of OECD countries and Jordan together, for which results are shown in Panel B of Table 3. The inclusion of OECD countries renders the aforementioned changes in Jordan's total freedom score insignificant. However, we find a significant improvement in Jordan's legal system score of nearly 1.3 points relative to the OECD countries. This result suggests that the influx of Kuwaiti-Palestinians led to an improved legal system in Jordan in excess of improvements in the OECD countries after controlling for country characteristics and regional trends. This result suggests that not only did the Kuwaiti-Palestinian refugees transition into Jordanian society, they also brought substantial improvements in the Jordanian legal system.

Finally, we consider a subsample consisting of only OIC countries, for which regression results are shown in Panel C of Table 3. Considering how Jordan's economic freedom changes relative to its OIC peers, we again find a substantial improvement in Jordan's total economic

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freedom score of nearly 0.57 points – a comparable estimate to our comparisons with non-OECD countries in Panel A. Similarly, we find the largest increases in Jordan's legal and monetary system scores of nearly 1.76 and 1.21, respectively. This result suggests that the immigration shock in Jordan led to significant improvements in Jordan's economic freedom that surpassed similar countries in the OIC.

Altogether, these results show that the 1990-1991 immigration shock in Jordan led to significant improvements in economic freedom along multiple dimensions. We find significant improvements in overall economic freedom when comparing Jordan to all countries in our sample, which is robust to the exclusion of OECD countries and the limiting of our sample to OIC countries. Furthermore, we find striking improvements in Jordan's legal system score – indicating improvements of over 1 to 1.7 points in each specification. Since Kuwaiti-Palestinians entering Jordan were able to participate in Jordan's political systems immediately, this result suggests that immigrant participation in the Jordanian political system improved it significantly relative to other nations. Similarly, we find improvements in Jordan's score for sound money, indicating improvements in Jordan's economic stability following the Kuwaiti-Palestinian immigration surge. One potential explanation for this may be rooted in the expansion of the tax base created by the influx of refugees, as considered by Storesletten (2000). In sum, our regression analyses indicate positive and substantial gains to economic freedom in Jordan resulting from the surge in Kuwaiti-Palestinian refugees.

6.2 Results – Synthetic Control Method

We also consider the SCM of Abadie and Gardeazabal (2003), Abadie et al. (2010), and Abadie et al. (2015) among others. Using this method we seek to create a Synthetic Jordan as a convex combination of comparable nations, which we select from 23 OIC nations with complete data for economic indicators and the EFW. To create our Synthetic Jordan, we consider a set of control variables to achieve the best fit, as measured by a small root mean

squared prediction error (RMSPE). Table 4 shows the selected predictors and their resulting means. Following Abadie et al. (2010) we select three lags of our outcome, the economic freedom index, to consider pre-treatment trends in the EFW index. Similarly, Table 5 presents the relative weights assigned to each OIC country, showing the highest weights associated with Gabon, the United Arab Emirates, Bahrain, and Syria. Figure 4 presents a plot of Jordan's economic freedom score over the sample period relative to Synthetic Jordan, indicating a clear divergence after the Kuwaiti-Palestinian refugee shock in 1990. Using this methodology, we estimate an increase in Jordan's economic freedom index of nearly 0.48 points, which is significant at the 1% level using a Newey-West (1987) standard error, adjusted for two lags of autocorrelation. Overall, this test reinforces our former finding of a positive effect of the immigration shock on Jordan's economic freedom.

6.3 Robustness

In this section we present a variety of robustness checks to reinforce our estimates of the impact of the Kuwaiti-Palestinian refugee shock on Jordanian economic freedom. We first consider a variable selection framework using Lasso to ensure that our results are robust to the effects of collinearity between our various macro indicators. Finally, we examine two forms of specification checks for our SCM estimates, including the in-place and in-time placebo methods of Abadie et al. (2010).

6.3.1 Verifying Regressions

Within the presence of multiple highly correlated macroeconomic and demographic indicators, we employ the double-selection model selection framework of Belloni, Chernozhukov, and Hansen (2014) to assess the sensitivity of our estimates to the removal of potentially redundant regressors. For this procedure, we first run a Lasso regression of each economic freedom index component on the entire set of controls. Next, we run a second lasso regression

of the Jordan indicator on the full set of controls. Finally, we run a final OLS regression of the economic freedom index on the regressors kept in each stage.[3] This two-step procedure mitigates concerns that variables dropped in the first step may be related to the treatment, therefore leading to omitted variable bias and impeding inference.

Results for these double-selection regressions are presented in Table 6. Column one verifies our result from Table 1 and indicates a significant rise in the total freedom score by nearly 0.5 points as a result of the Jordanian immigration shock with the double-selection framework choosing the exact model. Similarly, the double selection framework shows the same improvements in the average scores for legal systems and sound money of nearly 1.5 and 1.0 points, respectively.

6.3.2   Verifying the Synthetic Control Group

Our next robustness check is the in-time placebo. We conducted an in-time placebo by moving the intervention period to the range of years from 1985-1989 to see if a synthetic control based on the new pre-intervention period variables loses its ability to mirror changes in Jordan's economic freedom score. If changing the intervention date results in a synthetic control that is not close to the 1990 intervention date then this robustness test should decrease our confidence that the break observed in 1990 was caused by the surge of Kuwaiti-Palestinians. Plots for these estimates are presented in Figure 5 and show a clear similarity between pre-treatment trends leading up to the 1990 immigration shock.

We perform an additional robustness test in which we assign the 1990 immigration shock as a treatment to each other country in-sample and estimate a synthetic control unit for each country. Results for this test are shown in Figure 6. The black line represents the difference between Real Jordan and Synthetic Jordan, while light grey lines indicate the gaps

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[3]In both steps we do not penalize either set of country- or interacted region-year fixed effects. Since we assume that country characteristics and regional trends are important to explain disparities in economic freedom scores beyond variation in economic and demographic indicators, we opt not to penalize these effects.

between other real and synthetic countries in our sample. Figure 6 shows that most countries' synthetic groups provide a good fit for pre-treatment trends; however, the presence of some outliers indicates that a convex combination of countries may not be useful to construct a Synthetic Jordan.

7 Discussion

Jordan's economy and government finances were in desperate shape for years before the surge of Kuwaiti-Palestinians. Successive Jordanian governments showed desire to liberalize and privatize much of the state-dominated economy but they did not follow through. The surge of Kuwait-Palestinians upset the ethnic balance enough to prompt a change in the ethnic composition of the governing coalition by including Palestinians who favored liberalization and privatization. The widening of membership in the governing coalition to include a group that supported liberalization and privatization was responsible for the committed and sustained economic reforms that followed. This change in the governing coalition would not have occurred without the refugee surge upsetting Jordan's ethnic balance.

7.1 Economic Reform Prior to the Kuwaiti-Palestinians

The Jordanian government had been debating economic reform throughout the 1980s. A 1985 privatization plan and other austerity attempts in the mid-1980s failed to liberalize the economy. The government established the Economic Consultative Council in 1986 to jump start privatization and economic liberalization but later suspended it in 1989 after zero accomplishments (Knowles 2005, 178). The government was not seriously pursuing a privatization or liberalization policy as Jordan fell back on Keynesian fiscal stimulus to boost state employment in the 1980s. Government debt grew to 195 percent of GNP in 1989 up from 40 percent in 1980 (Brynen 1992, 89).

The growing debt prompted Jordan to seek an emergency aid and debt-relief loan package from the IMF in 1989. According to Prime Minister Mudar Badran in February 1990, that "economic reform program is principally based on improving the efficiency of the public sector and reducing it as far as possible; and on increasing, broadening, and diversifying the private sector's investment opportunities" (Knowles 2005, 165). The loans contained conditions intended to prompt Jordan to liberalize its economy, but the IMF cancelled the conditions after the refugees arrived and deficits continued to climb unabated (Troquer and al Oudat 1999, 40).

The crucial problem for the Jordanian government was that the IMF loans diminished political support for the regime. The reforms were so politically unpopular that they sparked riots in the town of Ma'an, a political base of Bedouin support for the monarchy that was suffering more than other regions from the economic downturn (Kanaan and Kardoosh 2002; Ryan 2003; Amerah 1993, 28). The anti-IMF riots spread from Ma'an to other cities in the south that had overwhelmingly Transjordanian populations that were supposedly the bedrock of the monarchy's popular support in a country starkly divided between Transjordanians and Palestinians (Sütalan 2006, 75).

Transjordanian rioting and resistance to previous reform efforts explain their failure prior to the surge of refugees. The Transjordanians opposed liberalization because they were the beneficiaries of the state-dominated economic system. According to the World Bank, "[r]esistance to reforms is rooted in the protection, privilege or subsidy enjoyed by many. Private firms have had the protection of high tariffs, or been guaranteed monopolies ... Public enterprises ... often enjoy monopoly status. Civil servants have enjoyed the privileges that go with licensing and other regulatory powers. Farmers have benefited from nearly free irrigation. Segments of each of these groups have protested a proposed reform abolishing some benefit to them" (The World Bank Group 1995, 7). Reducing government expenditures, privatizing industries, and liberalizing the economy would have diminished the incomes of

Transjordanians while benefiting the private sector Palestianians who were living in Jordan (Sütalan 2006, 81). These economic disagreements were more intense because they also fell along ethnic lines. The economic and debt crises, diminishment of Transjordanian political support, and a large Palestinian population created a fragile political situation on the eve of the surge of Kuwaiti-Palestinian refugees in 1990.

7.2 Refugees Jump started and Sustained the Economic Reforms

The regime's desire to survive is why the surge of Kuwaiti-Palestinians led to economic liberalization instead of political repression. The Jordanian monarchy has survived longer than most of its neighbors by co-opting and incorporating political, ethnic, religious, regional, tribal, and economic groups into its governing coalition rather than attempting to destroy them (Mufti 1999, 101). The notable exception to this was a very brief civil war in 1970-71 when the Jordanians forced out a large number of Palestinian militants who operated bases for the guerrilla campaign against Israel, a destabilizing action that the armed forces and the monarchy were not eager to repeat.

The economic situation after the Kuwait-Palestinians arrived was desperate. The refugees expanded the size of the labor force by 12 percent and accounted for 27 percent of the unemployed in 1991 (Amerah 1993, 8; van Hear 1998, 166). The Jordanian government estimated that GDP declined by 30 percent in the last five months of 1990 a Great Depression level decline in output (Piro 1998, 101). It was only at this stage that the government embraced privatization and liberalization in order to guarantee its political survival. As the Jordanian government saw it, their most important task was to reform the economic system to get the refugees working without expanding the already debt-ridden public sector (al Khouri 2007, 4; Troquer and al Oudat 1999, 42).

In January 1991, in the midst of the refugee surge, Prime Minister Mudar Badran favored "[e]volution not revolution" of economic policy by liberalization and privatization with the

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ultimate goal of guaranteeing the survival of the state (Mufti 1999, 113; Knowles 2005, 182-189). Prime Minister Taher al-Masri succeeded Badran in mid-1991 and continued his policies by saying that it is "no longer reasonable that the public sector should assume the responsibility of running commercial and industrial companies and institutions, or interfere ... in pricing policies, and confiscate the freedom of the private sector" (Knowles 2005, 165). The immediate beneficiaries were the long-settled Palestinians who already dominated the private sector and the newly arrived Kuwaiti-Palestinians eager to enter the workforce and start firms (Chemonics International 1993, 6; Brynen 1992, 81; Piro 1998, 70; Sütalan 2006, 81).

The major cleavage in Jordanian society and their governing coalition was between the Palestinians and Transjordanians (Chemonics International 1993, 11). The refugees upset that ethnic balance and created an opportunity for the monarchy to gain Palestinian support to help compensate for the diminishment of Transjordanian support, a move long feared by the latter. In fact, the Transjordanians attempted to forestall such a shift in the governing coalition by severing political ties with the West Bank in 1988, limiting Palestinian immigration, reforming election laws to decrease Palestinian representation in Parliament, and considering a peace treaty with Israel that was opposed by the Palestinians (Mufti 1999, 104; Brynen 1992, 88-89; Sütalan 2006, 38-39).

The refugee-induced sudden and large demographic shift made that feared political strategy possible (Brynen 1992, 78). Previous aborted reform efforts during the 1985 privatization plan, the 1986 Economic Consultative Council, and the 1989 Ma'an riots against the IMF loans were followed by increased government spending pushed by Transjordanian public sector managers, rent-seekers, and bureaucrats who were powerful members of the King's governing coalition (Piro 1998, 88-89; Sütalan 2006, 74-75). This anti-reformist cycle was broken by the addition of pro-liberalization Kuwaiti-Palestinians to the governing coalition because of the refugee surge (Piro 1998, 88; Brynen 1992, 78). In June 1991, the King in-

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cluded a record seven Palestinian ministers in his pro-reform government (Kimmerling and Migdal 2003, 263).

Unlike previous reforms, the early-1990s economic reforms were intended to improve the business climate for the private sector where the Kuwaiti-Palestinians worked (Chemonics International 1993, 6). The National Charter was a symbolic move approved by King Hussein in June 1991 that distinguished the latest round of reforms from the previous failed attempts, affirmed protection for private-property rights and free markets, and was a direct conciliatory message to Palestinians (Robinson 1998, 389-392, 393-394).

The Palestinian coalition made proposed reforms more radical. Initially the government proposed to cut taxes on income and capital as well as to create a national sales tax. The Palestinian-dominated small business sector supported the tax cuts on capital and income but opposed the implementation of the sales tax. They successfully delayed the tax's implementation by years, convinced the government to exempt many goods from the tax altogether, and even convinced the state to reduce the proposed maximum rate of 12 percent to 7 percent (Knowles 2005, 198). To pay for this decrease in tax rates, the handful of Palestinians who worked in the public sector were fired, but a recovering private sector was able to absorb them (Colton 2002, 83).

Most of the Kuwaiti-Palestinian refugees filled the "middle-man minority" niche in Kuwait where they were small business owners, shopkeepers, petty traders, semi-skilled workers, traders, technicians, administrators, and managers who worked outside of the public sector (van Hear 1998, 145). They were also more likely to be white-collar workers (Swaidan and Nica 2002, 10; Naser 2016; Humphrey 1993, 6). Regulations, licensing, and other barriers to entry kept the Kuwaiti-Palestinians from competing with established state and protected enterprises (Gelos 1995, 12). In Jordan, they criticized the barriers to entry and lobbied the government for a more liberal licensing and regulatory regime that would allow them to compete (van Hear 1995, 364).

The Kuwait-Palestinians also helped to liberalize trade. Their first interaction with the Jordanian government was through customs officials who wanted to tax them. Refugee lobbying and outrage over the customs duties forced the government to suspend punitive import duties on cars and other household effects brought by the refugees (van Hear 1995, 363; Troquer and al Oudat 1999, 45). After the crisis, the settled refugees were allowed to import furniture, cars, and electrical equipment without paying taxes that eventually led to even broader liberalization (Zaghal and Freij-Dergarabedian 2004, 10). The Jordanian government also diminished tariffs on the goods imported by aid agencies (United Nations Disaster Relief Organization (UNDRO) 1990, 17).

One reason the government was able to sustain the reforms is that the refugees caused an economic and employment boom, contrary to the predictions of the Jordanian government and international aid agencies (van Hear 1995, 364,368). Jordanian GDP shrank by 10.7 percent in 1989 and a further 0.3 percent in 1990 but grew by 1.6 percent in 1991 and 14.4 percent in 1992 (Figure 3). In 1992, Jordan's tax revenue covered its expenditures for the first time in the country's history (van Hear 1995, 368; Sab 2014, 24). Total factor productivity growth accelerated in the early 1990s and macroeconomic indicators like inflation, investment as a percent of GDP, and real GDP growth improved markedly immediately after the refugee surge (Sab 2014, 24; Kanaan and Kardoosh 2002, 18). The refugees boosted the supply side by starting firms in the retail, financial, commercial, and industrial sectors (Troquer and al Oudat 1999, 43). They also invested capital in Jordan, compensating for the decline in remittances from oil workers expelled during the Gulf War (Troquer and al Oudat 1999, 41; Athamneh 2012, 8-10; El-Sakka 2014, 6; Migration Policy Center 2013, 4). Total investment as a percentage of GDP peaked at over 35 percent in 1993 as the refugees repatriated billions in investment from their accounts in Kuwait (Sab 2014, 24; Troquer and al Oudat 1999, 42; British Refugee Council 1994, Jordan Section). The annual trade on Amman's stock market more than doubled from 1990 to 1992 and foreign exchange reserves increased tenfold while

the net foreign assets of the central bank and monetary system more than doubled (van Hear 1995, 366; Gelos 1995, 10-11; Ebrahimi 1996, 2). The Jordanian government did restrict the hiring of foreign workers as a direct result of the surge, but Jordan's poor control over its own borders means that this policy had no effect on staunching foreign labor inflows (van Hear 1992, 23; Arouri 2008, 2-3, 16; de Bel-Air 2007, 6). The United Nations, in concert with the Jordanian government, proposed a series of big, internationally funded development projects to employ the refugees, but they never began or were even funded (van Hear 1992, 20). Government efforts to reduce the supply of workers and boost labor demand did not contribute to the economic recovery.

The refugees also boosted the demand side of the economy. The largely Transjordanian-owned real-estate sector boomed and, as a result, housing starts doubled and construction employment expanded (Troquer and al Oudat 1999, 43; van Hear 1998, 174; van Hear 1995, 367; de Bel-Air 2007, 10). Most of the gains were concentrated in Amman and Irbid where 82 percent and 13 percent of the refugees, respectively, settled permanently (Troquer and al Oudat 1999, 39). The Jordanian government's role was minor, as it only allocated $4 million for housing starts and land purchases for the refugees (Troquer and al Oudat 1999, 45).

The Kuwaiti-Palestinians were a pro-market, pro-liberalization cohort that lobbied and switched the balance of Jordan's governing coalition away from supporting state economic management and toward free markets. The defensive liberalization of the economy was essential to expanding employment and successfully resettling the Kuwaiti-Palestinians. The Jordanian government brought Palestinians into the governing coalition, which resulted in the liberalization of the private economy where Palestinians worked but also required cutting subsidies and benefits to the Transjordanians (Brynen 1992, 91). The resulting economic boom caused by the refugees and continued by the reforms reduced opposition to liberalization and the risk of policy backtracking. The 1993 parliamentary elections cemented the role of the refugees in the governing coalition and clearly diminished the previous support

for the Transjordanian state-managed economy relative to the new Palestinian-dominated market economy (Sütalan 2006, 107). Jordan's economic reforms would not have been successful without the reshuffled governing coalition, increased lobbying for market reforms, and economic boom caused by the Kuwaiti-Palestinians.

7.3   The World Bank

The World Bank Structural Adjustment Loans (SALs) in 1989, 1993, 1994, 1995, 1996, and 1999 and the IMF SALs in 1994, 1996, and 1999 are not responsible for Jordan's liberalization. First, Jordan's economic liberalization and recovery did not follow the subsidized or recommend intensive export-driven economic growth path set by either lender. Instead, Jordan's economic growth was extensive and concentrated in the non-tradable sectors. Population and capital expansion are better explanations for extensive growth in the non-tradable sectors of the economy than the loan packages (Harrigan, El-Said, and Wang 2006).

Second, Jordan and the World Bank delayed the implementation of the adjustment portions required by the loans and renegotiated the terms when the Gulf War broke out (Mruwat et al. 2001, 655; Ebrahimi 1996, 1). The World Bank loans had modest reform goals, the conditions of the loans were reduced, and Jordan did not follow their prescriptions anyway (Harrigan et al. 2006; Implementation Compliance and Results Report 1998). The first World Bank loan was for $150 million in December 1989 and closed in 1992 with a second tranche of $80 million approved for 1993, $80 million in 1994, $80 million in 1995, $120 million in 1996, and $120 million in 1999 (Ebrahimi 1996). The 1998 World Bank Implementation Completion and Results (ICR) report on the second loan to Jordan noted that the government's reform agenda was "moving relatively slowly and the measures supported by this project [were] modest by international standards." The 2001 World Bank ICR noted that Jordan's reforms to trade, financial, regulatory, and boosted privatizations failed to jumpstart economic growth (Implementation Compliance and Results Report 2001).

However, those policy reforms exceeded World Bank expectations while the biggest improvements were in sounder money, improved property rights and legal system, and the liberalized trade subcategories of the economic freedom score (Implementation Compliance and Results Report 2001; Gwartney et al. 2015).

Third, IMF and World Bank loans usually have a negative or, at best, a neutral impact on political and economic institutions (Powell and Ryan 2006; Knowles 2005, 114, 119). On the political front, scores measuring democracy tend to decline as foreign aid increases while IMF and World Bank loans increase the likelihood of major government crises that usually weaken governance quality (Djankov, Montalvo, and Reynal-Querol 2008; Dreher and Gassebner 2012). IMF Structural Adjustment Programs can improve human rights but only if the IMF holds an increasing percentage of the government's debts; otherwise human rights can actually worsen (Eriksen and de Soysa 2009). The most common finding is that aid has no effect on democracy (Knack 2004).

IMF, World Bank, and other forms of loans or foreign aid rarely improve economic institutions. The most common finding is that it is unclear whether loan conditionality has any effect on policy (Rodrik 1996; Knedlik and Kronthaler 2007; Doyle 2012; Burnside and Dollar 2000). Few papers find that loans and foreign aid improve institutions and, when they do, they find minor or temporary improvements that are usually confined to a small set of countries, one factor of economic freedom or a particular institutional index, and that those more successful loans only originate from the World Bank (Heckelman and Knack 2009; Boockmann and Dreher 2003; Kilby 2005; Nooruddin and Simmons 2006). There are many more papers that find loans and aid have negative institutional impacts (Center for Strategic and International Studies (CSIS) 1999; Callaghy 1986; Mosley, Harrigan, and Toye 1995; Ranis 1996; Collier 1997). In the case of Jordan, SALs did not have an impact (Sütalan 2006, 20).

Foreign aid tends to have little effect on institutions because myriad donors have differ-

ent and contradictory reform aims. In the late 1980s and 1990s Jordan was lent money and received aid from the IMF, World Bank, United States, Japan, European Union, and Germany, and it pursued many free trade agreements that encouraged different types of reform, so it is difficult to credit any one of the arrangements for prompting Jordan's policy changes.

Fourth, Jordan liberalized its economic institutions more than any of the other OIC countries that received World Bank or IMF SALs during this time period (Pfeifer 1999, 24; Knowles 2005, 99). To test this hypothesis empirically, we create a second Synthetic Jordan using a sample of OIC countries that received SALs during the pre-treatment of 1980-1989.[4] The results are nearly identical to the SCM we ran in Section 6.2 and show a clear divergence in 1990 with a root mean squared prediction error (RMSPE) of 0.01 (Figure 7). Additionally, we find that the in-place placebo shows Jordan clearly diverging in 1990 from the other OIC countries with SALs (Figure 8). This divergence would not have occurred in 1990 among these comparison countries if the World Bank or IMF SALs caused Jordan to liberalize.

The report of the World Bank ICRs, the poor institutional reform performance of other OIC countries that received SALs, the thin record of SALs prompting positive institutional reforms, and the robustness of the timing of Jordan's reforms indicate that SALs are not the cause of Jordan's reforms. Jordan outperformed all of the OIC countries that received SALs that strongly suggests that something else occurred in 1990 that prompted Jordanian reform other than a new loan.

7.4   Jordanian Institutions are Unusually Adaptive

Jordan had two possible avenues of reform to help the Kuwaiti-Palestinians into the labor market. The first was to create new rules to aid only the refugees with targeted reforms.

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[4]OIC countries that received structural adjustment loans over the span of 1980 to 1989 include: Bangladesh, Benin, Cameroon, Gabon, Guinea, Guinea-Bissau, Guyana, Indonesia, Ivory Coast, Mali, Mauritania, Morocco, Mozambique, Niger, Pakistan, Senegal, Sierra Leone, Somalia, The Gambia, Turkey, Uganda.

The second was to enact broad-based reforms that would benefit the refugees as well as the native Jordanians. Jordan mostly chose the latter (van Hear 1992, 7).

Prior to 1990, Jordan experienced several waves of refugees who became permanent settlers (Chatelard 2010). In the 1920s, Jordan had an open immigration and refugee policy with its neighbors that shaped its urban society (de Bel-Air 2007, 2). Palestinian inflows prior to 1990 prepared Jordan for adapting to integrate refugees. Because of this experience, Jordan created a well-organized humanitarian response to the new influx of refugees in 1990 and 1991 (Mruwat et al. 2001, 653). The Jordanian government rapidly appointed officials to manage the flow, coordinated agency relief efforts, distributed supplies efficiently, and accurately anticipated material demands for immediate humanitarian concerns (United Nations Disaster Relief Organization (UNDRO) 1990, 4-5). The Jordanian government was adept and competent at dealing with the Kuwaiti-Jordanians but also at quickly transporting third-country folks to their home countries (United Nations Disaster Relief Organization (UNDRO) 1990, 4,21). Jordan's government agencies and non-profit institutions had a direct monetary pipeline to international aid agencies that allowed them to rapidly ramp up their humanitarian efforts (Mruwat et al. 2001, 653; United Nations Disaster Relief Organization (UNDRO) 1990, 1-2).

Jordan closed its borders at the beginning of the flow for 40 hours, stranding 100,000 refugees on the Iraqi side of the border as leverage in bargaining for more international grants of foreign aid (United Nations Disaster Relief Organization (UNDRO) 1990, 4). Jordan tried rent-seeking from international aid organizations, but the amounts were small. For instance, Jordan estimated that it spent $55 million resettling third-country refugees, which was just over the $50.5 million that the United Nations estimated they paid (Government Accountability Office 1991, 4-5). By February 1991, Jordan only received $15 million in reimbursements (Government Accountability Office 1991, 20). Jordan mostly received aid in kind, and only 7.9 percent of all aid funds went to the Jordanian government, so they did

not gain much from rent-seeking (United Nations Disaster Relief Organization (UNDRO) 1990, 14). The Office of the United Nations Disaster Relief Co-coordinator reported that despite the scale and pace of the refugee flow, the "the Jordanian Government, however, quickly organized itself to handle the emergency (United Nations Disaster Relief Organization (UNDRO) 1990, 5)."

The Jordanian government was not the only organized institution in society that had the knowledge and interest to help refugees. Tribal, religious, familial, and other cooperative organizations stepped in to run voluntary health care clinics, legal aid, and charity organizations (van Hear 1998, 161). In the longer run, the Jordan institutions of civil society helped feed, clothe, shelter, and find work for refugees in order to encourage economic self-sufficiency (Troquer and al Oudat 1999, 46-47; United Nations Disaster Relief Organization (UNDRO) 1990, 4). Jordan's long history of welcoming large refugee flows prepared them to effectively deal with the Kuwaiti-Palestinians.

8 Conclusion

Policy shifts in response to immigration could diminish the vast gains from liberalized international labor flows. The Kuwaiti-Palestinian refugee flow to Jordan in 1990 and 1991 provides a natural experiment to see how one government changed its policy in response to a sudden, exogenous shock of refugees. Jordan's economic freedom score improved to a statistically significant extent relative to the five different comparison groups we constructed for the differences in differences test. The synthetic control method also confirmed that Jordan's economic freedom improved significantly after 1990 relative to other Islamic countries. After the surge, Jordan's economic freedom score essentially rose from that of a Middle Eastern Muslim country to that of an OECD country and it was the only Islamic country to do so.

Jordan does not have a democratic government, but it reacted as a democratic govern-

ment would by bringing the new population of refugees into the governing coalition and defensively liberalizing the economy to create political stability through economic growth (Maktabo 1998). Jordan's reaction to such a large refugee surge may be due to its peculiarly adaptive institutions and history of absorbing other massive refugee surges. This is especially striking because Jordan had relatively weak governing institutions compared to developed nations that are currently concerned over how comparatively smaller surges of immigrants will affect their institutions. The example of Jordan shows that massive immigration from the third world could actually improve economic institutions even in countries with weaker institutions.

References

Abadie, A., Diamond, A., and Hainmuller, J. (2010). Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of Californias Tobacco Control Program. *Journal of the American Statistical Association*(105), 493 − 505.

Abadie, A., Diamond, A., and Hainmuller, J. (2015). Comparative Politics and the Synthetic Control Method. *American Journal of Political Science*(59.2), 495 − 510.

Abadie, A., and Gardeazabal, J. (2003). The Economic Costs of Conflict: A Case Study of the Basque Country. *American Economic Review*(93), 113 − 132.

Acemoglu, D., and Robinson, J. A. (2012). *Why Nations Fail: The Origins of Power, Propserity, and Poverty.* New York: Crown Business.

Alix-Garcia, J., and Saah, D. (2009). The Effect of Refugee Inflows on Host Communities: Evidence from Tanzania. *World Bank Economic Review, 24*(1), 148 − 170.

al Khouri, R. (2007). *Aspects of Migration and Development in Jordan.* (Prepared for *Migration and Refugee Movements in the Middle East and North Africa*)

Alon, Y. (2007). *The Making of Jordan: Tribes, Colonialism, and the Modern State.* Taurus, New York.

Amerah, M. (1993). *Unemployment in Jordan.* Center for International Studies, Royal Scientific Society, Amman-Jordan.

Amis, J. (2012). *The Jordanian Brotherhood in the Arab Spring.* Hudson Institute.

Angrist, J. D., and Krueger, A. B. (1999). Empirical Strategies in Labor Economics. In O. Ashenfelter and D. Card (Eds.), *Handbook of Labor Economics* (pp. 1277 − 1366). Elsevier.

Arouri, F. (2008). *Irregular Migration in Jordan, 1995-2007.* European University Institute.

Athamneh, A. B. (2012). *General Overview of Migration Into, From and Through Jordan.* CARIM, European Union Institute.

Balkan, B., and Tumen, S. (2015). *Immigration and Prices: Quasi-Experimental Evidence from Syrian Refugees in Turkey.* Central Bank of the Republic of Turkey, Ankara.

Belloni, A., Chernozhukov, V., and Hansen, C. (2014). Inference on Treatment Effects after Selection among High-Dimensional Controls. *The Review of Economic Studies, 81*(2), 608 − 650.

Blau, F. D., and Mackie, C. (2016). *The Economic and Fiscal Consequences of Immigration.* National Academy of Sciences, Washington DC.

Boockmann, B., and Dreher, A. (2003). The Contribution of the IMF and the World Bank to Economic Freedom. *European Journal of Political Economy, 19*(3), 633 − 649.

Borjas, G. J. (2014). *Immigration Economics.* Cambridge: Harvard University Press.

Borjas, G. J. (2015, December). Immigration and Globalization: A Review Essay. *Journal of Economic Literature, 53*(4), 961 − 974.

British Refugee Council. (1994). *Gulf Information Project, Information Pack.* British Refugee Council.

Brynen, R. (1992). Economic Crisis and Post-Rentier Democratization in the Arab World: The Case of Jordan. *Canadian Journal of Political Science, 25*(1), 69 − 97.

Buhaug, H., and Gleditsch, K. S. (2008). Contagion or Confusion? Why Conflicts Cluster

in Space. *International Studies Quarterly*, *52*(2), 215 – 233.

Burnside, C., and Dollar, D. (2000). Aid, Policies, and Growth. *The American Economic Review*, *90*(4), 847 – 868.

Callaghy, T. (1986). The Political Economy of African Debt: The Case of Zaire. In J. Ravenhill (Ed.), *Africa in economic crisis* (pp. 307 – 406). New York: Columbia University Press.

Card, D. (1990). The Impact of the Mariel Boatlift on the Miami Labor Market. *ILR Review*, *43*(2), 245 – 257.

Carrington, W. J., and de Lima, P. J. F. (1996). The Impact of 1970s Repatriates from Africa on the Portuguese Labor Market. *Industrial and Labor Relations Review*, *49*, 330 – 347.

Center for Strategic and International Studies (CSIS). (1999). *The United States and the Multilateral Development Banks.* Center for Strategic and International Studies, Washington, D.C.

Ceritoglu, E., Yunculer, H. B. G., Torun, H., and Tumen, S. (2017). *The Impact of Syrian Refugees on Natives' Labor Market Outcomes in Turkey : Evidence from a Quasi-Experimental Design.* Research and Monetary Policy Department, Central Bank of the Republic of Turkey. (Working Paper. No. 1705)

Chatelard, G. (2010). *Jordan: A Refugee Haven.* Migration Policy Institute.

Chemonics International. (1993). *Political Economy Review of Jordan.* (HNE 0377-C-00-2086-00)

Clark, J., Lawson, R., Nowrasteh, A., Powell, B., and Murphy, R. (2015). Does Immigration Impact Institutions? *Public Choice*, *163*(3), 321 – 335.

Clemens, M. A. (2011, September). Economics and Emigration: Trillion-Dollar Bills on the Sidewalk? *Journal of Economic Perspectives*, *25*(3), 83 – 106.

Clemens, M. A., Montenegro, C. E., and Pritchett, L. (2009). *The Place Premium: Wage Differences for Identical Workers Across the US Border.* John F. Kennedy School of Government, Harvard University. (HKS Faculty Research Working Paper Series RWP09-004)

Clemens, M. A., and Pritchett, L. (2016). *The New Economic Case for Migration Restrictions: An Assessment.* (Institute for the Study of Labor Discussion Paper 9730)

Cohen-Goldner, S., and Paserman, D. M. (2011). The dynamic impact of immigration on natives' labor market outcomes: Evidence from israel. *European Economic Review*, *55*(8), 1027 – 1045.

Collier, P. (1997). The Failure of Conditionality. In J. M. Nelson and C. Gwin (Eds.), *Perspectives on Aid and Development* (pp. 51 – 77). Overseas Development Council, Washington, D.C.

Collier, P. (2013). *Exodus: How Migration is Changing Our World.* Oxford: Oxford.

Colton, N. A. (2002). Between 'Supply Shocked' Markets: The Case of Jordanian and Palestinian Returnees. In J. J. W. Wright (Ed.), *Structural Flaws in the Middle East Peace Process: Historical Contexts.* Palgrave, New York: NY.

de Bel-Air, F. (2007). *State Policies on Migration and Refugees in Jordan.* The Forced

Migration and Refugee Studies Program: The American University in Cairo, Egypt. (Paper prepared for the Migration and Refugee Movements in the Middle East and North Africa)

Dell, M. (2010). The Persistent Effects of Peru's Mining Mita. *Econometrica*, *78*(6), 1863–1903.

Djankov, S., Montalvo, J. G., and Reynal-Querol, M. (2008, Sep). The Curse of Aid. *Journal of Economic Growth*, *13*(3), 169 – 194.

Doyle, D. (2012). Pressures to Privatize? The IMF, Globalization, and Partisanship in Latin America. *Political Research Quarterly*, *65*(3), 572 – 585.

Dreher, A., and Gassebner, M. (2012). Do IMF and World Bank Programs Induce Government Crises? An Empirical Analysis. *International Organization*, *66*(2), 329-358.

Ebrahimi, F. (1996, Jun). *Structural Adjustment in Jordan.* World Bank, Operations Evaluation Department, OED Precis.

El-Sakka, M. (2014). *Migrant Workers Remittances and Macroeconomic Policy in Jordan.* (Working Paper)

Eriksen, S., and de Soysa, I. (2009). A Fate Worse Than Debt? International Financial Institutions and Human Rights, 19812003. *Journal of Peace Research*, *46*(4), 485 – 503.

Friedberg, R. M. (2001). The Impact of Mass Migration on the Israeli Labor Market. *The Quarterly Journal of Economics*, *116*(4), 1373 – 1408.

Gelos, G. (1995). *Investment Efficiency, Human Capital and Migration: A Productivity Analysis of the Jordanian Economy.* (Discussion Paper Series No. 14)

Glitz, A. (2012). The Labor Market Impact of Immigration: A Quasi-Experiment Exploiting Immigrant Location Rules in Germany. *Journal of Labor Economics*, *30*(1), 175 – 213.

Government Accountability Office. (1991). *Persian Gulf Crisis: Humanitarian Relief Provided to Evacuees from Kuwait and Iraq* (No. GAO/NSIAD-91-160).

Grier, K., and Maynard, N. (2016). The Economic Consequences of Hugo Chavez: A Synthetic Control Analysis. *Journal of Economic Behavior and Organization*, *125*(C), 1-21.

Gwartney, J., Lawson, R., and Hall, J. (2015). *Economic Freedom of the World: 2016 Annual Report.* Vancouver, BC, Canada: Fraser Institute.

Haddad, T. (2010). *Palestinian Forced Displacement from Kuwait: The Overdue Accounting.* Badil Center: Resource Center for Palestinian Residency and Refugee Rights.

Hall, J. C., and Lawson, R. A. (2014). Economic Freedom of the World: An Accounting of the Literature. *Contemporary Economic Policy*, *32*(1), 1 – 19.

Harrigan, J., El-Said, H., and Wang, C. (2006). The imf and the world bank in jordan: A case of over optimism and elusive growth. *The Review of International Organizations*, *1*(3), 263 – 292.

Heckelman, J. C., and Knack, S. (2009). Aid, Economic Freedom, and Growth. *Contemporary Economic Policy*, *27*(1), 46 – 53.

Humphrey, M. (1993). Migrants, Workers and Refugees: The Political Economy of Population Movements in the Middle East. *Middle East Report*(181), 2 – 7.

Hunt, J. (1992). The Impact of the 1962 Repatriates from Algeria on the French Labor Market. *Industrial and Labor Relations Review*, *45*(3), 556 – 572.

Ibrahim, Y. M. (1991, March 14). After the War: Kuwait; Palestinians in Kuwait Face Suspicion and Probably Exile. *New York Times*.

Implementation Compliance and Results Report. (1998). *World Bank Project ID P044139, Jordan.* The World Bank Group.

Implementation Compliance and Results Report. (2001). *World Bank Project ID P045676, Jordan.* The World Bank Group.

Kanaan, T. H., and Kardoosh, M. A. (2002). *The Story of Economic Growth in Jordan: 1950-2000.* (Working Paper)

Kilby, C. (2005). World Bank Lending and Regulation. *Economic Systems*, *29*(4), 384 – 407. (World Bank Symposia 2005)

Kimmerling, B., and Migdal, J. S. (2003). *The Palestinian People.* Harvard University Press.

Knack, S. (2004). Does Foreign Aid Promote Democracy? *International Studies Quarterly*, *48*(1), 251-266.

Knedlik, T., and Kronthaler, F. (2007). Aid and Economic Freedom: An Empirical Investigation Using the Heritage Index. *Journal of Development Perspectives*, *3*.

Knowles, W. (2005). *Jordan Since 1989: A Study in Political Economy.* I.B. Taurus and Co. Ltd., London.

Kugler, A., and Yuksel, M. (2008). *Effects of Low-Skilled Immigration on U.S. Natives: Evidence from Hurricane Mitch* (CReAM Discussion Paper Series No. 0809). Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London.

Kuttab, D. (2005). Kuwait. In P. Matter (Ed.), *Encyclopedia of the Palestinians: Revised Edition* (pp. 288 – 290). New York: Facts on File, Inc.

Lach, S. (2007). Immigration and Prices. *Journal of Political Economy*, *115*(4), 548 – 587.

Lucas, R. E. (2003). Deliberalization in Jordan. *Journal of Democracy*, *14*(1), 137 – 144.

Maktabo, R. (1998). *Membership and Political Participation in Jordan, Kuwait, and Lebanon.* FAFO Institute for Applied Social Science, Oslo.

Migration Policy Center. (2013). *The Demographic-Economic Framework of Migration.* European University Institute.

Mosley, P., Harrigan, J., and Toye, J. (1995). *Aid and Power: The World Bank and Policy-Based Lending.* New York: Routledge.

Mruwat, E., Adwan, Y., and Cunningham, R. (2001). Transforming Danger into Opportunity: Jordan and the Refugee Crisis of 1990. In A. Farazmand (Ed.), *Handbook of Crisis and Emergency Management* (pp. 649 – 657). New York: Marcel Dekker.

Mufti, M. (1999). Elite Bargains and the Onset of Political Liberalization in Jordan. *Comparative Political Studies*, *32*(1), 100 – 129.

Naser, K. (2016). The Impact of the Gulf War immigration on Jordan's Economy and its Information Technology (IT) Sector. *i-manager's Journal on Management*, *10*(3), 6 – 19.

Nooruddin, I., and Simmons, J. W. (2006). The Politics of Hard Choices: IMF Programs and Government Spending. *International Organization*, *60*(4), 1001-1033.

Overseas Development Institute. (1991). *The Impact of the Gulf Crisis on Developing Countries.* (Briefing Paper)

Peri, G., and Yasenov, V. (2017). *The Labor Market Effects of a Refugee Wave: Synthetic Control Method Meets the Mariel Boatlift* (IZA Discussion Papers No. 10605). Institute for the Study of Labor (IZA).

Pfeifer, K. (1999). How Tunisia, Morocco, Jordan, and even Egypt Became IMF 'Success Stories' in the 1990s. *Middle East Report*(210), 23 – 27.

Piro, T. J. (1998). *The Political Economy of Market Reform in Jordan.* Rowman and Littlefield Publishers.

Powell, B. (2015). *Immigration: From Social Science to Public Policy.* New York, NY: Oxford University Press.

Powell, B., Clark, J., and Nowrasteh, A. (2017). Does Mass Immigration Destroy Institutions? 1990s Israel as a Natural Experiment. *Journal of Economic Behavior and Organization*, *141*(C), 83 – 95.

Powell, B., and Ryan, M. E. (2006). Does Development Aid Lead to Economic Freedom? *Journal of Private Enterprise*, *22*(Fall 2006), 1 – 21.

Ranis, G. (1996). *On Fast-Disbursing Policy-Based Loans.* Center for Strategic and International Studies, Washington, DC. (Background Paper prepared for the Task Force on the United States and Multilateral Development Banks)

Robinson, G. E. (1998). Defensive Democratization in Jordan. *International Journal of Middle East Studies*, *30*(3), 387 – 410.

Rodrik, D. (1996). Why is There Multilateral Lending. In *Annual Bank Conference on Development Economics 1995* (pp. 167 – 193). The World Bank Group.

Rodrik, D., Subramanian, A., and Trebbi, F. (2004). Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development. *Journal of Economic Growth*, *9*(2), 131 – 165.

Rosen, S. J. (2012). Kuwait Expels Thousands of Palestinians. *Middle East Quarterly*, 75 – 83.

Ryan, C. R. (2003). *Liberalization and Deliberalization in Jordan.* Perihelion, European Rim Policy and Investment Council.

Sab, R. (2014). *Economics Impact of Selected Conflicts in the Middle East: What Can We Learn from the Past?* [IMF Working Paper, WP/14/100]. International Monetary Fund.

Salehyan, I., and Gleditsch, K. S. (2006). Refugees and the Spread of Civil War. *International Organization*, *60*(2), 335 – 366.

Storesletten, K. (2000). Sustaining Fiscal Policy through Immigration. *Journal of Political Economy*, *108*(2), 300 – 323.

Sütalan, Z. (2006). *Globalization and the Political Economy of Reform in Jordan* (Unpublished master's thesis). Graduate School of Social Sciences of Middle East Technical University.

Swaidan, Z., and Nica, M. (2002). The 1991 Gulf War and Jordan's Economy. *MERIA Journal*, *6*(2).

The World Bank Group. (1995, 29). *Report and Recommendation of the President of the International Bank for Reconstruction and Development to the Executive Directors on a Country Assistance Strategy of the World Bank Group for Jordan.*

Troquer, Y. L., and al Oudat, R. H. (1999). From Kuwait to Jordan: The Palestinians' Third Exodus. *Journal of Palestine Studies*, *28*(3), 37 – 51.

United Nations Disaster Relief Organization (UNDRO). (1990). *The Iraq/Kuwait Crisis: International Assistance to Displaced People Through Jordan.* United Nations. (Case Report)

U.S. Department of State. (1995). *Background Notes: Jordan.* Bureau of Public Affairs.

van der Vlist, A. J., Czamanski, D., and Folmer, H. (2011). Immigration and urban housing market dynamics: the case of Haifa. *The Annals of Regional Science*, *47*(3), 585 – 598.

van Hear, N. (1992). *Consequences of the Forced Mass Repatriation of Migrant Communities: Recent Cases from West Africa and the Middle East.* (United Nations Research Institute for Social Development, DP 38)

van Hear, N. (1995). The Impact of the Involuntary Mass 'Return' to Jordan in the Wake of the Gulf Crisis. *The International Migration Review*, *29*(2), 352 – 374.

van Hear, N. (1998). *New Diasporas: The Mass Exodus, Dispersal and Regrouping of Migrant Communities.* University of Washington Press.

Zaghal, A. S., and Freij-Dergarabedian, A. (2004). *Cooperation Project on the Social Integration of Immigrants, Migration, and the Movement of Persons.* European Commission, MEDA Programme.

Zureik, E. (1994). Palestinian Refugees and Peace. *Journal of Palestine Studies*, *24*(1), 5 – 17.

Figures

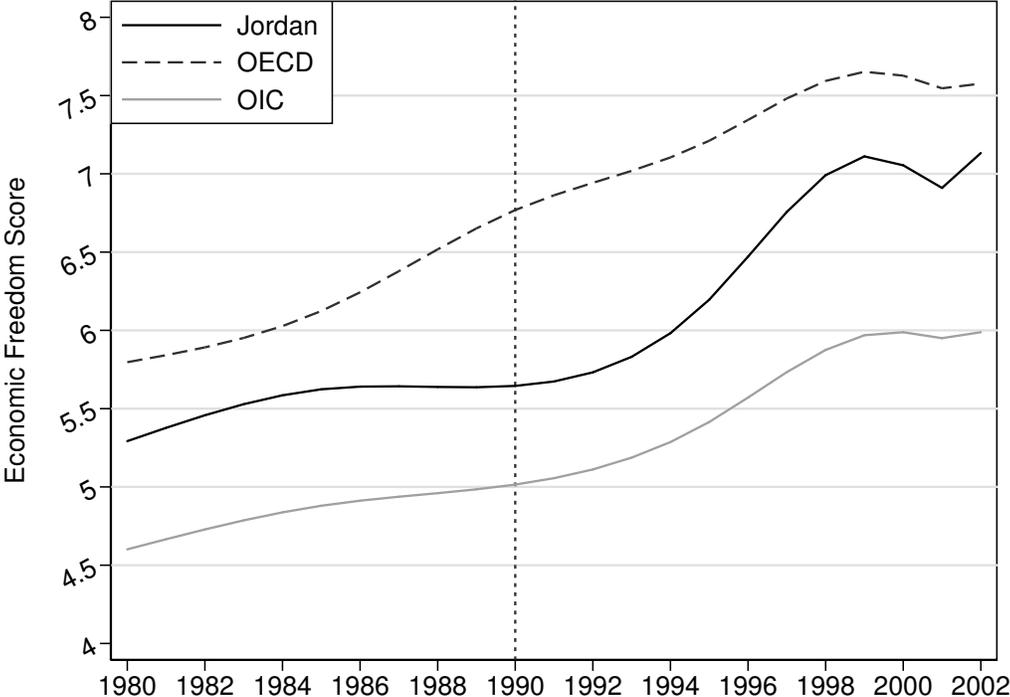Figure 1: Economic Freedom Index, 1980-2002

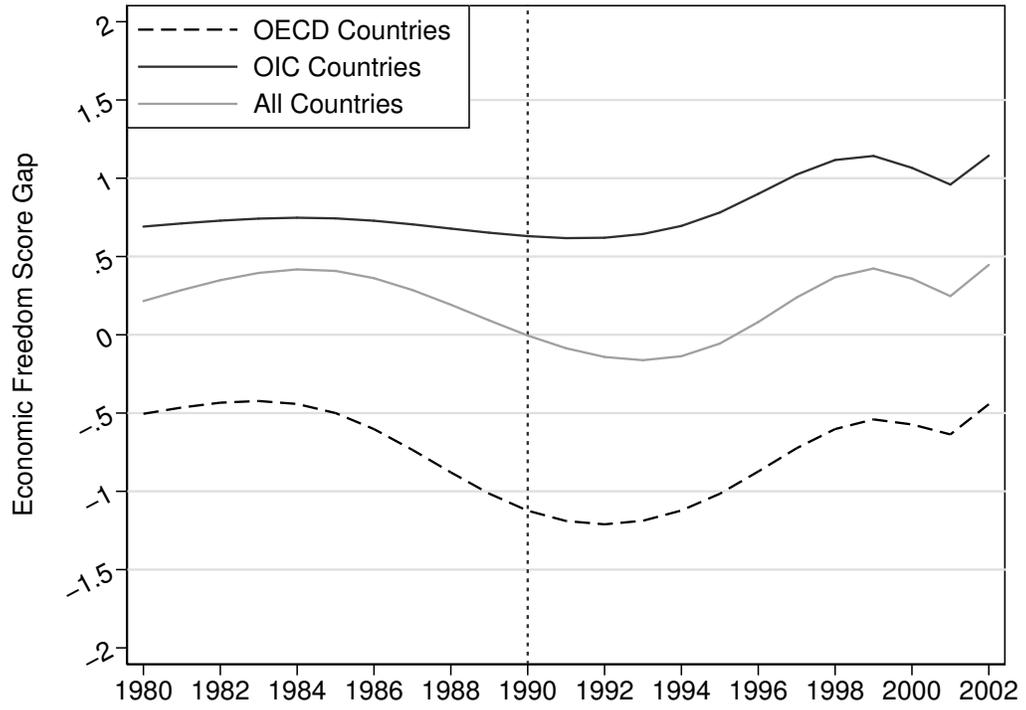Figure 2: Economic Freedom Index, Difference Relative to Jordan

Figure 3: Jordanian GDP Growth

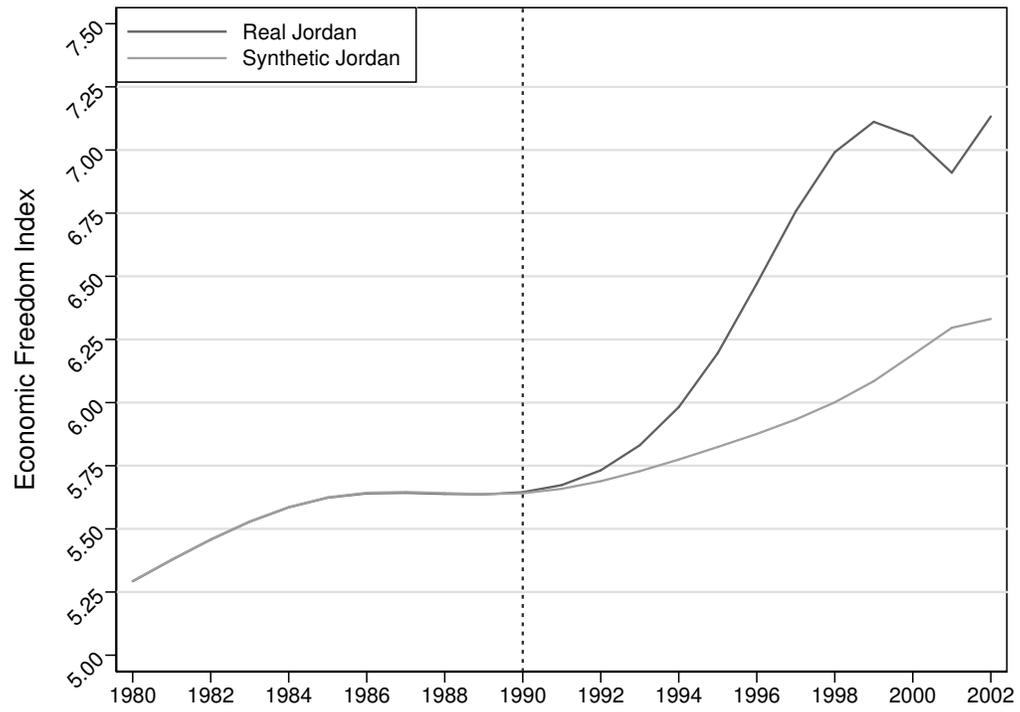Figure 4: Economic Freedom Index, OIC Synthetic Control Group
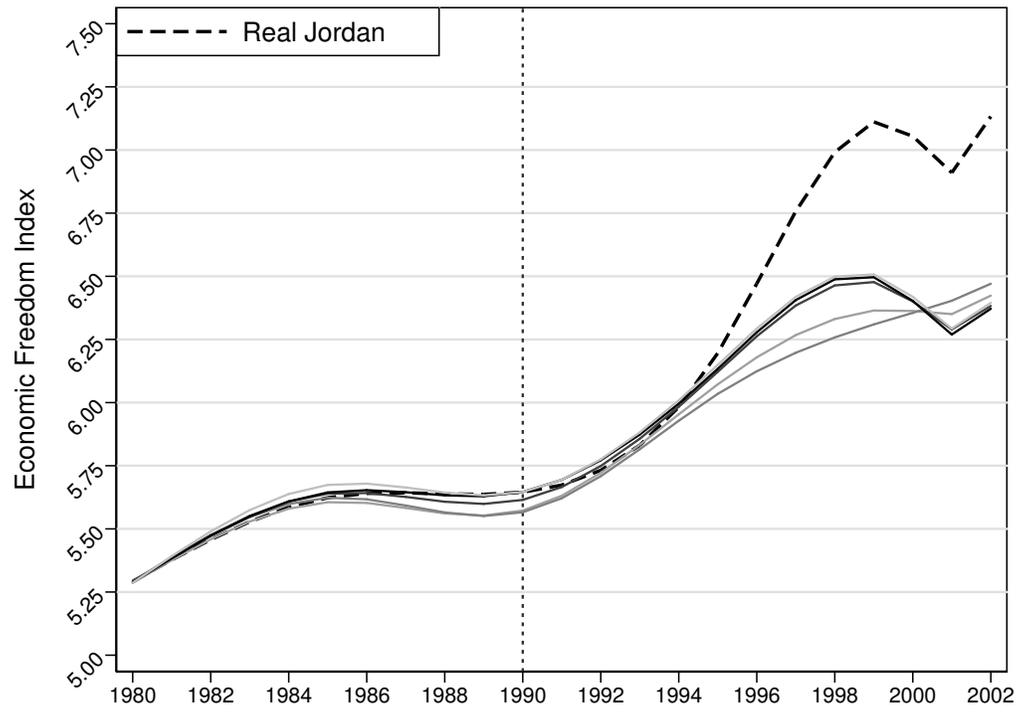
Figure 5: OIC Synthetic Control Group, In-Time Placebo

Notes: The dashed line represents Real Jordan's economic freedom score.
Each additional line represents a Synthetic Jordan with placebo treatments
in pre-treatment years 1985-1989.

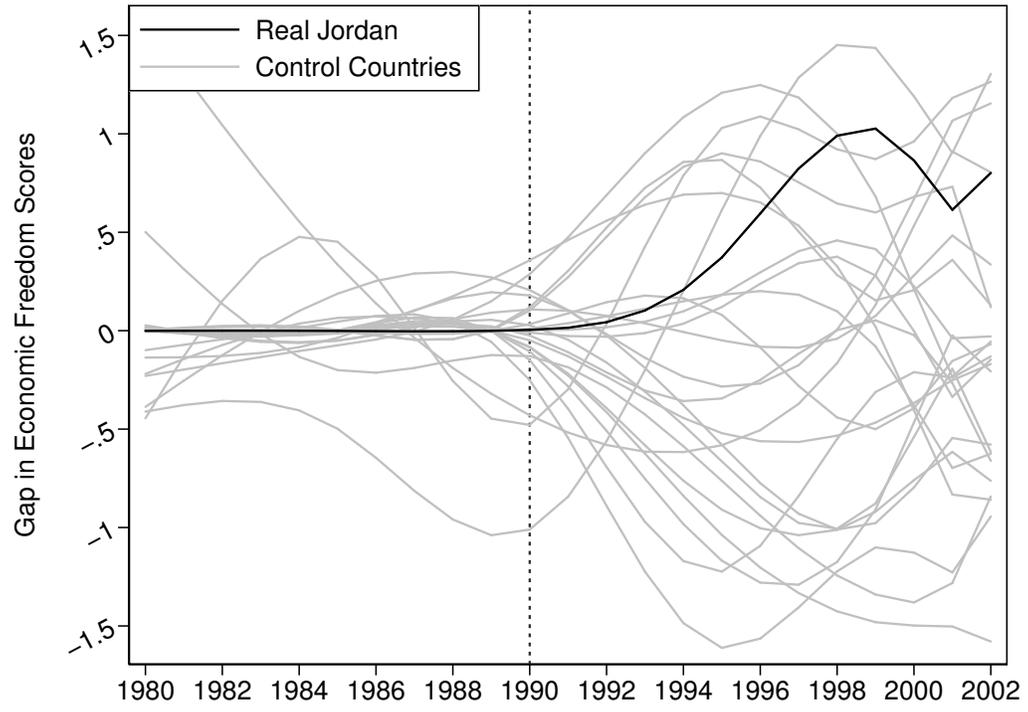Figure 6: OIC Synthetic Control Group, In-Place Placebo

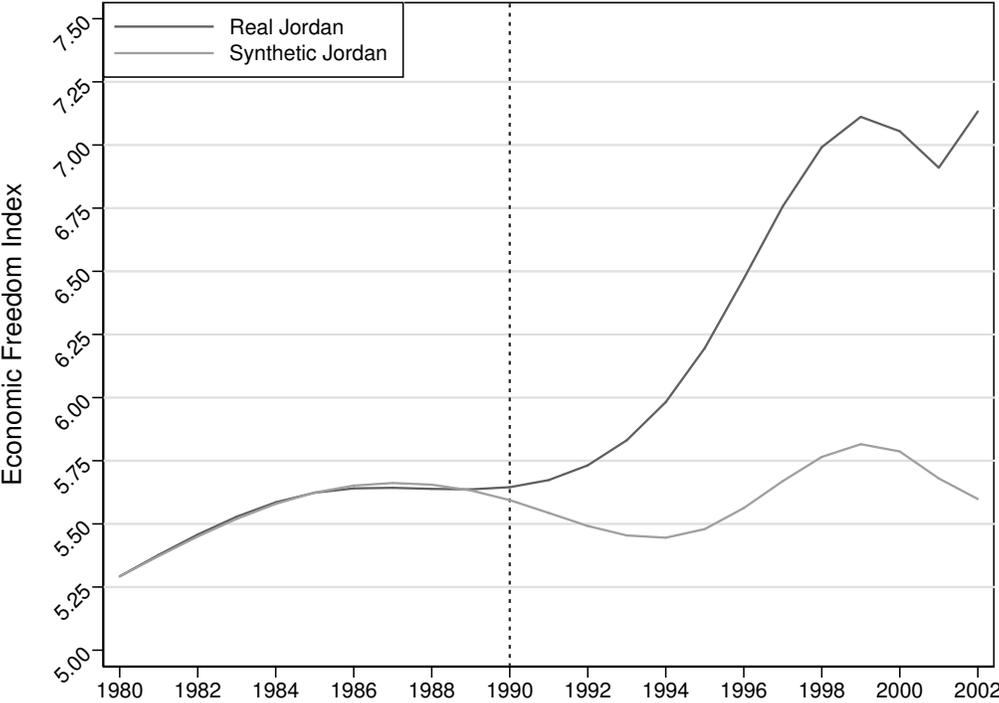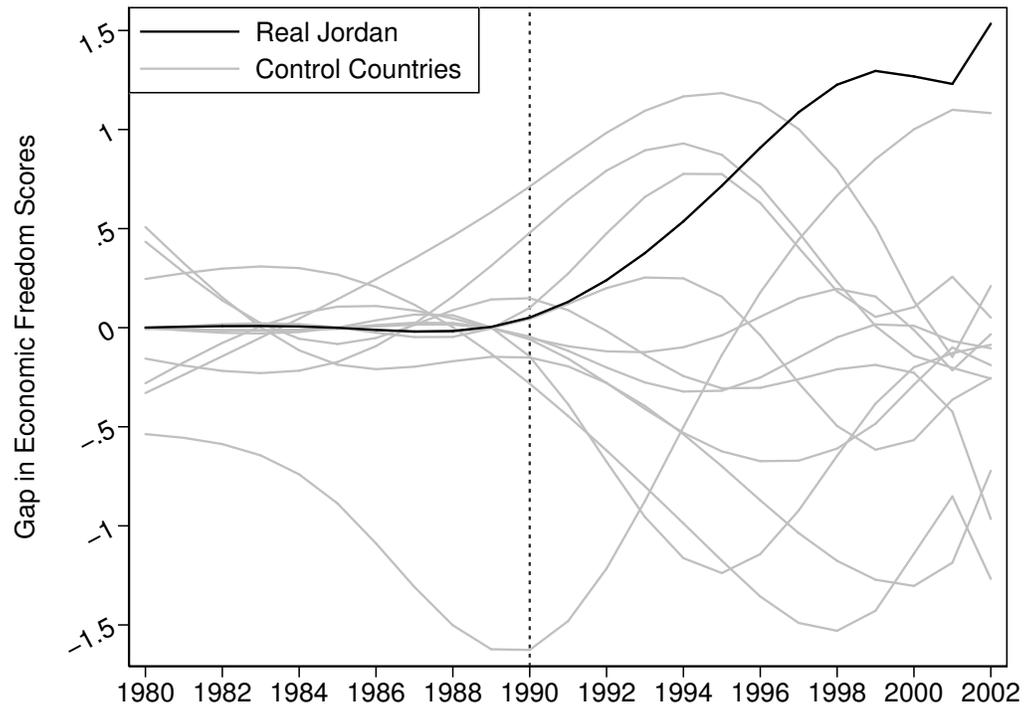Figure 7: OIC Synthetic Control Group with World Bank or IMF Loans

Figure 8: OIC Synthetic Control Group with World Bank or IMF Loans, In-Place Placebo

Tables

Table 1: Impact of Immigration Shock on Economic Freedom

	(1)	(2)	(3)	(4)
Jordan×Post-1990	0.171	0.138	0.130	0.488*
	(0.133)	(0.119)	(0.126)	(0.206)
Linear Trend		×		
Year FE			×	
Region-Year FE				×
Observations	550	550	550	550
Within R^2	0.459	0.524	0.111	0.127

Notes: The dependent variable in each specification in the total Economic Freedom Index. Each regression includes a set of time-varying economic and institutional controls, including GDP and foreign direct investment in current USD, population growth, fraction of population residing in urban areas, change in the international migrant stock, infant mortality rate, polity score (*polity2*), and executive constraint score (*xconst*). Each specification includes country fixed effects. Standard errors are clustered by country and reported in parentheses.

Significance codes: * $p < 0.05$, ** $p < 0.01$

Table 2: Impact of Immigration Shock on Economic Freedom, Index Components

	(1) Size	(2) Legal	(3) Money	(4) Trade	(5) Regulation
Jordan×Post-1990	0.110	1.507**	1.003*	-0.332	0.0709
	(0.420)	(0.343)	(0.468)	(0.327)	(0.164)
Observations	1950	1892	1960	1861	1935
Within R-Sq	0.0174	0.0445	0.116	0.0807	0.0566

Notes: The dependent variable in each specification in the total Economic Freedom Index. Each regression includes a set of time-varying economic and institutional controls, including log GDP and foreign direct investment in current USD, population growth, fraction of population residing in urban areas, change in the international migrant stock, infant mortality rate, polity score (*polity2*), and executive constraint score (*xconst*). Each specification includes country and interacted year-region fixed effects. Standard errors are clustered by country and reported in parentheses.

Significance codes: * $p < 0.05$, ** $p < 0.01$

Table 3: Impact of Immigration Shock on Economic Freedom, Sensitivity

| | Index | Index Components | | | | |
		Size	Legal	Money	Trade	Regulation
Panel A. Exclude OECD Countries						
Jordan×Post-1990	0.581*	0.0635	1.325**	1.158*	0.0410	0.160
	(0.250)	(0.420)	(0.411)	(0.570)	(0.356)	(0.179)
Observations	1,387	1,377	1,319	1,387	1,288	1,362
Within R-Sq	0.0884	0.0609	0.0764	0.113	0.0886	0.0987
Panel B. OECD Countries						
Jordan×Post-1990	0.252	0.0840	1.257*	0.665	-0.855	0.441
	(0.275)	(0.653)	(0.453)	(0.867)	(0.484)	(0.337)
Observations	550	550	550	550	550	550
Within R-Sq	0.249	0.128	0.309	0.228	0.319	0.208
Panel C. OIC Countries						
Jordan×Post-1990	0.571*	-0.354	1.755**	1.207*	0.00146	0.172
	(0.221)	(0.495)	(0.409)	(0.531)	(0.410)	(0.138)
Observations	550	540	535	550	480	540
Within R-Sq	0.127	0.0733	0.137	0.137	0.199	0.0989

Notes: The dependent variable in each specification in the total Economic Freedom Index. Each regression includes a set of time-varying economic and institutional controls, including log GDP and foreign direct investment in current USD, population growth, fraction of population residing in urban areas, change in the international migrant stock, infant mortality rate, polity score (*polity2*), and executive constraint score (*xconst*). Each specification includes country and interacted year-region fixed effects. Standard errors are clustered by country and reported in parentheses. Significance codes: * $p < 0.05$, ** $p < 0.01$

Table 4: Freedom Index Predictors

Variables	Jordan Treated	Jordan Synthetic	Avg. of Control Countries
Index (1980)	5.29	5.29	4.60
Index (1985)	5.62	5.63	4.87
Index (1989)	5.64	5.64	4.98
GDP Growth	-0.08	-0.08	-0.02
Mig. Pop. Growth	0.38	0.17	0.02
polity2	-8.90	-8.37	-3.88
xconst	1.70	1.67	0.29
Urban, % of pop.	66.22	65.35	48.12
FDI (in $1,000)	456.01	545.99	3213.32

Note: All controls averaged over the pre-treatment period 1980-1990, except for the 1980, 1985, and 1989 lags of the economic freedom index. GDP and FDI are measured in current USD.

Table 5: Synthetic Jordan Weights, OIC Countries

Country	Wgt.	Country	Wgt.
United Arab Emirates	0.234	Mali	0
Bangladesh	0	Malaysia	0
Bahrain	0.132	Nigeria	0
Cote d'Ivoire	0.167	Pakistan	0.278
Cameroon	0	Senegal	0
Algeria	0	Sierra Leone	0
Egypt	0	Syria	0.132
Gabon	0	Togo	0
Indonesia	0	Tunisia	0
Iran	0.034	Turkey	0
Kuwait	0.023	Uganda	0
Morocco	0		
RMSPE=0.001			
Treatment Effect	0.483**	(se = 0.150)	

Table 6: Impact of Immigration Shock on Economic Freedom, Double Selection

	Index	Index Components				
		Size	Legal	Money	Trade	Regulation
Jordan×Post-1990	0.488*	0.110	1.516**	1.010*	-0.332	0.0709
	(0.206)	(0.420)	(0.339)	(0.468)	(0.327)	(0.164)
Observations	1960	1950	1895	1960	1861	1935
Within R-Sq	0.0959	0.0174	0.0443	0.112	0.0807	0.0566
First Step λ	0.0012	0.0000	0.0137	0.0075	0.0000	0.0000

Notes: The dependent variable in each specification in the total Economic Freedom Index. Each regression includes a set of time-varying economic and institutional controls selected by Lasso. The potential control set includes log GDP and foreign direct investment in current USD, population growth, fraction of population residing in urban areas, change in the international migrant stock, infant mortality rate, polity score (*polity2*), and executive constraint score (*xconst*). Each specification includes country and interacted year-region fixed effects. Standard errors are clustered by country and reported in parentheses. Significance codes: * $p < 0.05$, ** $p < 0.01$

Table 7: Impact of Immigration Shock on Economic Freedom, Jordan v. SAL Recipient Countries

	Index	Index Components				
		Size	Legal	Money	Trade	Regulation
Jordan×Post-1990	0.652	-0.770	2.855**	1.628	-0.120	-0.246
	(0.301)	(0.893)	(0.716)	(0.795)	(0.804)	(0.235)
Observations	298	293	288	298	278	298
Within R-Sq	0.221	0.204	0.277	0.174	0.187	0.197

Notes: The dependent variable in each specification in the total Economic Freedom Index. Each regression includes a set of time-varying economic and institutional controls selected by Lasso. The potential control set includes log GDP and foreign direct investment in current USD, population growth, fraction of population residing in urban areas, change in the international migrant stock, infant mortality rate, polity score (*polity2*), and executive constraint score (*xconst*). Each specification includes country and interacted year-region fixed effects. Standard errors are clustered by country and reported in parentheses. Significance codes: * $p < 0.05$, ** $p < 0.01$