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The Impact of Forced Displacement on Host Communities A Review of the Empirical Literature in Economics

Paolo Verme and Kirsten Schuettler[1]

Abstract

The paper reviews the literature that estimated the impact of forced displacement on host communities. A comparative analysis of the empirical models used in 59 studies and a meta-analysis of 972 results collected from these studies are the main contributions of the paper. Coverage extends to 19 major forced displacement crises that occurred between 1922 and 2018, high, medium and low-income host countries and different types of forced migrants. Results refer to outcomes related to employment, wages, prices and household well-being. The meta-analysis finds that most results on employment and wages are non-significant. When significant, decreases in employment and wages are more likely to occur than increases with decreases strongly associated with the short-term, middle-income countries, females, young and informal workers. Food and rent prices tend to increase in the short-term. The probability of observing a decrease in household well-being among hosts is lower than 1 in 5.

JEL: D12; E24; F22; F66; J08; J1; J2; J3; J4; J7; J8; N3; O15; P46; R2

Keywords: Refugees, Returnees, Expellees, Escapees, Internally Displaced Persons (IDPs), Forced Migration, Forced Displacement, Host Communities, Labor Markets, Wages, Prices, Employment, Unemployment, Well-being.

[1] The World Bank. Corresponding author: Paolo Verme (pverme@worldbank.org). This is a second updated and revised version of the paper originally published in the World Bank Policy Research Working Paper series (February 2019, No. 8727). The following authors whose papers are covered in the review have kindly checked on our representation of their results and provided comments: Yusuf Emre Akgündüz, Ibrahim Al Hawarin, Örn B. Bodvarsson, Sebastian Braun, Valentina Calderón-Mejía, David Card, Evren Ceritoglu, Michael Clemens, Emilio Depetris-Chauvin, Ali Fakih, Albrecht Glitz, Jennifer Hunt, Merle Kreibaum, Saul Lach, Joshua J. Lewer, Erik Makela, Hani Mansour, Jean-Francois Maystadt, Juan S. Morales, Elie Murard, Ayla Ogus Binatlı, Giovanni Peri, Sandra Rozo, Isabel Ruiz, Albert Saiz, Rafael Santos, Semih Tumen, Carlos Vargas-Silva, Mathis Wagner, and Jacky Wahba. Additional comments were received from Xavier Devictor, Christian Eigen-Zucchi, Harun Onder, Caglar Ozden, and William Wiseman at the World Bank and from participants who attended the following conferences: "Impacts of Refugees in Hosting Economies" held at the University of Southern California, Los Angeles, September 14-15, 2018; "Forced Displacement, Asylum Seekers and Refugees: Economics Aspects and Policy Issues" held at Queen Mary University in London, March 18-19, 2019; "3rd International Conference on Forced Displacement and Migration" held at the German Development Institute in Bonn, October 30-31, 2019; "2020 Research Conference on Forced Displacement. Improving and Scaling Evidence" held at the Joint Data Center on Forced Displacement in Copenhagen, January 16-18, 2020. The paper was also presented in Marseille, Amman and Beirut to local administrations hosting refugees and field workers working with refugees. We are grateful to the Centre for Mediterranean Integration, The German Marshall Fund and the World Bank country offices for organizing these events and to participants for useful insights that helped to contextualize and clarify some of our findings. This work is part of the program ``Building the Evidence on Protracted Forced Displacement: A Multi-Stakeholder Partnership". The program is funded by UK aid from the United Kingdom's Department for International Development (DFID), it is managed by the World Bank Group (WBG) and was established in partnership with the United Nations High Commissioner for Refugees (UNHCR). The scope of the program is to expand the global knowledge on forced displacement by funding quality research and disseminating results for the use of practitioners and policy makers. This work does not necessarily reflect the views of DFID, the WBG or UNHCR. All remaining errors are responsibility of the authors.

1. Introduction

The question of whether forced displacement[2] is beneficial or detrimental to host communities[3] has become a hotly debated issue in policy, political and media circles since the start of the Syrian refugee crisis in 2011 and the peak of the EU migration crisis in 2015. Economics has traditionally paid little attention to this phenomenon with only occasional studies of mostly historical interest until very recently. The first study of this kind dates back to 1990 (Card 1990) and between 1990 and 2011 an average of only one study per year reached publication. This changed after 2011 when the average number of studies per year started to increase very significantly. Thanks to these recent efforts, we now have a more solid body of evidence addressing this question: *What is the impact of forced displacement on host communities?* This paper provides a comprehensive review of the empirical literature in economics that addressed this question and a meta-analysis of the results emerged from this literature.

Forced displacement (FD) is a different phenomenon from economic migration (EM), justifying a separate review.[4] By definition, FD is less of a choice and less voluntary than EM, although there is ultimately always a choice behind most (but not all) migration decisions. FD is a decision that is taken quickly following a sudden shock as opposed to EM, which is more often a carefully planned move. Forced migrants typically carry some small savings with them but little else because of the sudden nature of the shock whereas economic migrants tend to carry savings and assets or transfer these in advance of the move. Economic migrants tend to rely on extended networks in the place of origin and destination and plan their move in accordance with these networks. Forced migrants tend to move to destinations based on proximity and security criteria rather than personal networks, although networks can occasionally play a role. EM is a regular phenomenon with increasing and decreasing trends whereas FM happens in sudden and unexpected bursts of population movements which can be massive in nature.[5] Behavioral characteristics can be very different between economic and forced migrants. FD is therefore a rather different phenomenon from EM, calling for different types of theoretical and empirical instruments (Verme 2016, Ceriani and Verme 2018).

The objective of this review is twofold. First, we wish to provide a review of the specific modeling and econometric challenges that this type of work entails for the benefit of social scientists who wish to work in this area. For this purpose, we provide a comparative analysis of models used across the 59 papers considered. Second, similarly to Card et al.'s (2010) review of active labor market policies, we provide a meta-analysis using a data set of 972 results extracted from this literature with the objective of summarizing results by selected outcome and provide initial leads on some of the factors that drive these outcomes. By doing so, we wish to bring some clarity to a very complex and controversial topic.

[2] Under the term Forced Displacement (FD) we include refugees, returnees, expellees, escapees and Internally Displaced Persons (IDPs). These populations may have different characteristics, but they represent groups that have been subjected to FD due to some form of conflict, violence, persecution, human rights violations or high levels of insecurity or uncertainty resulting in a sudden and massive movement of people. We exclude episodes of Forced Migration (FM) due to environmental or other types of disasters and occasional or small episodes of forced displacement. Forced displacement is sometimes referred to as forced migration. We use these terms interchangeably in this paper.

[3] Host communities are defined as natives or existing residents who are affected by a sudden influx of forcibly displaced persons. For measurement purposes, these communities are generally identified by the literature in terms of administrative areas, but it is evident that these areas may include or exclude persons who are or are not affected by the displacement shock. To capture these potential heterogeneous effects, some papers assess impacts on different subgroups of the population.

[4] The lines between forced migrants and economic migrants can be blurred and, over time, forced migrants might become similar to economic migrants, notably in the case of secondary movements. However, these two phenomena remain clearly distinguishable from both a theoretical and empirical perspective.

[5] Sudden and massive movements are much more frequent in the context of forced displacement, but there are cases of sudden and massive inflows of migrant workers. One example is a new commuting policy that led to a sharp and unexpected inflow of Czech workers to areas along the German-Czech border (Dustmann, Schoenberg, and Stuhler 2017).

The focus of the review is on the labor and consumer markets and, more specifically, on four outcomes: employment, wages, prices and household well-being. This choice was dictated by the literature that has focused almost exclusively on these outcomes.[6] Household well-being measured in terms of income, consumption or wealth is the main outcome of interest to understand whether the net effect of a FD crisis is positive or negative *overall* for the host population. Negative changes in market outcomes such as increases in consumer prices or decreases in wages damage consumers and workers but benefit producers and owners of assets. The net effect on household well-being is not obvious when wages and prices change. Besides increasing the labor supply and creating a demand stimulus on consumer markets, refugees can also have an impact on productivity and structural change (Paserman 2013; Hornung 2014; Braun and Kvasnicka 2014; Sarvimäki 2011; Peters 2017), innovation and new patents (Moser, Voena, and Waldinger 2014), create new enterprises (Akgündüz, van den Berg, and Hassink 2018; Altindag, Bakis, and Rozo 2019) or increase FDI (Mayda, Parsons, and Vézina 2017) and trade with their countries of origin (Parsons and Vezina 2018; Ghosha and Enamib 2015; Mayda, Parsons, and Steingress 2017). The overall impact on household well-being is evidently the product of a combination of multiple factors and labor market analyses capture only some of these factors.

The present review builds and expands on previous efforts. Ruiz and Vargas-Silva (2013) carried out a literature review of the impact of forced displacement on the displaced and on host communities but the review on host communities provides a brief overview of only eight papers, as most of the available literature is more recent. Related reviews on migration or the impacts of war and violence are broader in scope and have only occasional references to papers covering the impact of forced migrants on host communities. The recent reviews by Özden and Wagner (2018) and Dustmann, Schönberg and Stuhler (2016) focus on the labor market impacts of migration and only cover some of the natural experiments included in this paper. Other reviews only cover one country or focus mainly on one region (e.g. Ogude 2017; Verwimp and Maystadt 2015; Maystadt et al. 2019). Some of the empirical papers we review offer an overview of parts of the literature, such as Borjas and Monras (2017) and Clemens and Hunt (2019) who revisit several cases of large and sudden displacement crises in high-income countries. The literature on the impacts of forced displacement on the displaced themselves was very limited until recently (see the reviews by Kondylis and Mueller, 2014 and Ruiz and Vargas-Silva, 2013), and started to grow in the past few years (e.g. Gimenez-Nadal, Jose Ignacio, José Alberto Molina, and Edgar Silva-Quintero, 2018; Fransen, Vargas-Silva, and Siegel, 2018) but this is clearly a separate topic from the impact of forced displacement on host communities. The most recent and comprehensive review of this literature is Becker and Ferrara (2019), which provides a rich discussion of the literature particularly focused on labor market outcomes. Our review expands on these efforts by covering a larger set of papers, providing a comparative analysis of models and instruments used by the literature, building a database of results and providing a meta-analysis of these results.

Most of the papers considered are published in peer-reviewed international journals and most of these journals are top ranked journals in their respective disciplines. This set of papers is complemented by papers published as working papers in reputable series by known authors using standard modeling techniques. The oldest paper covered is dated 1990 and the newest 2019. The episodes of FD included in this literature span from 1922 to 2018 and cover 19 of the major FD crises of this period, those that received the most attention from scholars. These are distributed between high, medium and low-income host countries and include episodes of FD in the US and Europe, Middle East, North-Africa, Sub-Saharan Africa and Latin America.

[6] An increasing number of papers look at the impacts of refugees and IDPs on education (Semrad 2015; Assad, Ginn and Saleh 2018; Tumen 2018, 2019a, 2019b; Bilgili et al. 2019; Figlio and Ozek 2018), fewer papers look at the impacts on health (Baez 2011), the environment (Martin et al. 2017) or at the impacts on crime and social cohesion in the host communities (Amuedo-Dorantes, Bansak and Pozo 2018; Depetris-Chauvin and Santos 2018; Masterson and Yasenov 2018).

Almost all studies are described as *natural experiments* by the authors but nevertheless face measurement and identification challenges. Availability of micro data is one of the challenges and the first explanation of why these types of studies have emerged only very recently.[7] All studies have been undertaken *ex-post*, after the displacement crisis has taken place. The unexpected nature of the crisis and the randomness of the decision to leave and the allocation of displaced persons are two elements used to defend the natural experiment assumption. However, all papers address the central question of endogeneity and unobserved heterogeneity. How random is the decision to leave, the choice of destination or the type of people who flee? What other unobserved concomitant factors such as growth, natural disasters or international aid have contributed to the observed outcomes? These studies are therefore better described as *quasi-natural experiments*.

There are several factors affecting results that should be considered when comparing these results across countries and across FD episodes. The income per capita of the host country is an obvious factor which has also implications for the economic structure of the labor and consumer markets' institutions and the degree of formality of these markets. It also determines whether international aid or increased government spending accompany these crises or not. Host countries may be big or small, some may be going through periods of growth and others through periods of recession. The legal framework and policies in place (right to work, freedom of movement) are different across countries and sometimes different within countries along space or time. Some studies focus on displaced populations hosted in camps and others on those outside camps, some of the displaced live in urban areas and others in rural areas. Some refugees move to countries with similar cultures, profiles and languages, others do not. Some of the FD episodes studied are massive in size while others are relatively small and the size relative to the host population can vary significantly across studies. Most inflows are sudden, but some are spread over longer periods of time. Also, very few studies consider the role of international aid, which is a confounding factor to the displacement shock (Alix-Garcia and Saah, 2010).

The comparative analysis of the empirical models used by this literature shows a certain homogeneity in the choice of identification and modeling strategy. Double difference and linear elasticity models are the dominant choice. The key independent variable (FD shock) is generally used in both its natural form and its instrumented version where variables such as geographical distances and (forced) migrants' location or occupation prior to the shock are used to construct the instrument. Matching and placebo counterfactuals often support these choices. Cross-section econometrics is the predominant approach (largely dictated by the type of data available), few papers use time-series models and Computable General Equilibrium (CGE) models whereas panel data models are very rare.

The main results of the meta-analysis can be summarized as follows. The review of studies on employment and wages shows that, when taken together, 6 in 10 results are non-significant. When results are significant, they are more likely to be negative (decreases in employment and wages) than positive. These negative results are strongly associated with the short-term, middle-income countries, female, young, informal and low-skilled workers. They also tend to disappear in the long-run. Results on prices show that the probability of finding changes in prices in the aftermath of a forced displacement crisis is high, almost 80%, but that predicting the direction of changes in prices is difficult and largely dependent on the items considered. Food and rental prices are more likely to increase as compared to other prices, particularly in the short-run. Empirical results on household well-being - the only comprehensive indicator of the impact of forced displacement on hosts - shows that the probability of a negative and statistically significant outcome is less

[7] National household surveys do not normally cover displaced populations and humanitarian agencies in charge of displaced populations do not normally cover host populations in their surveys. These latter surveys also rarely contain socio-economic information of sufficient quality to be used in econometric studies, not least because issues such as sampling and questionnaire design are extremely difficult with mobile populations such as refugees and IDPs. Registration data do not always capture the whole displaced population, might be outdated and focus on the displaced rather than host communities. Displaced people are usually hosted in marginal areas where data are scarce or of poor quality.

than 1 in 5. The majority of results show an increase in household well-being whereas negative results are associated with less accurate measures of well-being such as housing.

The paper is organized as follows. The next section discusses how a forced displacement crisis turns into economic shocks in the labor and consumer markets. Section 3 reviews the empirical models and identification strategies used to address the question of impact of such crises on host communities. Section 4 outlines the database that was put together for the meta-analysis and provides a statistical overview of the literature covered. Section 5 discusses findings from the meta-analysis conducted on the results from the papers considered. Section 6 concludes by summarizing results, providing a brief policy discussion and indicating areas for future research.

2. Forced displacement as economic shocks to the consumer and labor markets

A forced displacement crisis typically results in two types of shocks. The first is a *population shock* with a sudden increase in population generated by an inflow of people in a particular geographical area. The second is an *public expenditure shock* determined by the increased financial flows that a forced displacement crisis may attract, including aid from international donors and/or increased government spending on the part the host government. How these two components of the public expenditure shock play out largely depends on the level of income per capita of host countries. In low income countries, displacement crises are typically accompanied by an almost simultaneous inflow of international aid. In middle income countries, international aid is usually accompanied by an increase in public spending on the part of the host government. In high income countries international aid is mostly absent whereas an increase in public spending would be the norm (social transfers to refugees or asylum seekers and subsidies to access education, health and other public services). In all these cases, we should think in terms of a public expenditure shock channeled through an increase in welfare programs and the provision of public services targeting areas hosting refugees. We consider the population and expenditure shocks as quasi simultaneous short-term shocks.[8] International aid and public welfare programs would generally be established later than the first inflow of refugees or displacement of IDPs but international aid can flow in within a few weeks, sometimes days, and the increased use of national public services on the part of forcibly displaced people is often immediate where services exist.

The combination of these two exogenous shocks determine *demand and supply shifts in the labor and consumer market*. These are not necessarily immediate and can lead to changes in elasticities over time. While consumer demand responds promptly to these shocks, consumer supply may be slower to adapt. Similarly, while labor supply may increase rather quickly, there are several constraints that may slow down this supply and labor demand adjustments. Refugees require some time to adapt to the new labor market opportunities, if any, and access to the local labor market may be severely constrained by regulations. International aid organizations and government services will take some time to be established, hire new local workers and have an impact on the local economy. Local firms will take additional time to react to the increased demand for goods and services and the increased labor supply by increasing production and hiring new workers, and the degree of supply elasticity of goods and services varies across products and services. Local workers need time to reassess their situation and take decisions such as accept lower wages, drop out of the workforce or move out of the affected area. Population and expenditure shocks should also be expected to operate differently in the consumer and labor markets. A population shock results first in a shock to consumer demand and labor supply whereas an expenditure shock results first in a shock to consumer and labor demand. The basic mechanics of the shocks to the labor and consumer markets can be described as follows:

[8] In this section and in the rest of the paper, short, medium and long-term can be loosely defined as one year, five years and more than five years' time-spans.

Shock to the labor market. An influx of forcibly displaced would generally increase labor supply with this effect varying significantly depending on where the displaced are hosted (in camps or outside camps, urban or rural areas), on the host country legislation in relation to work status and freedom of movement as well as on the socio-economic characteristics of the displaced. Whether employment of the hosts decreases or not, this will depend on the degree of substitutability between local and displaced workers, on the opportunity wage available to low skilled locals, and on whether the influx ultimately results in outmigration of locals from these areas. Firms might also adapt their technologies to the increased labor supply and substitute capital for labor. Investments will increase, and in the long term, labor-capital ratios can be expected to equalize. Concomitantly, an influx of aid, an increase in government spending, and an increase in public services increases the demand for skilled and unskilled labor. Humanitarian agencies typically recruit local staff for registering refugees and IDPs, distributing food, setting up camps, driving vehicles and various other skilled and non-skilled activities. International aid workers also generate a demand for domestic unskilled labor. National agencies would also need to recruit more staff to scale-up programs. On the other hand, the increase in consumer demand generates a second-round production effect which generates new employment opportunities for locals. These elasticities are all largely unknown and the net effect of these different forces is hard to predict, but we can reasonably assume a displacement effect for some local workers, particularly workers with similar skills to the ones of forced migrants, at least in the short- to medium-term. We should also expect to see winners and losers in this process, with winners concentrated among high skilled formal workers and losers concentrated among low skilled informal workers.

Shock to the consumer market. One of the first effects of a FD crisis is an *increase in consumer demand* induced by savings, aid, and public spending. Forced migrants usually carry a minimum amount of savings in kind or cash and these savings are typically spent on primary goods and services such as food, health services and shelter. Concomitantly, international aid or government spending boosts the spending capacity of the forcibly displaced via social transfers that are or can be monetized and via increased public spending that reduces living costs for the forcibly displaced.[9] These factors are expected to push the consumer demand towards the right with a subsequent increase in prices and consumption.[10] In a second round, local producers are expected to expand production encouraged by higher prices and cheap labor available, with a consequent increase in supply and decrease in prices.[11] The net demand-supply effect is not easily predicted but expected to result in sudden price changes in the short-term as compared to the long-term with different types of items experiencing different changes in prices. Food and rental prices should be subject to an upward pressure in the short-run and a stabilization or downward pressure in the long-run whereas prices for services are more difficult to predict as they largely depend on existing capacity and public-private shares of services of host countries. During this process, we should expect to have winners and losers with winners concentrated among net producers in rural areas and asset owners in urban areas and losers concentrated among manual labor in rural areas and consumers in urban areas.

Overall, the most important question is whether average household income for the host population increases or decreases. The growth of the consumer market and the arrival of aid and/or increase in government spending, and the subsequent growth of local production and employment drive household income upwards but the displacement effects and the decrease in employment and wages for some workers drive household income down. The net effect is difficult to predict and is likely to vary depending on the host country

[9] Support for refugees and IDPs usually takes the form of cash, food vouchers, food in-kind, shelter, health and education services. Cash, food vouchers and food in-kind should be expected to have similar effects on consumer demand. Refugees are known to market food vouchers and when the vouchers are used to buy food, they tend to increase the demand for locally produced food just as cash would do. Humanitarian agencies tend to facilitate the availability of locally produced goods in stores that accept food vouchers and even when the food is delivered in-kind there is an effort to buy stocks from local producers. Moreover, humanitarian agencies have progressively shifted towards cash and food vouchers over the years as opposed to food in-kind. Free services such as health and education also increase the spending capacity of refugees by not diverting savings towards these expenditures.

[10] When subsidies are in place for certain products, prices for these goods would not increase but fiscal costs would.

[11] Supply might be non-elastic, at least in the short-term, in very poor and isolated areas and notably for non-tradables, like housing.

income per capita level and the substitutability of local workers with foreign workers. What is certain is that changes in relative prices and wages have distributional effects resulting in some low skilled/net consumer households to be worse off overall, at least in the short- to medium-term, and others high skilled/net producer household being better off.

3. Empirical modeling and identification strategies

As displacement crises are largely unpredictable, all the studies surveyed in this paper are evaluations conducted *ex-post*. In theory, a few of the crises studied could have been predicted but it would not be possible to allocate individuals to treated and non-treated groups randomly given that, by the definition of forced displacement we provided, people are fleeing violence, persecution or high levels of insecurity or uncertainty. Consequently, none of the papers reviewed is based on a Randomized Controlled Trial (RCT). Due to the randomness of the decision to leave (because of conflict, violence, insecurity or major political events) and/or the random allocation of displaced people in the country of destination (by policy or by default), some authors argue that they are in the presence of natural experiments. All authors do, however, address the question of endogeneity and, if one searches for a common thread, these evaluations would be better described as *quasi-natural experiments*.

The basic model used by the literature is a model of the following form:

$$y_{ie} = \alpha + \beta FD_{ie} + \gamma X_{ie} + FE_e + \varepsilon_i$$

where *i* is the unit of observation (individuals, households, subpopulation groups, regions, countries, etc), *y* is one of the four outcomes described (employment, wages, prices or well-being), *FD* is the forced displacement shock (measured with different functional forms including the number or share of FD persons), *X* is a set of controls and *FE* are fixed effects with *e* representing the *FE* dimension considered (usually time and locality). Most papers with few exceptions use standard OLS estimators or some of its variants (Table 1). Two papers use general equilibrium models (Bodvarsson,Van den Berg, and Lewer 2008; Hercowitz and Yashiv 2002) and two papers simply compare means between treated and non-treated groups resulting in simple difference estimations (Card, 1990 and Alix-Garcia and Bartlett, 2015).

[Table 1]

The unit of observation varies depending on the data at hand. Most studies rely on household survey data where individuals or households are the unit of observations and most studies include some regional dimension (more frequently administrative areas). Where longitudinal or panel data are available, time is also included. Other choices for unit of observations include skills or education level, various types of population groups (based on gender, age or other socio-economic characteristics), and, in a few cases, economic sectors, industry or labor market segments. The use of fixed effects varies. Some papers use the full set of indicators depicting units of observation (for example, household, region and time fixed effects in equations where the unit of observation is constructed using household, region and time). Other papers use subsets of these indicators. Other papers introduce FEs that are not used to identify the unit of observation. Very few papers provide explanations for these choices and there is no clear common approach to this choice. There are also only a handful of papers that discuss estimations of the error term and choices made in this regard.

The two prevalent evaluation methods used by these studies are Differences-in Difference (DD) methods and linear elasticities models. In the first case, the variable of interest (*FD*) is a discrete status variable (generally a pre/post- treated/non-treated interaction term) and the coefficient of interest measures the impact on outcomes in the presence or absence of displaced people after the inflow. In the second case, the model is typically in log form and is based on a shock variable that measures the intensity of the shock such as the number or share of refugees per geographical unit. In this case, the coefficient measures the elasticity of outcomes to the intensity of displacement. A few papers conduct simple differences illustrating results

graphically or in tabular form. A handful of papers use ordinary matching methods (Alix-Garcia and Bartlett 2015, Aydemir and Kirdar 2018, Murard and Sakalli 2017; Mayda et al. 2017) and four papers use Synthetic Matching Methods (Peñaloza Pacheco 2019; Peri and Yasenov 2019; Borjas 2017; Makela 2017). We could not find any paper using a discontinuity design.[12]

The essential ingredients used to measure the population shock are the number or presence of forcibly displaced persons, the size of the host population and the distance of the displaced from host communities if the displaced are clustered in camps or other forms of independent settlements. The literature covering high-income countries tends to focus on labor markets and the host population is often defined in terms of labor force whereas the literature covering middle and low-income countries often expands the work to household well-being and considers as host the entire population living in selected geographical areas. Papers looking at labor market impacts either measure refugees or IDPs as a percentage of the population or labor force in a certain geographical area or as a percentage of the labor force in a certain education-experience group or both. The latter is used for the so-called *skill-cell approach*, which is prevalent in the economic migration literature and measures the impact of refugees or IDPs for specific population groups defined along education, skills or experience characteristics (see the recent reviews by Dustmann, Schönberg, and Stuhler 2016, and Özden and Wagner 2018). For forcibly displaced populations the skill-cell approach has so far only been used in the context of high-income host countries. Table 1 shows how heterogeneous the definitions of the independent forced displacement variables are.

The outcome variables (employment, wages, prices and well-being) are usually measured at the sub-national level, but in a few cases nation-wide or across countries. They are measured across all sectors or, in three of the papers reviewed, for specific sectors of the economy (i.e. the construction sector in Portugal as in Carrington and de Lima 1996 and Makela 2017, or the retail sector in Miami as in Bodvarsson, Van den Berg and Lewer 2008). The authors aggregate results across all workers and types of employment or disaggregate them by specific groups of workers (based on their age, gender, skills or experience and education level) and types of employment (formal or informal; as employee, employer, self-employed; full-time or part-time). Results either measure absolute effects or relative effects for certain groups compared to other groups. The studies also vary in terms of the time frame studied, with most of the studies looking at short- and, medium-term impacts and only few studies at long-term or dynamic impacts.

The question of endogeneity is central to all papers and the main approach to address this issue is the instrumental variable approach. The choice of instruments varies across contexts. Distance from the shock, such as the distance to the border with the country of origin of the refugees (Ruiz and Vargas-Silva 2016) or the distance from the capital or the nearest larger city in the country of origin (Angrist and Kugler 2003) are popular choices. Fallah et al. (2018) instrument for the locality share of refugees based on the distance from the main refugee camp. Ruiz and Vargas-Silva (2015) measure the distance between each host community and 13 refugee camps and their population over time. Loschmann, Bilgili and Siegel (2019) compare households within a 10km radius to a refugee camp to those from 20km onwards. Measures of distance are often combined into one instrument variable with (proxies for) outflow numbers. Rozo and Sviatschi (2018), for example, use the inverse distance of each geographic unit to each of the three main refugee camps and the number of individuals fleeing the Syrian Arab Republic each year. Del Carpio and Wagner (2016) and Aksu, Erzan, and Kirdar (2018) combine the distance to the different governorates in Syria with the number of registered refugees from these governorates in Turkey. Depetris-Chauvin and Santos (2018) use the weighed sum of IDP outflows from all municipalities (except the receiving host city), where the weights are the inverse of the road distance between the host city and each municipality of origin. Ibanez and Calderon-Mejia (2016) use the number of deaths due to civil violence in the previous year, weighted by the distance between the urban labor market and the site of the violence. IV models using some form of distance to the border need to be cautious of potential correlations between distance to the shock and economic conditions, which violate the exclusion restriction. This is notably the case when border

[12] Schumann (2014) is an exception, but only looks at the impacts on municipality size.

regions are very remote or are affected by the conflict in the neighboring country through a decline in trade and an increase in insecurity. Within a country, there might be spill-overs from violence in affected municipalities to municipalities nearby.

The other frequent approach to instruments is the prior refugee or migration stock in the area, based on Card (2001) and Altonji and Card (1991) and the idea that previous migrants attract new migrants (network effect). Borjas and Monras (2017), for example, instrument for the refugee shock with prior migration to that region. Rozo and Sviatschi (2018) use the settlements of Syrians in Jordan before the start of the war in Syria in 2011. Hunt (1992) uses the share of early (1954-1962) repatriates as a share of the 1962 population to instrument the 1962-1968 repatriates as a share of the labor force. Like in the case of distance, this is often combined with (proxies for) outflow numbers. Morales (2018) uses an instrument for inflows of IDPs in municipalities that combines outflows with immigrant stock. Caruso, Canon, and Mueller (2019) combine distance between each region in the country of origin and destination with the total immigrant stock and the pre-crisis share of host country emigrants in each origin country province. A common criticism of the migrant stock instrument is that the settlement of previous immigrants or refugees may be correlated with economic conditions across these locations that may persist until today, which violates the exclusion restriction. To confront this criticism authors either use migrant stock data from a number of years before the influx they study or argue that the settlement of previous (forced) migrants was independent of economic conditions. To measure impacts in 2018, Bahar, Ibanez and Rozo (2019), for example, use the 1993 Venezuelan migrant stock, based on the last census data before the election of Hugo Chavez in Venezuela. Aydemir and Kirdar (2017) use the share of earlier repatriates and show that the Turkish state took the decision of where to settle refugees independently of economic conditions. Another criticism of this shift-share type of instrument is that if (forced) migrant inflows are stable over time, it conflates the short-run impacts of a new inflow with the long-run impacts of previous inflows (Jaeger, Ruist, and Stuhler, 2018).

The previous occupational distribution of the refugees in their country of origin (Friedberg 2001) or the occupational distribution of previous immigrants or refugees in the country of destination (Borjas and Monras 2017) are also used as instruments. Authors who prefer the latter argue that refugees might experience occupational downgrading upon arrival and their previous occupation might only be a weak instrument for their current occupation. Braun and Mahmoud (2014) combine previous occupational distribution and distance when they instrument the share of male expellees in the total male labor force in state-occupation cells exploiting regional variations in pre-war distribution of occupations and the distance of the expellees' origin from West Germany. Hunt (1992) proposed the annual average temperature in each department in France, as repatriates from Algeria had a tendency to settle in areas in the South of France with higher annual average temperature. Sarvimäki (2011) uses the elements of the government's placement policy as instruments (i.e. the proportion of a municipality's population speaking Swedish and the hectares of potential agricultural land). Kürschner Rauck and Kvasnicka (2018) use the location of refugee reception centers and group quarters in German counties before the massive influx of 2015.

Other authors focus instead on the counterfactual group testing alternative designs of the control group, sometimes including placebo groups and other times recurring to matching methods. The choice of matching methods varies from ordinary methods such as nearest neighbor to more recent advances such as Synthetic Control Methods (Abadie and Gardeazabal, 2003).

The inclusion of fixed effects is common to almost all papers although the choice of fixed effects can be very different, as described above. Only one paper compares Fixed Effects (FE) and Random Effects (RE) models and tests for differences (Esen and Binatli 2017). Cross-section econometrics is, by far, the method of choice even if time is included into the equations but we also found three papers employing time-series models (Carrington and de Lima 1996, Makela 2017, Fakih and Ibrahim 2015). Only few papers are able to exploit panel data (Foged and Peri 2015, Depetris-Chauvin and Santos 2017) and some of these papers use the same panel data set (Maystadt and Duranton 2018, Maystadt and Verwimp 2014; Ruiz and Vargas-

Silva 2015, 2016, 2018; Tsuda 2018). Not all cross-sectional studies have multiple rounds of comparable data, covering the period before and after the crisis. When comparing impacts between locations within a country, cross-sectional data do not usually allow to capture impacts on those who moved out and to differentiate impacts between those who were already there before the shock and those who moved in afterwards. Some of the models based on administrative areas qualify as spatial econometrics models in that they use estimation methods that derive from this literature and are published in spatial econometrics journals.

Studies that compare different areas within a country are not only confronted with the potential endogeneity of the size and skill composition of the inflow and the choice of destination, but also with the endogenous reactions of the host community. Local workers might respond to the labor supply shock by dropping out of the labor force, investing in education, occupational upgrading or moving to other areas thereby reducing the impact of the inflow. Even if local workers do not respond to wage variations, capital flows may equalize capital/labor ratios within the country, labor-intensive industries might move towards the regions with a high refugee or IDP influx or firms might use more labor-intensive production technologies. The reactions of the host country workers, investors and firms are medium-to long-term in nature and will play less of a role in the short-term if there are large, sudden and geographically concentrated inflows. Some of the papers explicitly analyze these potential channels, notably migration of local workers, and, to a lesser extent, occupational upgrading. Outmigration of hosts is a critical complement to the labor market analysis and excluding this outcome can lead to an underestimation of the impacts of forced displacement on the labor market outcomes of natives. Unfortunately, most of the papers reviewed either ignore or are unable to measures this phenomenon. The papers we reviewed that looked at tasks complexities and the question of substitution versus complementarities between refugees and natives found occupational upgrading among natives as a result of the refugee inflow (Akgündüz, van den Berg, and Hassink 2018, Akgündüz and Torun 2018, Foged and Peri 2015, and Alix-Garcia and Bartlett 2015).

Measurement challenges also arise due to the phenomenon of skill downgrading (Ozden and Wagner 2018). Refugees are often not able to find jobs that correspond to their education level and previous work experience. This has an impact on the degree of substitution between refugees and natives with the same observable education and work experience. Papers using the skill-cell approach face these measurement challenges, while papers which look at the impacts of refugees or IDPs across all skills and experience levels do not have to address this issue.

There are two important questions related to endogeneity and spurious correlation that have been raised and addressed in two separate papers but are relevant for and have been largely ignored by the rest of the literature. The first question related to endogeneity was raised by Borjas and Monras (2017). The displacement shock has an impact on local wages and this affects native labor supply at the intensive margin (by affecting the amount of labor that working natives provide) and at the extensive margin (by affecting the number of natives who participate in the labor market). In order to address this issue, one has to consider a labor supply model that is able to measure both effects separately whereas most papers confound these two effects into one. Foged and Peri (2015) is one of the exceptions, as their paper looks at the intensive margin (fraction of year worked). Rozo and Sviastchi (2018) as well as Caruso, Gomez Canon and Mueller (2019) include the number of hours worked, and Ruiz and Vargas-Silva (2018) look at the changes in number of hours dedicated to a task (including employment outside the household). The second question relates to possible spurious correlations generated by how variables are combined in models. Linear models that use ratios of two variables as dependent variable (think of average prices or wages, employment rates or consumption per capita) and the denominator of this ratio as independent variables (think of the share of refugees on host communities or household size) can produce spurious correlations (Kronmal 1993). This is noted and addressed in Clemens and Hunt (2019) who show how addressing this issue changes results for several studies in the literature covered here. Almost all models reviewed in this paper use the same population or household size on both sides of the equations but do not discuss this issue.

Finally, the expenditure shock which we discussed in the previous section (international aid or an increase in public spending associated with the forced displacement crisis) is considered by only a handful of papers. This is a possible confounding factor of the impact of forced displacement on host communities and one that is not easily addressed with the use of fixed effects. This is clearly a shortcoming of this literature that will require increased attention in the future.

4. Data for the meta-analysis

The literature review covers 59 papers spanning over a period of 29 years, from 1990 to 2019. We were not able to find published papers prior to the work by Card in 1990, which effectively started this literature, and there is a relatively low interest in this topic between 1990 and 2011 with only one or two papers published per year (Figure 1). With the Syrian crisis starting in 2011 and the peak of the EU crisis in 2015 the number of papers per year increased by several folds. Most of the papers and results considered in this review are therefore very recent. We used academic databases and search engines (EconLit, Social Science Research Network, JSTOR, Google Scholar) and searched websites of institutions with relevant working paper series (NBER, IZA, ERF and others). Relevant unpublished papers were included by searching agendas of workshops and conferences organized during the past few years.

[Figure 1]

From the papers reviewed, we selected a total of 972 results summarized in Tables A1 to A3. The database of results was compiled as follows. For each paper, we focused on the results that the authors considered the main and most reliable findings.[13] For the same paper, results are considered different if the dependent, the key independent variable or the population group considered change. For each of these variations, we include two results, a minimum and a maximum value, derived from variations in estimators, set of regressors or modalities for the estimation of the standard error.[14] The sample is therefore unbalanced with respect to papers. The final database includes the following fields: authors, journal, host countries' income group (LICs, MICs, HIC), caseload (crisis), shock size (displaced population as a share of the host population), dependent variable, time-lag between crisis and the measurement of the impact, key independent variable, sign and significance level of key coefficients, reference tables in the papers and 36 dummy variables to identify population sub-groups, products or other relevant characteristics measured in the equations.

Employment is the outcome most studied with 446 results followed by wages (322), prices (128) and well-being (76) in this order (Table A1). Considering that well-being is the only indicator that captures the overall impact on host households, the relatively low number of outcomes is clearly a shortcoming of this literature. Overall, results are fairly spread across papers and outcomes. Most authors consider more than one outcome and all outcomes are covered by a significant number of papers. There is an average of between 13 and 27 papers per outcome and an average of between 4.9 and 15.3 results per paper.

The literature covered includes 19 displacement crises well distributed across high, medium and low-income hosting countries (Table A2). There is a good coverage of all three groups of countries and there is a good coverage of most crises with a few exceptions. The single crisis that dominates the literature is the Syrian crisis. Other well studied crises are Burundian and Rwandan refugees in Tanzania, Cuban refugees in Miami, Former Soviet Union (FSU) escapees to Israel and IDPs in Colombia. One case (refugees in Denmark) has many results but they derive from a single paper (Foged and Peri, 2015). Table A2 also reports the share of refugees around the peak of the crises and the time-lag between the crisis and the time

[13] When OLS and IV estimations are reported, for example, IV estimations are almost invariably preferred by the authors. Robustness checks are excluded from the list of results.

[14] Only in a few cases, we considered a change in estimator a separate result. That is when the two estimators convey clearly different information.

of outcomes considered in the studies.[15] Depending on the crisis, the share of the displaced population varies between 0.1% and 71.7% of the host population whereas the approximate time-lag between the crisis and the outcome studied is between 0.6 years and 58 years.

The coverage in terms of journals is of high quality (Table A3). The average recursive impact factor for the last ten years is 0.85 and journals include top journals such as the Quarterly Journal of Economics, the Journal of Political Economy, the Review of Economics and Statistics, the Journal of Labor Economics, the Journal of International Economics, the AEA: Applied Economics, the Journal of Development Economics, the Journal of Economic Geography and the World Bank Economic Review.[16] The number of papers is well distributed across journals. The average number of papers per journal is 2.3. Industrial and Labor Relations Review, the review that published the first paper by Card, is the journal with more papers with four articles followed by the Journal of Development Economics and the Journal of Economic Geography with three articles each. The IZA Discussion Papers series is the non-journal series with the highest number of contributions (6 papers).

In addition to the main results of the studies surveyed (coefficients, signs and significance level), the data base contains indicators for several features that characterize the crises and the population groups observed. These include variables on time effects (short-run and long-run), shock size (small, medium and large shocks), host countries' level of income (low, medium and high-income), gender (male and females), age (young and old), formality (formal and informal) and skills level (low skills and high skills). These variables are indicator variables that were available for sub-sets of papers and are those that will be used as predictors of outcomes in the regression analysis.

5. Meta-analysis

As it should be evident from the comparative analysis of the empirical models, the size of the coefficients estimated by the different papers is not comparable, not even for sub-samples of the literature, because of the diversity of models considered across the literature (Table 1). This forcibly limits the meta-analysis that follows to the sign (positive or negative) and significance level of the key parameters of interest. This is not uncommon in reviews of this kind. Card et al. (2010) provide a meta-analysis of active labor market policies evaluations covering 97 studies and conclude, as we do, that coefficients are not comparable across studies.[17] They proceed with a meta-analysis focused on signs and significance levels based on a multivariate categorical model. In what follows, we use the same approach outlining first the descriptive statistics (Table 2) and then providing the results of the regression analysis (Tables 3-6).

Table 2 provides frequencies and percentages with standard errors for the four outcomes classified into positive, non-significant and negative values where positive and negative values are intended as significant. Note that percentages can be interpreted as probabilities if we consider that the review covers the population of existing studies and results rather than a sample of studies.

Table 3-6 report the results of the regression analysis with each table focusing on one outcome (employment, wages, prices and well-being in this order). The dependent variable is a categorical variable indicating whether results are negative and significant, positive and significant or non-significant. This allows for constructing three flavors of the dependent variable: i) Trichotomous ordered categorical (1=Positive and significant, 2=Non-significant and 3=Negative and significant); ii) Dichotomous

[15] The incidence of refugees and IDPs is estimated based on the peak stock value of refugees or IDPs divided by the host population, which can be a country or a smaller geographical area affected by refugees or IDPs. These data are mostly provided by the papers that cover these crises. We use the same number for all papers analyzing the same crisis.

[16] The recursive impact factor for the last ten years is taken from the IDEAS/Repec repository as for September 10, 2018. The same listing includes journals and working papers. Working papers not included in the list were attributed an impact factor of 0.01.

[17] Card et al. (2010) are able to use a sub-set of their data for a comparative analysis of coefficients. This is not possible with our data set as none of the models used by the different authors has been used consistently across sub-sets of papers with sufficient number of observations.

categorical complete (1= Negative and significant and 0=Positive and significant or non-significant) and iii) Dichotomous categorical incomplete (1= Negative and significant and 0=Positive and significant). The trichotomous ordered categorical variable (i) is the approach followed by Card et al. (2010). The last two flavors are added because it is disputable whether non-significant coefficients can be interpreted as intermediary category between positive and negative significant values. Also, as we face a trade-off between the number of observations considered and the precision of the dependent variable, considering these three flavors provides one viable approach to robustness checks. For further robustness checks, we also provide four flavors of the independent variables: i) Dichotomous variables; ii) Dichotomous variables with controls; iii) Trichotomous variables and; iv) Trichotomous variables with controls.

For all tables, we report odds ratios and z-statistics. Z-statistics equal or above an absolute value of 2 are considered significant and are highlighted in tables (+/-1.96 is technically the critical value for a 5 percent significance level of a two-sided test). As the number of observations varies across outcomes, not all independent variables listed in the data section could be used for all outcomes. All results are provided in weighted and non-weighted form with weights being the journals' impact factors. Given the wide range in impact factors across journals and working papers (0.01-8.4), we opted to use the squared root of impact factors as weights to avoid giving excessive relative weights to single papers published in top journals. This reduced the range of impact factors to 0.07-2.89. In total, we provide the results of 24 equations for each of the four outcomes considered (3 flavors of dep. var. * 4 flavors of independent variables * weighted and unweighted estimations). We discuss results by market and outcome.

5.1 Labor market outcomes

Employment. The database on employment contains 446 observations where employment can be a rate, a status or a probability. In all these cases a positive and significant value indicates that employment among host communities has increased as a result of forced displacement. Table 2 shows that between 14.6 and 15.2% of results are positive and significant, between 61.2 and 63.9% are non-significant and between 20.9 and 24.2% are negative and significant depending on whether we consider results weighted for impact factor or not. Therefore, the large majority of results are non-significant. Among significant results, negative results (decreases in employment) are more likely to occur than positive results with odds factors of 1.4-1.6.

[Table 2]

Table 3 shows the odds ratios and the z-statistics estimated from the 24 logit equations run on employment. We look first at population characteristics as possible predictors of negative effects. There are two clear results. The first is that the odds of a negative and significant result are much higher for informal workers as compared to formal workers. This result is very consistent across equations with the odds being significant in 21 of the 24 specifications. The second result is that being young predicts negative and significant results perfectly in 8 of the equations, and in other 8 equations the odds of a negative result for young people are very high and significant. A third visible result is that females are more likely to be associated with negative and significant results than males or non-classified results as shown for gender in 7 of the 25 equations. In essence, informal and young workers and, to a lesser extent, female workers are the groups that suffer the most from a displacement crisis in terms of employment losses.

As for the crises' characteristics, the main finding is that negative and significant effects are prevalent in the short-run. Here we consider a total of 12 equations as crises' characteristics are used as controls in the remaining 12 equations. We find that the odds of negative and significant results are higher in the short-run as opposed the long-run or non-classified observations in 5 of the 12 equations. There is also some evidence that low-income countries benefit from an increase in employment as compared to high-income countries. Instead, results on the size of the shock in terms of share of displaced people over the host population are inconclusive. In sum, negative effects on employment are evident in the short-run with some indications

that low-income countries may benefit from an increase in employment. The latter might be due to the inflow of aid as a confounding factor.

[Table 3]

Wages. The database contains 322 observations on wages where wages can be expressed in different forms in terms of time unit, they can be gross or net, or can be defined as earnings. In all these cases, results with positive signs indicate an increase in wages. Table 2 shows that between 10.3 and 19.9% of results are positive and significant, between 51.6 and 52.6% are non-significant and between 27.6 and 38.2% are negative and significant depending on whether we consider results weighted for impact factor or not. As for employment, the majority of results are non-significant. Among significant results, negatives are more likely to occur than positives with odds of 1.4-3.7 depending on whether results are weighted or not.

Population characteristics can contribute to explain negative and significant results (Table 4). Being young significantly increases the likelihood of finding a decrease in wages in 15 of the 24 equations, and in 8 of these equations it perfectly predicts negative and significant outcomes. We also find that being old decreases the likelihood of a negative result in 3 of the 12 trichotomous equations. Similarly, being employed in the informal sector increases the likelihood of a decrease in wages in 13 of the equations with 8 predicting perfectly negative outcomes, whereas being employed in the formal sector significantly decreases the likelihood of a negative outcome according to 8 of the 12 trichotomous equations. Having low skills also increases the likelihood of a negative outcome according to 12 of the equations and decreases it for high-skilled people in 12 out of 12 of the trichotomous equations. All these results become stronger when we look at the more restrictive (and precise) of the equations in the top-right hand corner of the table. Therefore, young age, informality and low skills level are very important factors in predicting negative effects on wages, the more so if we consider that these characteristics can be cumulated in the same persons.

Some of the attributes of the crises are also very important. All the 12 estimations that consider short versus long-run effects (estimations without controls) find that the likelihood of a negative effect on wages is much higher in the short-term than in the long-term with the odds being as high as 35. Results on the size of the shock are inconclusive. Instead, the income per capita of host countries shows that wealthier countries are more likely to experience negative effects according to 9 of the 12 equations with trichotomous independent variables, with 8 of these equations predicting negative values perfectly. Therefore, negative effects on wages should be expected to be much more prevalent in the short-run and in richer countries.

[Table 4]

We can conclude, that, in the aftermath of a forced displacement shock, labor market effects are mostly non-significant. This, of course, may signal that the effects are very weak or that it is very hard to detect these effects with the type of models and data reviewed. Many studies are silent about the number of observations their results are based on and the statistical power they have. When significant, results are more likely to be negative than positive for both employment and wages with these negative effects more likely to be short-term and limited to certain sections of the population including informal, young, low-skilled and female workers. This is the reason why our analysis focused on negative effects. A forced displacement crisis has clearly negative effects but on selected groups of the host population. These groups are found to be the most vulnerable as we should expect, and they should be the focus of labor market policies aimed at mitigating the negative effects of a forced displacement crisis.

5.2 Consumer market outcomes

Prices. The database includes 128 results on prices where prices refer to various items which we classified into three categories: food, rents and others. Results in Table 2 show that between 35.2 and 44% of results are positive and significant (prices increase), between 17.2 and 21.9% are non-significant and between 38.8 and 43% are negative and significant (prices decrease). As before, these ranges are determined by whether

results are weighted or not weighted and can be interpreted as probabilities. There is no "good" or "bad" interpretation as changes in prices benefit some hosts and damage others. We should expect producers and landlords to benefit and consumers and tenants to suffer from higher prices with the net effect on hosts depending on the aggregate effects. What is noticeable is that, unlike other outcomes, the share of non-significant results is lower than either the share of positive or negative results. There is also no dominance of positive or negative prices if we compare weighted and unweighted results. Therefore, a forced displacement shock is most likely to affect prices with a probability of 77-78% but the direction of changes is unpredictable.

Table 5 provides some indications on the drivers of price changes. As before, we focus on results with a z-statistics larger than the absolute value of 2. As independent variables we use the time-lag, shock size and host countries income level as we did for other outcomes and use price categories (food prices, rents and other) instead of population characteristics. We find that prices are more likely to be negative (decrease) in the short-run than in the long-run with high odds ratios and this result is consistent for 6 of the 12 equations that consider this variable. This is confirmed by the results on the long-run that show a lower likelihood of being associated with negative values (decreases in prices). No effects are found for shock size and the level of income per capita of host countries (the latter effect with one exception).

Concerning price items, food and rent prices are less likely to be associated with a decrease in prices than other prices as shown by the trichotomous equations. However, when considered alone, rents prices are more likely to be associated with a decrease in prices than food prices. These results persist when we control for shock size and income per capita of hosts. In other words, prices are more likely to decrease in the short-term but key prices such as food and rent are more likely to increase. This may be explained by the fact that the early stages of a crisis are accompanied by an increase in public expenditure via international aid, refugee savings and government expenditure and that this initial demand shock is not matched by a supply adjustment in terms of food and housing supply with this mismatch being stronger in the food market, notably in remote and isolated areas. These supply shortages are not so evident for other products and services in the short-term. In essence, overall prices are more likely to decrease in the short-term with the notable exceptions of food and rent prices that seem to suffer from supply shortages. These findings remain working hypotheses based on very diverse data and a low number of observations. Future research will need to be more comprehensive in coverage of different products and countries, differentiating between tradable and non-tradable goods. It will also be essential to expand research on price elasticities of demand and supply, including cross elasticities, and relate this research with the research on household well-being.

[Table 5]

Well-being. Among all the papers reviewed, 14 papers explicitly measure the impact of displacement on the economic well-being of host communities for a total of 76 distinct results. Of these, 34 are on income, consumption or output, 26 are on housing or assets, 6 are on night luminosity and 10 are on poverty. Only two of these results are on HICs, 26 are on MICs and 48 on LICs. In all these cases, a positive result is considered a good outcome meaning that household well-being has increased as a result of the forced displacement shock. [18]

Table 2 shows that between 47.4 and 52.1% of results are positive and significant depending on whether results are weighted for the journals' impact factor or not. This indicates a net improvement in household well-being according to about half of results. An additional, 35.5-42.1% of results are non-significant, and the remaining 5.8-17.1% of results are negative and significant. This implies that the likelihood of finding a positive result is between 2.8 and 9 times higher than finding a negative result depending on whether results are weighted or non-weighted by the journals' impact factor. Overall, the probability of observing a

[18] Note that when poverty was used as an indicator of well-being, the sign of the coefficient was reversed to make it consistent with the other indicators of well-being where a positive sign indicates an improvement in well-being.

decline in well-being among host households in the aftermath of a forced displacement crisis is below 18% and the odds of an increase in well-being as opposed to a decrease are as high as nine times.

Table 6 shows the odds ratios of a negative result as in previous tables. All results should be taken with caution as the number of observations is small. Negative effects (a decrease in well-being) is perfectly predicted by the short-run and it is almost always perfectly predicted by larger crises. There is also evidence that negative results are more associated with middle-income countries. This may be due to the fact that the Syrian crisis dominates these results and that countries hosting Syrian refugees are middle-income countries. When well-being is measured with housing indicators it is more likely to result in a negative value. Results on assets and housing indicators refer to individual items such as construction materials of dwellings and are therefore less representative of household well-being as compared to aggregate income or expenditure. In sum, when we observe a decline in the well-being of host families, this is almost invariably explained by the short-run, larger crises, middle-income countries and non-monetary indicators of well-being.

The effects on the consumer market and household wellbeing are generally psoitive with some important caveats. The likelihood of finding a decline in household wellbeing among host households is less than 18% and the likelihood of finding an increase is wellbeing is very high. Decreases in well-being are also almost invariably associated with the short-run, larger shocks, richer countries and non-monetary indicators. Such outcomes are clearly in contrast with the popular view that forced displacement is detrimental to host communities. However, available results on well-being are still scarce and well-being is under researched and measured by different indicators as compared to labor market outcomes such as employment and wages. Future research will need to provide more evidence based on income, consumption or expenditure indicators and expand its coverage to many more countries and situations, possibly assessing the distributional impact on well-being of forced displacement.

[Table 6]

6. Conclusion

The paper reviewed 59 empirical studies that focused on estimating the impact of forced displacement on host communities. This literature covers 19 different displacement situations in high, medium and low-income countries covering the impact on the labor and consumer markets. A total of 972 results have been used for the meta-analysis. To our knowledge, this is the first comprehensive review of this literature providing a comparative analysis of models and a meta-analysis of results.

The empirical modeling analysis highlighted the main traits of this literature. By definition, all studies operate *ex-post*, after the displacement crisis has taken place. The unexpected nature of the crisis and the randomness of the allocation of displaced persons are two elements used to defend the natural experiment assumption. However, all papers address the central question of endogeneity. The instrumental variable approach is the dominant method to address endogeneity issues and instruments tend to focus on either distance from the forced migrants' location of origin or previous location of migrants. Double difference and linear elasticity models are the dominant choice of estimation models with matching and placebo counterfactuals often supporting these choices. Cross-section econometrics is the predominant approach (mostly dictated by the type of data available), few papers use time-series models whereas panel data models are the exception. Most papers are set in a partial equilibrium framework with just two papers using Computable General Equilibrium (CGE) models.

The meta-analysis of empirical results on household well-being - the only comprehensive indicator of the impact of forced displacement on hosts - shows that the probability of a negative and significant outcome is less than 1 in 5. The majority of results show an increase in household well-being whereas negative results are associated with less accurate measures of well-being such as housing. The review of studies on employment and wages shows that, when taken together, 6 in 10 results are non-significant whereas 1-2 in

10 results are positive and significant meaning that employment and wages improve for the local population. When we zoomed into the remaining negative results on employment and wages, we found that these related mostly to female, young, informal and low-skilled workers, and that they are associated with larger crises and tend to disappear in the long-run. Results on prices show instead that the probability of finding changes in prices in the aftermath of a forced displacement crisis is high, around 80%, but that predicting the direction of changes in prices is difficult and largely depend on the items considered. Food prices and rents are more likely to increase as compared to other prices in the short-term.

Despite recent research efforts and the findings described, research in this area remains in its infancy. Studies have focused on selected markets, first round, short and medium-term effects, selected methodologies and selected displacement crises. Very little work is available on second-round and long-term and dynamic effects, on the production side of the economy and on the impact of forced displacement on primary services such as water, electricity, education or health. Results on household well-being, - which should be the most important outcome to study as it is the overall sum of all effects - remain few. While an increasing number of studies look at heterogeneous impacts among hosts, only few studies differentiate impacts between the tradable and non-tradable sectors of the economy. Panel data, which are the most promising type of data for this type of analysis, covered only a few segments of a few crises. We could not find evaluations that used regression discontinuity designs even if forced displacement crises can potentially lend themselves to this type of evaluation. Some crises, such as the Rohingya crisis, have not been covered by the literature because they may be too recent, but other major displacement crises, such as the repeated crises in the Democratic Republic of Congo, the Central African Republic, Afghanistan, Pakistan or Iraq, have been largely ignored by the economics profession. Results are also derived from a multitude of models and case-studies and their comparability remains a challenge. While our findings show that negative impacts on host communities tend to disappear in the long-term, the studies reviewed in this paper did not really expand on this issue. Only few papers studied changes in migration of locals into and out of the area affected by the forced migration inflow as one important adaptation mechanism and even fewer looked at skills-upgrading among hosts, changes in production technologies of firms and the output mix between firms, investments, or the entry and exit of firms.

Some selected evidence on policies can also be derived from the review, even if few studies analyze the mechanisms through which forced displacement impacts labor and consumer markets. There is some evidence that negative impacts on employment of hosts might be stronger in countries with more rigid labor markets (Angrist and Kugeler 2003). Restrictions on the right to work usually mean that refugees of all skills are limited to compete with low-skilled workers in the informal sector, potentially increasing negative impacts on already vulnerable groups (as the studies on Turkey and Jordan show). Allowing refugees to work will disperse the impacts across different sectors and skill levels. As three papers on Turkey exemplify, enterprises created by refugees themselves can contribute to these efforts, if policies and regulations allow them to (Akgündüz, van den Berg, and Hassink 2018; Altindag, Bakis, and Rozo 2019). The papers we reviewed that looked at task complexities and the question of substitution versus complementarities between refugees and natives found occupational upgrading among natives as a result of the refugee inflow (Akgündüz, van den Berg, and Hassink 2018, Akgündüz and Torun 2018, Foged and Peri 2015, and Alix-Garcia and Bartlett 2015). Policies can reinforce these complementarities between forced migrants and native workers and increase the productivity of native workers by providing incentives to upgrade their skills. As a number of studies showed, internal migration helps dissolve some of the impacts on the labor market and could be incentivized by policy makers. Increased capital flows can help re-equalize capital/labor ratios within the country. In general, policies are needed to counterbalance the distributional impacts of a forced displacement inflow on the labor and consumer markets.

Public policies can also mitigate the impact of a forced displacement crisis on prices. Prices increase because supply might be non-elastic, at least in the short-term, particularly in poor and isolated areas. These effects should be expected to be stronger for non-tradable items such as housing and goods with tight markets such as food. To address these rigidities, investments by the government, donors and humanitarian organizations can help connect these places to markets. The improved road network seems to have a positive impact on household welfare, even after the forced migrants return (Maystadt and Verwimp 2018). An improved business and investment climate can speed up the reaction of the private sector to an increase in demand. An increase in the issuance of construction permits, notably for social housing, can help buffer the effects on the housing market, at least in the medium term. If construction permits for high-income housing crowd out construction permits for social housing instead, the negative income effects on lower income hosts are reinforced (Depetris-Chauvin and Santos 2018).

More research is also needed to help us understand the channels through which the influx of forced migrants determines impacts on outcomes and whether policies have had any role in this process, notably policies regarding the access to the labor market or the mobility of forced migrants as well as the general business and investment climate. With the exception of one study on temporary residency permits in Colombia (Bahar, Ibanez and Rozo 2019), none of the studies covered by this review explicitly measured the effects of policy changes on host communities. Policies affect outcomes and the different policies administered cross-country represent a confounding factor when results are pulled together and compared.

Equally important is to have a much better understanding on the process of local integration of displaced persons among host communities in the medium and long-term to better understand when displaced persons can stop being considered as displaced and are finally counted as an integral part of the population. The level of their economic and social integration will also influence their impacts on the host community and change it over time. More efforts could be dedicated to combine the literature and data on the labor market outcomes of refugees and IDPs with the impacts measured for hosts. Which skills, education and experience do those forcibly displaced bring with them? Which sectors and occupations do they integrate into after they arrived at the host country? How quickly do they integrate into the labor market? What are the obstacles they face? How do their occupations change over time? Including even descriptive statistics on these questions in papers on impacts on hosts would provide a better understanding of the specific groups that compete on the labor market. When using area-based approaches, this would allow us to better guide the analysis and interpret the results in terms of impacts on certain subgroups and sectors in the host community. When using the skill-cell approach to measure impacts on hosts, a better understanding of the labor market participation patterns of forced migrants would allow us to better assess the degree of substitutability within certain education-experience cells.

Finally, there can be noticeable differences between the measured impacts on host communities and perceptions of these impacts. The empirical evidence on the impact of forced displacement on host communities that we discussed in this paper is clearly at odds with the public discourse. To our knowledge, only two studies looked at these differences (Kreibaum 2015; Loschmann, Bilgili and Siegel 2019) and found it to be sizable. Subjective well-being can be a powerful driver for change and understanding its relation with objective well-being is key from a policy perspective. New data collection and research efforts should take this aspect into account.

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Table 1 – Summary of main equations

No.	Paper	Estimator	Dep.Var.	Unit	Fixed Eff.	Forced Displ. Var.	Instrumental Var.
1	Akgündüz and Torun (2018)	OLS, 2SLS	EM	i, r, t	r, t	FD/pop	Sum(((FD_t-1/pop)*FD)/d))
2	Akgündüz et al. (2015)	OLS	EM, PR	i, t,r	t, r	FD presence; FD;	none
3	Aksu et al. (2018)	OLS, 2SLS	EM, WG	i, r, t	r, t	FD/pop	Sum(((FD_t-1/pop)*FD)/d))
4	Alhawarin et al. (2018)	OLS	WB	i, t	i, r, t	(FD/pop)*TM	none
5	Alix-Garcia and Bartlett (2015)	D	WB	i	n.a.	Simple diff with	none
6	Alix-Garcia and Saah (2010)	OLS	PR, WB	i, t	mkt, y/m	1/d_mk*(FD/pop)*100	none
7	Alix-Garcia et al. (2012)	OLS	PR	w, m, t	t	FD	none
8	Alix-Garcia et al. (2018)	DMSP-OLS	PR, WG, WB	v, r, t	r, t	Sum_d{(ihs(FD)*d)}	none
9	Angrist and Kugler (2003)	OLS, 2SLS	EM	g, r, t	g, r, t	ln(FD/g_t)	d
10	Bahar, Ibanez and Rozo (2019)	2SLS	EM, WG	i, t, r	t, r		(IM(n-1)/IM)*TM
11	Balkan and Tumen (2016)	OLS	PR	item, r,	item, r, m, t	(FD/pop)*TM	none
12	Balkan et al. (2018)	OLS	PR, WB	h, r, t	r, t	(FD/pop)*TM	none
13	Bodvarsson et al. (2008)	3SLS, CGE	WG	r	none	FD/pop	FD_t-1
14	Borjas (2017)	OLS	WG	r, t	r, t	TR*TM	none
15	Borjas and Monras (2017)	OLS, 2SLS	EM, WG	r, s	r, s	FD/LF	(FD/WAP)_t-1
16	Bozzoli et al. (2012)	OLS, 2SLS	EM	i, r, t	i, t	Net FD	Estimated conflict indicator
17	Braun and Kvasnicka (2014)	OLS	EM, WB	r	none	FD/pop	none
18	Braun and Mahmoud (2014)	OLS, 2SLS	EM	j, r	j	FD/LF	Sum_r(FD*occ)/(Sum_r(FD*occ)+pop*occ)
19	Calderon-Mejia and Ibanez (2016)	OLS, 2SLS	WG	i, r, t	r*t, t	FD/WAP	Sum_r(Casualties/d)
20	Card (1990)	D	EM, WG	r	n.a.	Simple diff with	none
21	Carrington and de Lima (1996)	OLS	EM, WG	t or r	none	FD/pop	none
22	Caruso, Gomez Canon, and Mueller (2019)	OLS, 2SLS	EM, WG	i, t, r	t, r	FD/population	Sum (1/d)*EM(n-1) in country of origin*IM(n-1) stock
23	Cengiz and Tekguc (2018)	OLS, 2SLS	EM, WG	i, t	t	TM or FD/pop	Various based on distance and language
24	Ceritoglu et al. (2017)	OLS	EM, WG	i, r, t	none	TR*TM	none
25	Clemens and Hunt (2019)	OLS, 2SLS	WG	r, s	r, s	ihs(FD)	stock of prior migrants
26	Cohen-Goldner and Paserman (2011)	OLS, 2SLS	EM, WG	i, j, t	j, t, j*t	FD/j	FD/E_t-1
27	Del Carpio and Wagner (2016)	OLS, 2SLS	EM	i, r, t	r, t	FD/WAP + d	Sum_r(FD*(FD_t-1/pop)/d
28	Depetris-Chauvin and Santos (2017)	OLS, 2SLS	PR, WB	r, t	r, t	FD flow_t-1	sum_r(FD outflow/d)
29	Depetris-Chauvin and Santos (2018)	OLS, 2SLS	PR	r, t	r, t	FD flow_t-1	sum_r(FD outflow/d)
30	Esen and Binatli (2017)	OLS	EM	t, r	r	FD; FD/pop	none
31	Fakih and Ibrahim (2016)	VAR	EM	t	none	n.a.	none
32	Fallah et al. (2018)	OLS, 2SLS	EM, WG	i, r, t	none	FD/pop	(FD/pop)/d
33	Foged and Peri (2015)	OLS, 2SLS	EM, WG	i, j, r, t	t*j; t*r, i*u	FD/E	sum_r(FD/WAP)

34	Friedberg (2001)	OLS, 2SLS	EM, WG	i, j, t	j	FD/natives	FD/E_t-1
35	Gehrsitz and Ungerer (2018)	OLS	WG	r, t	r	FD	none
36	Glitz (2012)	OLS, 2SLS	EM, WG	s, r, t	s*t, r*t	Delta(s/LF)	(FD/s*FD/WAP*Delta(FD))/LF_s
37	Hercowitz and Yashiv (2002)	SUR, CGE	EM, PR	t	none	Delta(FD)/pop	none
38	Hunt (1992)	OLS, 2SLS	WG	r, s	r	FD/LF	Temperature and FD_t-1
39	Kreibaum (2015)	LPB	WB	hh, v, t	t, r	Diff_(t-t-1)(FD/1000	FD/d
40	Kurschner Rauck and Kvasnicka (2018)		PR	i, r, t	r, t	TM*FD/pop	1/log(1+d)
41	Lach (2007)	OLS, 2SLS	PR	item,	item, store,	FD/natives	FD_t-1/natives
42	Loschmann, Bilgili, and Siegel (2019)	LPM	EM, WB	i	none	d<10km	none
43	Makela (2017)	OLS	WG	g, t	none	TR*TM	none
44	Mansour (2010)	OLS	WG	i, t	t, s, j, r	FD dummy	migrants
45	Mayda et al. (2017)	OLS, 2SLS	EM, WG	r, t	r, t	f(FD)	FD_t-1
46	Maystadt and Duranton (2018)	OLS, 2SLS	PR, WB	h, v, t	h, t, t*strata	ln(Sum_c(FD/d))	none
47	Maystadt and Verwimp (2014)	OLS	WB	h, v	t	ln(1+FD/d)	none
48	Morales (2018)	OLS, 2SLS	WG	i, r, t	r, t	100*Delta(FD)/pop	100*(Sum[Delta(expulsions_j)*stockshare_mj])/pop
49	Murard and Sakalli (2018)	OLS	WG, WB	r	r	FD/pop_t-1	none
50	Peñaloza Pacheco (2019)	OLS	WG	i, t, r	t, r	TR	none
51	Peri and Yasenov (2019)	OLS	WG	g, t	none	TR*TM	none
52	Rozo et al. (2018)	OLS, 2SLS	EM, WG, WB	i, r, t	r, t	FD/(FD_r*d)	(FD_t-1/pop_t-1)*FD
53	Ruiz and Vargas-Silva (2015)	OLS, 2SLS	EM	i, t	i, t	ln(1/d)	none
54	Ruiz and Vargas-Silva (2016)	OLS, 2SLS	EM	i, t	i, t	ln(1/d)	none
55	Ruiz and Vargas-Silva (2018)	OLS, 2SLS	EM	i, h, t	i, h, t	ln(Sum(FD/d))	none
56	Saiz (2003)	OLS	PR	r, t	none	T	none
57	Taylor et al. (2016)	CGE	WB	n.a.	n.a.	n.a.	n.a.
58	Tsuda (2018)	OLS	EM	h, t, r, g	h, r	TR(d<50km)*TM	none
59	Tumen (2016)	OLS	EM, PR, WG	i, r, t	none	TR*TM	none

Legend: D=Dependent variable; FD=Forcibly Displaced population; IM=Immigrants; EM: Emigrants; AID=Monetary AID; EM=Employment or Employment Rate; WG=wages; PR=Prices; WB=Well-being (income, consumption or expenditure); LF=Labor Force; FE=Fixed Effects; OLS=Ordinary Least Square; 2SLS=Two-Stage Least Square; LPB=Linear Probability Model; DD=Differences in Difference estimator; PSM=Propensity Score Matching; ATE=Average Treatment Effect; TR=Treatment dummy; TM=pre-post treatment dummy; TR*TM=Generally refers to DD estimators; i=individuals; h=households; p=prices; t=time or year; r=region or location; d=distance from shock (camp, country of origin); v=village or community; c=camp; hp=host population; w=week; m=month; y=year; mk=market; nl=night luminosity; ihs=inverse hyperbolic sign; ae=adult equivalent; s=skills or education level; g=population group; s=sector; j=sector, occupation; industry or labor market segment.

Table 2 – Frequencies and Percentage Shares (Probabilities)

	Unweighted				Weighted by impact factor			
	Freq.	**%**	**% (s.e.)**	**Cum.**	**Freq.**	**%**	**% (s.e.)**	**Cum.**
Employment								
Positive	65	14.6	1.7	14.6	67.7	15.2	2.0	15.2
Nonsignificant	273	61.2	2.3	75.8	285.1	63.9	2.6	79.1
Negative	108	24.2	2.0	100.0	93.2	20.9	2.2	100.0
Total	446	100.0			446.0	100.0	6.9	
Wages								
Positive	33	10.3	1.7	12.5	63.9	19.9	2.1	19.9
Nonsignificant	166	51.6	2.8	72.4	169.2	52.6	2.6	72.4
Negative	123	38.2	2.7	100.0	88.9	27.6	2.4	100.0
Total	322	100.0		184.9	322.0	100.0	7.1	
Prices								
Positive	45	35.2	4.2	35.2	56.3	44.0	4.7	44.0
Nonsignificant	28	21.9	3.7	57.0	22.1	17.2	3.6	61.2
Negative	55	43.0	4.4	100.0	49.7	38.8	4.6	100.0
Total	128	100.0			128.0	100.0	12.9	
Wellbeing								
Positive	36	47.4	5.7	47.4	39.6	52.1	8.7	52.1
Nonsignificant	27	35.5	5.5	82.9	32.0	42.1	8.6	94.2
Negative	13	17.1	4.3	100.0	4.4	5.8	4.1	100.0
Total	76	100.0			76.0	100.0	0.0	

Table 3 – Logit and Ordinary Logit Equations Results – Employment

Dep. Var.	1=Pos.; 2=Non-sig.; 3=Neg.					1=Neg; 0=Pos. or Non-sig.					1=Neg; 0=Pos.				
	Non-weighted		Weighted			Non-weighted		Weighted			Non-weighted		Weighted		
Indep.Var.	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**	**Odds**	**z-stat**	**Odd**	**z-stat.**	**N**
Dichotomous															
shortrun_longrun	2.6	2.3	1.7	0.8	126	3.2	2.7	2.0	0.9	126	2.1	1.0	2.0	0.5	44
largeshock_smallshock	1.1	0.4	0.8	-0.8	446	0.8	-0.8	0.7	-1.4	446	1.3	0.9	0.8	-0.5	173
lic_hic	0.6	-2.1	1.0	-0.1	446	0.7	-1.2	1.0	0.1	446	0.4	-2.2	0.9	-0.1	173
female_male	1.5	1.5	1.6	1.5	206	1.8	1.8	1.5	1.2	206	1.7	1.3	2.2	1.5	88
young_old	1.6	0.7	2.9	1.5	38	1.3	0.4	2.7	1.4	38	####	0.0	####	0.0	18
informal_formal	7.7	4.5	8.7	3.5	92	4.1	3.0	5.0	2.4	92	56.0	3.7	43.0	3.0	55
lowskill_highskill	1.3	0.5	1.4	0.7	120	1.2	0.3	6.7	1.1	120	1.5	0.5	6.6	1.1	24
Dichotomous with controls															
female_male	1.5	1.5	1.6	1.5	206	2	2.1	1.7	1.3	206	2.3	1.7	2.6	1.6	88
young_old	1.7	0.8	3	1.5	38	1.3	0.4	2.7	1.4	38	####	0.0	####	0.0	18
informal_formal	7.7	4.5	8.8	3.5	92	4.2	3.0	5	2.4	92	61	3.7	54	2.9	55
lowskill_highskill	1.3	0.5	1.6	0.9	120	1.2	0.3	7.1	1.2	120	0.67	-0.4	4.7	0.9	24
Controls															
largeshock_smallshock	yes					yes					yes				
lic_hic	yes					yes					yes				
Trichotomous															
Short-run	2.7	2.9	1.3	0.5	446	2.7	2.7	1.0	0.0	446	4.0	2.1	2.0	0.7	173
Long-Run	1.2	0.8	0.9	-0.4	446	0.8	-0.6	0.5	-1.3	446	1.9	1.4	1.0	0.0	173
Shock size (>5 & <=10)	1.0	-0.2	0.7	-1.1	446	0.6	-1.6	0.4	-2.2	446	1.2	0.4	0.6	-0.8	173
Shock size (>10)	1.2	0.7	1.0	0.0	446	1.0	0.0	1.0	0.1	446	1.4	1.0	1.0	-0.1	173
MICs	1.6	2.0	1.1	0.2	446	1.4	1.2	1.1	0.3	446	2.2	2.1	1.1	0.1	173
HICs	1.6	1.8	1.0	0.0	446	1.4	1.0	0.9	-0.3	446	2.4	1.9	1.1	0.1	173
Female	1.1	0.5	2.3	2.8	446	1.4	1.4	3.1	3.4	446	1.0	-0.1	2.9	2.2	173
Male	0.7	-1.4	1.3	0.8	446	0.8	-0.8	2.0	1.9	446	0.6	-1.5	1.3	0.6	173
Young	3.2	2.6	5.7	3.5	446	2.8	2.2	5.3	3.2	446	####	0.0	####	0.0	173
Old	2.0	1.5	2.2	1.6	446	2.2	1.6	2.0	1.2	446	2.4	1.1	6.1	1.4	173
Informal	3.5	4.1	4.0	3.3	446	3.7	4.0	4.3	3.3	446	13.0	2.4	9.3	1.9	173
Formal	0.2	-4.3	0.2	-3.4	446	0.9	-0.3	0.9	-0.3	446	0.2	-3.4	0.2	-2.6	173
Low-skilled	0.6	-2.0	0.4	-3.1	446	0.2	-3.3	0.2	-3.5	446	0.5	-1.4	0.2	-2.7	173
High-skilled	0.5	-2.3	0.3	-3.0	446	0.2	-3.2	0.0	-2.3	446	0.3	-1.9	0.0	-2.1	173
Trichotomous with controls															
Female	1.3	1.0	2.5	3.0	446	1.6	1.8	4	3.7	446	1.2	0.5	3.4	2.3	173
Male	0.81	-0.9	1.4	1.2	446	0.85	-0.5	2.5	2.4	446	0.56	-1.4	1.6	0.8	173
Young	3.7	2.9	6.5	3.6	446	3	2.3	6.2	3.3	446	####	0.0	####	0.0	173
Old	2.3	1.7	2.6	1.8	446	2.3	1.6	2.3	1.4	446	3.2	1.4	7.9	1.6	173
Informal	3.2	3.4	4.1	2.9	446	4.6	4.0	6.3	3.3	446	5.1	1.4	9.3	1.7	173
Formal	0.2	-4.3	0.21	-3.1	446	1.1	0.2	1.2	0.3	446	0.08	-4.1	0.17	-2.2	173
Low-skilled	0.58	-2.0	0.31	-3.6	446	0.22	-3.3	0.12	-4.0	446	0.41	-1.4	0.13	-2.9	173
High-skilled	0.51	-2.3	0.3	-3.1	446	0.18	-3.2	0.02	-2.4	446	0.28	-1.9	0.02	-2.3	173
Controls															
Shock size (>5 & <=10)	yes					yes					yes				
Shock size (>10)	yes					yes					yes				
MICs	yes					yes					yes				
HICs	yes					yes					yes				

Note: Highlighted cells for |z-stat|>2. Darker (red) cells and ### odds ratios indicate perfect predictions. Base categories for the trichotomous independent variables are LIC for income levels and Medium skills for skill levels. All the other base categories are results that are not tagged with population categories. They generally refer to the whole population.

Table 4 – Logit and Ordinary Logit Equations Results – Wages

Dep. Var.	1=Pos.; 2=Non-sig.; 3=Neg.					1=Neg; 0=Pos. or Non-sig.					1=Neg; 0=Pos.				
	Non-weighted		Weighted			Non-weighted		Weighted			Non-weighted		Weighted		
Indep.Var.	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**	**Odds**	**z-stat**	**Odds**	**z-stat.**	N
Dichotomous															
shortrun_longrun	11.0	5.2	10.0	4.9	110	11.0	5.0	10.0	4.8	110	35.0	3.1	24.0	2.9	69
largeshock_smallshock	0.6	-1.9	0.9	-0.3	322	0.5	-3.0	0.6	-2.0	322	1.2	0.5	1.6	1.3	156
lic_hic	0.1	-1.7	0.2	-1.7	322	0.0	0.0	0.0	0.0	322	0.0	0.0	0.0	0.0	156
female_male	1.4	1.0	1.6	1.3	110	1.6	1.1	1.9	1.6	110	1.3	0.3	1.1	0.2	55
young_old	2.9	0.9	7.6	2.1	16	2.0	0.6	2.0	0.8	16	######	0.0	######	0.0	14
informal_formal	4.1	1.6	29.0	1.4	44	1.9	0.7	11.0	1.0	44	######	0.0	######	0.0	10
lowskill_highskill	2.8	2.5	2.5	2.2	98	2.8	2.2	3.0	2.1	98	5.2	2.2	4.2	2.2	43
Dichotomous with controls															
female_male	1.4	1.0	1.6	1.3	110	1.6	1.1	1.9	1.6	110	1.3	0.3	1.1	0.2	55
young_old	2.9	0.9	7.6	2.1	16	2.0	0.6	2.0	0.8	16	######	0.0	######	0.0	14
informal_formal	4.1	1.6	29.0	1.4	44	1.9	0.7	11.0	1.0	44	######	0.0	######	0.0	10
lowskill_highskill	2.8	2.5	2.5	2.2	98	2.8	2.2	3.0	2.1	98	5.2	2.2	4.2	2.2	43
Controls															
largeshock_smallshock	yes	yes				yes					yes				
lic_hic		n.a.					n.a.					n.a.			
Trichotomous															
Short-run	7.8	6.5	11.0	6.8	322	7.7	6.4	11.0	6.6	322	23.0	3.0	33.0	3.5	156
Long-Run	0.8	-0.9	1.2	0.5	322	0.7	-0.8	1.1	0.2	322	0.6	-0.8	1.4	0.6	156
Shock size (>5 & <=10)	0.4	-3.3	0.9	-0.4	322	0.3	-4.3	0.5	-1.9	322	0.6	-1.2	1.5	0.9	156
Shock size (>10)	0.9	-0.4	1.0	-0.1	322	0.7	-1.3	0.6	-1.7	322	2.4	1.7	1.8	1.3	156
MICs	15.0	2.0	15.0	2.3	322	######	0.0	######	0.0	322	######	0.0	######	0.0	156
HICs	5.7	1.3	3.9	1.2	322	######	0.0	######	0.0	322	######	0.0	######	0.0	156
Female	1.4	1.2	2.1	2.3	322	1.5	1.3	2.1	2.2	322	1.5	0.7	2.7	1.8	156
Male	1.0	0.0	1.3	1.0	322	1.0	-0.2	1.1	0.2	322	1.2	0.3	2.4	1.5	156
Young	7.1	2.5	2.2	1.4	322	7.0	2.4	1.9	1.1	322	######	0.0	######	0.0	156
Old	1.9	0.7	0.2	-2.3	322	3.5	1.4	0.9	-0.1	322	0.6	-0.7	0.2	-2.1	156
Informal	0.6	-1.2	0.9	-0.3	322	0.3	-2.1	0.5	-1.1	322	######	0.0	######	0.0	156
Formal	0.3	-2.4	0.3	-1.8	322	0.2	-2.3	0.0	-1.4	322	0.2	-1.9	0.0	-1.4	156
Low-skilled	1.1	0.3	0.8	-0.9	322	1.0	0.1	0.7	-1.0	322	1.5	0.6	0.8	-0.5	156
High-skilled	0.4	-2.6	0.3	-3.3	322	0.4	-2.4	0.2	-3.0	322	0.3	-2.3	0.2	-3.0	156
Trichotomous with controls															
Female	1.3	0.8	1.5	1.2	322	1.4	1.1	1.7	1.5	322	1.5	0.7	1.9	1.1	156
Male	1.0	0.0	1.0	0.0	322	1.0	0.0	0.9	-0.2	322	1.3	0.4	2.1	1.1	156
Young	9.2	2.7	3.9	2.3	322	8.3	2.5	3.4	1.9	322	######	0.0	######	0.0	156
Old	1.2	0.2	0.3	-1.8	322	2.5	1.0	1.3	0.3	322	0.6	-0.6	0.3	-1.2	156
Informal	0.4	-2.3	0.2	-2.7	322	0.2	-2.8	0.1	-3.1	322	######	0.0	######	0.0	156
Formal	0.2	-3.1	0.1	-4.0	322	0.1	-2.5	0.0	-2.1	322	0.1	-2.8	0.0	-2.4	156
Low-skilled	1.4	1.1	0.9	-0.3	322	1.3	0.7	0.9	-0.4	322	2.0	1.1	1.2	0.3	156
High-skilled	0.3	-3.1	0.3	-3.3	322	0.3	-2.8	0.2	-3.1	322	0.3	-2.2	0.2	-2.4	156
Controls															
Shock size (>5 & <=10)	yes					yes					yes				
Shock size (>10)	yes					yes					yes				
MICs	yes					yes					yes				
HICs	yes					yes					yes				

Note: Highlighted cells for |z-stat|>2. Darker (red) cells and ### odds ratios indicate perfect predictions. Base categories for the trichotomous independent variables are LIC for income levels and Medium skills for skill levels. All the other base categories are results that are not tagged with population categories. They generally refer to the whole population.

Table 5 – Logit and Ordinary Logit Equations Results – Prices

Dep. Var.	1=Pos.; 2=Non-sig.; 3=Neg.					1=Neg; 0=Pos. or Non-sig.					1=Neg; 0=Pos.				
	Non-weighted		Weighted			Non-weighted		Weighted			Non-weighted		Weighted		
Indep.Var.	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**
Dichotomous															
shortrun_longrun	7.7	2.0	18.0	3.3	18	9.0	1.7	35.0	2.8	18	14.0	1.9	44.0	2.9	14
largeshock_smallshock	1.1	0.2	0.7	-0.8	128	1.2	0.3	0.7	-0.7	128	1.1	0.1	0.6	-0.8	100
lic_hic	0.8	-0.5	1.1	0.2	128	0.4	-1.6	0.6	-0.7	128	0.8	-0.4	1.0	0.0	100
rents_food prices	3.1	2.7	1.0	0.0	96	3.6	2.7	0.9	-0.2	96	4.0	2.7	0.9	-0.1	75
Dichotomous with controls															
rents_food prices	8.1	3.7	0.9	-0.2	96	25.0	4.2	2.6	1.0	96	19.0	3.7	1.7	0.5	75
Controls															
largeshock_smallshock	yes	yes				yes					yes				
lic_hic		yes				yes					yes				
Trichotomous															
Short-run	1.3	0.4	4.3	2.4	128	1.2	0.3	5.0	2.6	128	1.4	0.4	4.6	2.1	100
Long-Run	0.2	-2.3	0.2	-2.3	128	0.1	-1.9	0.1	-1.7	128	0.1	-2.1	0.1	-1.9	100
Shock size (>5 & <=10)	0.4	-1.8	0.5	-1.2	128	0.3	-1.9	0.6	-0.9	128	0.2	-2.0	0.5	-1.1	100
Shock size (>10)	1.7	1.2	0.9	-0.3	128	1.9	1.2	0.8	-0.3	128	1.8	1.0	0.8	-0.3	100
MICs	1.2	0.4	0.6	-0.9	128	2.2	1.5	0.8	-0.3	128	1.2	0.3	0.6	-0.8	100
HICs	1.4	0.7	1.5	0.7	128	2.7	1.6	2.9	1.6	128	1.4	0.5	1.7	0.7	100
prices-food	0.2	-2.8	0.1	-3.7	128	0.3	-2.3	0.1	-3.1	128	0.0	0.0	0.0	0.0	100
prices-rents	0.1	-5.4	0.1	-4.6	128	0.1	-4.9	0.1	-4.0	128	0.0	0.0	0.0	0.0	100
Trichotomous with controls															
prices-food	0.2	-2.6	0.0	-3.5	128	0.2	-1.7	0.1	-1.5	128	0.0	0.0	0.0	0.0	100
prices-rents	0.0	-5.4	0.0	-4.8	128	0.0	0.0	0.0	0.0	128	0.0	0.0	0.0	0.0	100
Controls															
Shock size (>5 & <=10)	yes					yes					yes				
Shock size (>10)	yes					yes					yes				
MICs	yes					yes					yes				
HICs	yes					yes					yes				

Note: Highlighted cells for |z-stat|>2. Darker (red) cells and ### odds ratios indicate perfect predictions. Base categories for the trichotomous independent variables are LIC for income levels and Medium skills for skill levels. All the other base categories are results that are not tagged with population categories. They generally refer to the whole population.

Table 6 – Logit and Ordinary Logit Equations Results – Wellbeing

Dep. Var.	1=Pos.; 2=Non-sig.; 3=Neg.					1=Neg; 0=Pos. or Non-sig.					1=Neg; 0=Pos.				
	Non-weighted		Weighted			Non-weighted		Weighted			Non-weighted		Weighted		
Indep.Var.	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**	**Odds**	**z-stat**	**Odds.**	**z-stat.**	**N**	**Odds**	**z-stat**	**Odds**	**z-stat.**	**N**
Dichotomous															
shortrun_longrun	######	0.0	######	0.0	10	######	0.0	######	0.0	10	######	0.0	######	0.0	5
largeshock_smallshock	3.6	2.2	2.1	0.4	76	######	0.0	######	0.0	76	######	0.0	######	0.0	49
lic_hic	0.1	-4.1	0.3	-1.8	76	0.1	-3.0	0.6	-0.4	76	0.0	-3.7	0.3	-1.0	49
monet_other	0.8	-0.5	0.2	-2.0	76	1.4	0.5	0.4	-0.7	76	1.1	0.1	0.2	-1.0	49
Dichotomous with controls															
monet_other	0.7	-0.8	0.3	-1.6	76	1.3	0.4	0.4	-0.6	76	0.6	-0.6	0.3	-0.9	49
Controls															
largeshock_smallshock	yes	yes				yes					yes				
lic_hic		yes				yes					yes				
Trichotomous															
Short-run	######	0.0	######	0.0	76	######	0.0	######	0.0	76	######	0.0	######	0.0	49
Long-Run	3.7	1.9	3.5	1.6	76	2.1	0.8	0.7	-0.2	76	7.8	1.6	2.2	0.4	49
Shock size (>5 & <=10)	16.0	3.9	8.5	1.1	76	######	0.0	######	0.0	76	######	0.0	######	0.0	49
Shock size (>10)	1.5	0.7	1.7	0.3	76	######	0.0	######	0.0	76	######	0.0	######	0.0	49
MICs	8.8	4.1	2.8	1.2	76	9.4	3.1	2.7	0.8	76	21.0	3.7	3.7	1.0	49
HICs	5.3	1.4	5.1	1.6	76	0.0	0.0	0.0	0.0	76	1.0	.	1.0	.	49
Well-being-housing	5.8	2.8	2.4	0.9	76	23.0	2.7	13.0	1.8	76	34.0	2.8	9.6	1.5	49
Well-being-monetary	1.3	0.6	0.3	-1.7	76	7.7	1.8	1.2	0.1	76	6.4	1.6	0.7	-0.2	49
Trichotomous with controls															
Well-being-housing	0.8	-0.2	7.5	1.3	76	3.7	0.9	30.0	1.7	76	7.9	1.2	18.0	1.4	49
Well-being-monetary	0.3	-1.8	0.3	-1.5	76	1.4	0.3	1.0	0.0	76	0.4	-0.6	0.5	-0.4	49
Controls															
Shock size (>5 & <=10)	yes					yes					yes				
Shock size (>10)	yes					yes					yes				
MICs	yes					yes					yes				
HICs	yes					yes					yes				

Note: Highlighted cells for |z-stat|>2. Darker (red) cells and ### odds ratios indicate perfect predictions. Base categories for the trichotomous independent variables are LIC for income levels and Medium skills for skill levels. All the other base categories are results that are not tagged with population categories. They generally refer to the whole population.

Figure 1 – Number of published papers by year

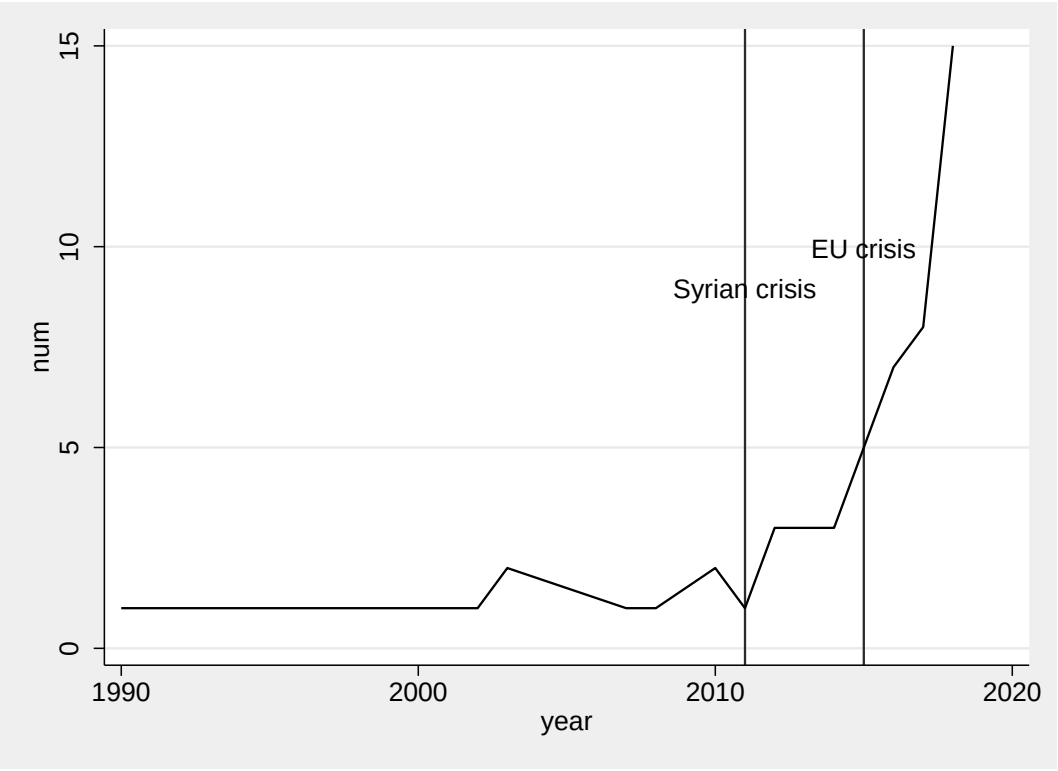

Table A1 – Papers by outcome

No.	Paper	Employment	Wages	Prices	Wellbeing	Total
1	Akgündüz and Torun (2018)	14				14
2	Akgündüz et al. (2015)	20		12		32
3	Aksu et al. (2018)	68	12			80
4	Alhawarin et al. (2018)				8	8
5	Alix-Garcia and Bartlett (2015)				2	2
6	Alix-Garcia and Saah (2010)			4	4	8
7	Alix-Garcia et al. (2012)			4		4
8	Alix-Garcia et al. (2018)		2	2	6	10
9	Angrist and Kugler (2003)	12				12
10	Bahar, Ibanez and Rozo (2019)		6			6
11	Balkan and Tumen (2016)			14		14
12	Balkan et al. (2018)			14	2	16
13	Bodvarsson et al. (2008)		8			8
14	Borjas (2017)		8			8
15	Borjas and Monras (2017)	10	8			18
16	Bozzoli et al. (2012)	6	4			10
17	Braun and Kvasnicka (2014)	2			2	4
18	Braun and Mahmoud (2014)	18				18
19	Calderon-Mejia and Ibanez (2016)		44			44
20	Card (1990)	4	4			8
21	Carrington and de Lima (1996)	4	4			8
22	Caruso, Gomez Canon, and Mueller (2019)	4	38			42
23	Cengiz and Tekguc (2018)	8	8			16
24	Ceritoglu et al. (2017)	20	20			40
25	Clemens and Hunt (2019)		6			6
26	Cohen-Goldner and Paserman (2011)	24	24			48
27	Del Carpio and Wagner (2016)	22				22
28	Depetris-Chauvin and Santos (2017)			12	2	14
29	Depetris-Chauvin and Santos (2018)			12		12
30	Esen and Binatli (2017)	8				8
31	Fakih and Ibrahim (2016)	2				2
32	Fallah et al. (2018)	16	4			20
33	Foged and Peri (2015)	32	12			44
34	Friedberg (2001)	2	12			14
35	Gehrsitz and Ungerer (2018)		6			6
36	Glitz (2012)	6	6			12
37	Hercowitz and Yashiv (2002)	4		4		8
38	Hunt (1992)		2			2
39	Kreibaum (2015)				2	2
40	Kurschner Rauck and Kvasnicka (2018)			8		8
41	Lach (2007)			4		4
42	Loschmann, Bilgili, and Siegel (2019)	24			12	36
43	Makela (2017)		12			12
44	Mansour (2010)		4			4
45	Mayda et al. (2017)	6	6			12
46	Maystadt and Duranton (2018)			12	16	28
47	Maystadt and Verwimp (2014)				2	2
48	Morales (2017)		20			20
49	Murard and Sakalli (2018)		2		2	4
50	Peri and Yasenov (2019)		8			8
51	Peñaloza Pacheco (2019)		14			14
52	Rozo et al. (2018)	28	16		12	56
53	Ruiz and Vargas-Silva (2015)	6				6
54	Ruiz and Vargas-Silva (2016)	10				10
55	Ruiz and Vargas-Silva (2018)	54				54
56	Saiz (2003)			10		10
57	Taylor et al. (2016)				4	4
58	Tsuda (2018)	8				8
59	Tumen (2016)	4	2	16		22
	Total	**446**	**322**	**128**	**76**	**972**

Table A2 – Share of results by crisis with share of forcibly displaced (FD)

No.	Caseload	HICs	LICs	MICs	Total	FD (%)	Est.Time
1	2015 Refugees in Germany	1.4	0.0	0.0	1.4	1.3	0.6
2	Burundian and Rwandan refugees in Tanzania	0.0	11.9	0.0	11.9	53.3	12.9
3	Congolese refugees in Rwanda and Uganda	0.0	4.3	0.0	4.3	3.2	15.2
4	Cuban refugees in Miami	5.8	0.0	0.0	5.8	8.1	5.8
5	Escapees from Algeria to France	0.4	0.0	0.0	0.4	2.5	6.0
6	Ethnic Germans from EE and FSU to Germany	1.2	0.0	0.0	1.2	0.8	5.0
7	Ethnic Greeks from Turkey to Greece	0.0	0.0	0.4	0.4	12.0	58.0
8	Expellees from East Europe to West Germany	2.3	0.0	0.0	2.3	16.5	7.0
9	FSU escapees to Israel	8.2	0.0	0.0	8.2	10.1	6.3
10	FY refugees to Europe	1.4	0.0	0.0	1.4	0.4	8.3
11	IDPs in Colombia	0.0	0.0	10.3	10.3	11.7	4.6
12	IDPs in Sudan (Darfur)	0.0	0.6	0.0	0.6	71.7	3.7
13	Palestinians in West Bank	0.0	0.0	0.4	0.4	50.0	4.0
14	Refugees in Denmark	4.5	0.0	0.0	4.5	4.7	14.0
15	Refugees in Kenya (Turkana)	0.0	1.0	0.0	1.0	19.4	20.0
16	Refugees in the USA	1.2	0.0	0.0	1.2	0.1	30.0
17	Returnees from Angola and Mozambique to Portugal	0.0	0.0	2.1	2.1	7.8	12.4
18	Syrian refugees in Jordan and Turkey	0.0	0.0	36.0	36.0	8.0	2.7
19	Venezuelans in Colombia	0.0	0.0	6.4	6.4	5.2	1.2
	Total/Average	26.5	17.9	55.6	100.0		

Legend. FD (%) indicates the number of forcibly displaced persons (refugees or IDPs) as a percentage of the host population in a given geographical area affected by refugees or IDPs. (*) Est. Time shows the average time gap between the beginning of the influx and the year for which the impacts are measured in each study.

Table A3 – Results and papers by journal and impact factor

N.	Journal	Papers	Results	Imp.Fact.
1	AEJ: Applied Economics	1	44	3.61
2	American Economic Review: Papers and Proceedings	2	28	0.01
3	Defence and Peace Economics	1	2	0.07
4	ERF Working Paper	1	8	0.05
5	Economic Development and Cultural Change	1	2	0.73
6	Economic Policy	1	18	2.25
7	Economic Research Forum Working Papers	1	20	0.05
8	European Economic Review	2	60	1.24
9	FCE UNPL Documento de Trabajo	1	14	0.01
10	GLO Discussion Paper	1	14	0.01
11	IDB Technical Note	1	6	0.01
12	ILR Review	1	6	0.38
13	IZA Discussion Papers	6	148	0.66
14	IZA Journal of Development and Migration	1	36	0.01
15	IZA Journal of Labor Policy	1	40	0.35
16	Industrial and Labor Relations Review	4	26	0.48
17	Journal of Conflict Resolution	1	10	0.11
18	Journal of Development Economics	3	42	1.90
19	Journal of Economic Geography	3	82	0.45
20	Journal of International Economics	1	4	2.85
21	Journal of Labor Economics	1	12	3.01
22	Journal of Political Economy	1	4	6.64
23	Journal of Population Economics	1	14	0.02
24	KNOMAD Working Paper	1	14	0.01
25	Labour Economics	2	12	0.01
26	Mimeo	2	64	0.01
27	Oxford Economic Papers	2	44	0.58
28	PERI Working Papers	1	16	0.01
29	Proceedings of the National Academy of S	1	4	0.01
30	Quarterly Journal of Economics	1	14	8.40
31	Review of Development Economics	1	54	0.13
32	Social Sciences	1	8	0.02
33	The Economic Journal	1	12	2.27
34	The Journal of Economic History	1	18	0.27
35	The Journal of Human Resources	1	8	2.45
36	The Review of Economics and Statistics	1	10	2.38
37	US Department of State Chief Economist W	1	12	0.01
38	World Bank Economic Review	1	8	0.57
39	World Bank Policy Research Working Paper	1	22	0.01
40	World Development	2	6	0.29
41	ZEW Discussion Papers	1	6	0.01
	Total	**2.32**	**972**	**0.85**