

THE ECONOMICS OF FORCED DISPLACEMENT: AN INTRODUCTION

Paolo VERME*

***Abstract** - Forced displacement – defined as the displacement of refugees and Internally Displaced Persons (IDPs) due to violence – has reached an unprecedented scale and global attention during the past few years, particularly in the aftermath of the Syrian refugee crisis in 2011 and the European Union’s migration crisis in 2015. As this plight gained momentum, economics found itself unprepared to answer the basic questions surrounding refugees and IDPs. Few economists or institutions were working on forced displacement. Economic theory or empirics had little to offer in terms of articles published in journals. Data were found to be scarce, unreliable or inaccessible. Can economics rise to the challenge? Is the economics of forced displacement different from neoclassical economics? Can we use off the shelves models to study forced displaced populations? What are we missing to do the economics of forced displacement? What are the data constraints that limit economists in this work? This paper provides a first non-technical introduction to these topics. We argue that the modelling of utility, choice, risk and information in a short-term setting is the key to address the problem. Neoclassical economics lacks some of the theoretical ingredients that are needed but recent developments in game theory, neuroeconomics and behavioral economics have opened new horizons that make the task of modelling forced displacement within reach. Empirics is clearly limited by the scarcity of quality data but an example shows how welfare economists can start working with existing data. Economists have no excuse to maintain the status quo and should get on with the work on forced displacement.*

Keywords - REFUGEES, INTERNALLY DISPLACED PERSONS, FORCED DISPLACEMENT, CONFLICT

JEL classification - F22, K37, O15, R22, D74, F51

* World Bank.

1. INTRODUCTION

Forced displacement¹, is part of human history and achieved its peaks in the 20th century during World War I and II. Since the end of World War II, the nature of conflict has changed with intra-national conflicts dominating international conflicts but the number of refugees, Internally Displaced Persons (IDPs) and other forcibly displaced people have been growing steadily nevertheless. In 2015, the total number of forcibly displaced persons was the largest since 1950 when the global counts started².

The growth in numbers has accelerated during the past two decades mainly due to the Somalia, Iraq, Afghanistan and South Sudan conflicts. More recently, the Syrian conflict started in 2011 and the EU migration crisis of 2015 brought the plight of the forcibly displaced to global attention so that today the challenge is both with the numbers of people in need of assistance and with the political sensitivity of the forced migration issue. The Syrian crisis, immigration from poor to rich countries and extremist groups perpetrating violence and causing forced displacement in countries as diverse as Iraq, Nigeria or Afghanistan are now household topics at the center of daily news that can determine the outcome of national elections.

In this new global scenario, the economics profession has been surprisingly silent. Studies on refugees and IDPs have always been marginal in economics partly because of lack of data and partly because these were topics thought to belong to the humanitarian rather than development sphere. Studies on refugees focused on assistance, protection programs, or service delivery mostly from a humanitarian perspective and mostly in the form of reports rather than academic articles. More recently, economic research turned to assess the impact of refugees on host communities but these studies focused on outcomes and remained short of developing the economics of forced displacement (Sarvimäki et al., 2009; Baez, 2011; Ruiz and Vargas-Silva, 2013; Kreibaum, 2016). Other disciplines such as health, sociology or demography³ have been more pro-active in conceptualizing forced displacement but theories of forced displacement have been hard to come by and published articles in top journals are very rare.

In this paper, we provide a non-technical introduction to the economics of forced displacement. We will first make the case for the need of economics to step in by reviewing the facts about forced displacement in section 2. We then discuss how the economics of forced displacement may deviate from neoclassical economics and how recent developments in economics can actually offer new instruments to model forced displacement. This is done from the perspective of utility theory and modelling choice. Next, we discuss data issues that are currently preventing economists from working on forced displacement. Section

¹ For the purpose of this paper, we define forced displacement as the displacement of people due to violence. This is a narrower definition of the term as used elsewhere, which may include displacement due to natural disasters.

² <http://www.unhcr.org/en-us/figures-at-a-glance.html>.

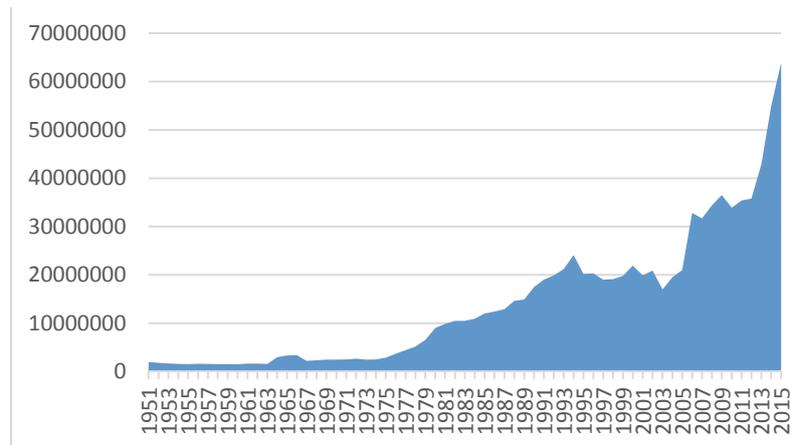
³ The journal that publishes more frequently about refugees is *Social Science and Medicine* followed by multidisciplinary journals such as *Migration Letters*.

5 will provide a concrete example of how economics research can serve policy makers and improve the lives of refugees, IDPs and their hosts. Section 6 concludes.

2. SOME FACTS

The United Nations High Commissioner for Refugees (UNHCR) reports that at the end of 2015 there were 65.3 million forcibly displaced people worldwide.⁴ This number includes 21.3 m. refugees and about 10 m. stateless people with the rest mostly being accounted for by Internally Displaced Persons (IDPs). The forcibly displaced population accounts therefore for about 0.9 percent of the world population estimated at 7.3 bn people in 2015. The latest estimate of forcibly displaced people is the largest on record, since the creation of the UNHCR in 1950. The growth in these numbers are evidently associated with episodes of conflict and violence. The Somalia, South-Sudan and Syrian conflicts have been responsible for the major outflows of refugees and movements of IDPs over the past decade with the Syrian conflict being responsible for the latest spike (**Figure 1**).

Figure 1. Number of Forcibly Displaced Persons (1951-2015)



Note: 2015 data are mid-year and lower than end of year data.

Source: Constructed from UNHCR population data.

http://popstats.unhcr.org/en/time_series.

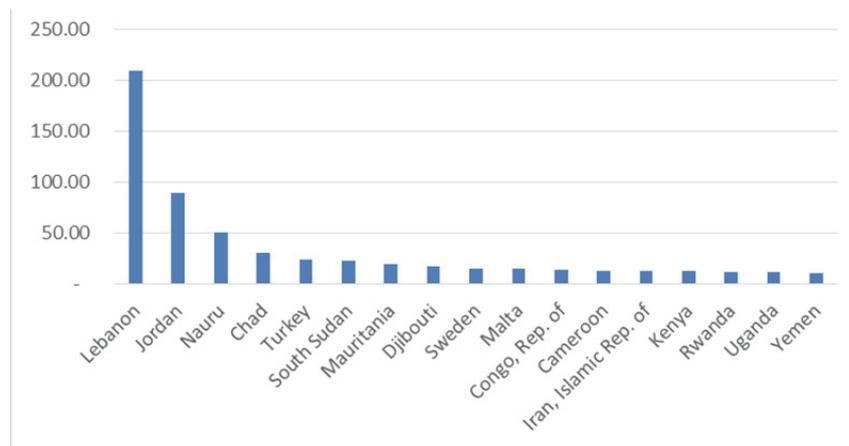
Most countries in the world are affected by forced displacement. There are at least 150 countries that host at least 100 refugees each and there are at least 141 countries that generated at least 100 refugees each. If we add the numbers for the internally displaced, almost no country in the world can be said to be immune from forced displacement.

Some countries and some regions are more affected than others. Over 53 percent of all refugees come from only three countries (Somalia, Afghanistan

⁴ <http://www.unhcr.org/en-us/figures-at-a-glance.html>.

and Syria) and the great majority of displaced people are hosted in the Middle East and North Africa (39%), Africa (29%) and Asia and the Pacific (14%) regions.⁵ Europe accounts for only 6% of the forcibly displaced and the Americas accounts for 12%, most of which are IDPs in Colombia.

Figure 2. Refugees per 1000 Inhabitants



Source: Constructed from UNHCR population data.
http://popstats.unhcr.org/en/time_series

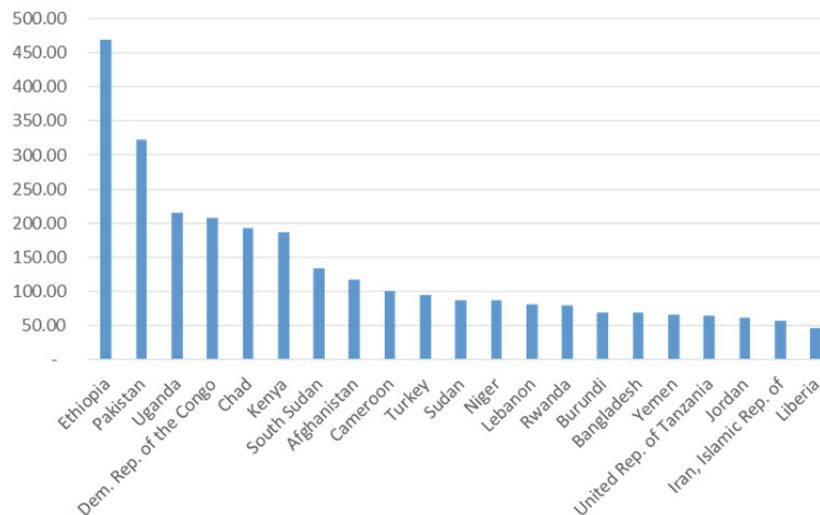
The incidence of refugees on host countries is greater in low and middle-income countries and this is true whether we consider population or GDP statistics, refugees or IDPs. Figure 2 shows the number of refugees per 1,000 inhabitants and it is visible that Lebanon is by far the country with the highest incidence of refugees followed by Jordan. Almost all countries in the figure are either middle or low income countries and almost all are in the MENA or Africa region. Figure 3 shows the number of refugees per USD estimated in Purchasing Power Parity (PPP) per capita. Ethiopia and Pakistan lead this particular ranking and the MENA and African region together with South Asia are the regions with countries showing the highest incidence. This principle also applies to IDPs. The top ten countries with the largest populations of IDPs are Colombia, Syrian Arab Republic, Iraq, Sudan, Democratic Republic of Congo (DRC), Azerbaijan, Somalia, Bosnia and Herzegovina, Afghanistan and Pakistan, essentially low and middle income countries. Quantitatively speaking, the heavy burden of refugees and IDPs is carried by low and middle income countries and not by wealthy OECD countries. Forced displacement is therefore a problem that complicates the question of economic development in directions that are not yet fully understood.

These facts were mainly known to specialists until the beginning of the Syrian crisis in 2011 and the EU migration crisis in 2015, two events largely covered by the press that brought forced displacement to global attention. This new

⁵ <http://www.unhcr.org/en-us/figures-at-a-glance.html>.

level of interest, in turn, pressed international organizations for new solutions to the management of forced displaced people. The old general consensus that forcibly displaced persons are responsibility of humanitarian organizations was replaced by a new consensus whereby humanitarian organizations such as the UNHCR should work together with development organizations such as the World Bank from the very beginning of a forced displacement crisis to devise solutions that are sustainable for the livelihood of the forcibly displaced and their hosts (Verme and Macleod, 2016; Devictor, 2016).

Figure 3. Refugees per USD/PPP/Capita



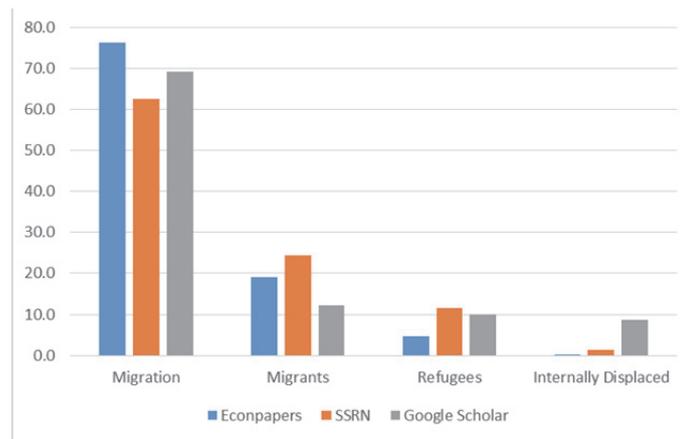
Source: Constructed from UNHCR population data.
http://popstats.unhcr.org/en/time_series

The growth of the forced displacement phenomenon and the new consensus on the humanitarian-development nexus encouraged development organizations to start looking at refugees, IDPs and their hosts. These populations were largely excluded from the development discourse until a few years ago. For example, the global count of poverty excluded for the most part refugees and IDPs because national household budget surveys would normally exclude these populations. Humanitarian organizations that conducted surveys on these populations did so mostly for humanitarian protection purposes and did not have special expertise on the measurement of welfare and poverty. Data remained scarce and economists did not pay much attention to forced displacement. This changed when development organizations started to engage with refugees, IDPs and their hosts with this phenomenon contributing to raise economists' interests.

Until these recent events, the economics profession approached the question of displacement from the perspective of internal (within nation) or external (across nations) migration. The economics of migration finds its theoretical and empirical roots in labor and development economics and is now an established

discipline on its own with thousands of contributions in international journals. More recently, some contributions emerged on forced migration (Ruiz and Vargas-Silva, 2013) but these contributions remained empirical in nature and scarce in numbers.

Figure 4. Research on Migration, Refugees and IDPs (% of total hits)



Source: Authors' estimations based on Econpapers, SSRN and Google Scholars.

A search by keywords of the major economic and social science research repositories shows a vast difference in the number of hits between the terms “migration” and “migrants” on the one hand and the terms “refugees” and “internally displaced” on the other hand (Figure 4). For example, a research in titles and keywords among published journal articles in the main economics repository (*Econpapers*) shows 6,350 hits for the word migration, 1,586 for the word migrants, 383 for the word refugees and only 18 for the word internally displaced. Similar outcomes in relative terms are visible if we do a search by title, keywords and abstracts of the research papers contained in the *Social Sciences Research Network* (SSRN), the main repository of social sciences articles, or google scholar. It is also extremely rare for studies on forced displacement to be published in top economics journals. Despite mass press coverage, studies on refugees and IDPs remain very scarce in number and quality.

This phenomenon can be explained by essentially two factors. The first relates to the humanitarian-development nexus. For the longest time, refugees and IDPs remained the quasi monopoly of humanitarian organizations whose mandate is essentially the humanitarian protection of refugees and IDPs. These organizations are not typically staffed by economists and analysts but by field workers and lawyers. There was, therefore, little demand for hard economics on forced displacement for a very long time. This is changing as development organizations typically staffed by economists have started to work on forced displacement situations. The second factor relates to lack of good data. As we will see in the data section, data collection of mobile populations is complex and the main organizations in charge of data collection of refugee and IDPs data are humanitarian organizations that do not necessarily have the complex skills re-

quired for issues like sampling, questionnaire design and data analysis and have a duty to protect data by mandate. This, in turn, has resulted in very few micro data that would be both of good quality and accessible to researchers. This is also starting to change but it is clear that the economics of forced displacement remains in its infant stage for now. What would it take to bring economics up to speed with developments on forced displacement? This is the question we address next.

3. THE ECONOMICS OF FORCED DISPLACEMENT

Is the economics of forced displacement different from neoclassical economics? Can we use off the shelves models to study forced displaced populations? What are we missing to do the economics of forced displacement? These are some of the questions we explore in this section. We focus on utility theory first, we then discuss how to model choice in a forced displacement context and we conclude with selected references from the macroeconomic and trade literature.

3.1. Utility theory

Economics is grounded in the concept of utility, a term that refers to the degree of satisfaction, happiness or wellbeing that individuals enjoy. Economics developed two separate approaches to measure utility. A direct approach that attempts to measure happiness with hedonimeters (Edgeworth, 1881; Khaneman, 2000) and an indirect approach that attempts to use revealed preferences in consumption patterns to derive the degree of utility that choices, such as consumption choices, provide (Fisher, 1892, Samuelson, 1938). Utility, as a concept, applies to forced displaced populations as it applies to any other population and we can potentially measure utility for refugees and IDPs using direct or indirect measures or objective and subjective measures. In this respect, forced displaced populations are no different for other populations. We should expect refugees and IDPs to attempt to maximize their own utility given a set of constraints and choices. However, the metrics we may use to measure utility, the time-span of the utility maximization process and the degree of information under which this process takes place are three aspects that may differentiate utility in a forced displacement context.

The **metrics** used to measure utility in economics is normally income or consumption and, in principle, these same metrics apply to refugees and IDPs. However, measuring income and expenditure of refugees and IDPs is different from measuring these same quantities in regular populations, the relation between income, wealth and savings is different, and non-monetary metrics are as important, if not more important, than monetary ones.

When people are subject to life threatening risks, abandoning jobs and income may be of secondary importance to abandoning assets such as real estate properties, which may have been acquired in the course of a lifetime. Abandoning properties during a conflict also heightens the likelihood of losing property rights, especially where institutions such as cadasters, are weak or non-existent. On the contrary, people with substantial financial wealth, may be able to quickly export this wealth before or during a conflict and rebuild lives elsewhere with

no need to seek refugee or IDP status. Refugees and IDPs, by definition, have been forced to abandon their income and probably most of their wealth.

In the place of destination, refugees or IDPs would normally rely on handouts (cash and food vouchers) and maybe some informal and low paid work. Savings play a very important role and divesting in-cash and in-kind savings may be a major subsistence activity. Housing options may be between expensive rent, camps or informal shacks. This is a very different welfare scenario than the one faced by regular populations, even if very poor, and the money metrics of utility has to be rethought accordingly.

Non-monetary utility indicators also play a more important role in a forced displacement context. There are things that money cannot buy and provide the greatest utility in a conflict environment. Security and survival may be completely independent of income or wealth and, if this is the case, these variables are legitimate metrics of utility in such contexts. Measuring risk and personal security are complex undertakings in fragile and volatile environments, but important to understand the decision making process of refugees and IDPs. In a forced displacement context, nonmonetary indicators of utility become relatively more important than monetary indicators.

Another important question is the **time-span** of the utility maximization process. In standard economic models, including models of economic migration, utility maximization implies long-term or even life-cycle horizons. The decision to migrate is carefully taken based on lifetime prospects that relate to migrants and sometimes to the children of migrants. The large costs of migration are borne in the expectation of large long-term returns to these investments. As in Deaton (1991), people start with a certain wealth, receive a stochastic wage draw in each future time period and must decide how much to save in order to smooth consumption and maximize utility over time. Many migration models are life-cycle models.

In the context of forced migration, people start with income and wealth that is subject to an idiosyncratic shock due to conflict and face uncertain prospects about future incomes and assets. They also have little time to plan the move, which may lead to irrational decisions related to moving choices. The decisional process is short-term and life-cycle models would not be suitable. The type of choice setting forced migrants face is closer to short-term game theory models. As we will see further in this section, modern branches of economics such as game theory, neuroeconomics and behavioral economics may provide those complementary elements that are currently missing in labor or migration economics.

Related to the question of time-span is the question of **information**. Life-cycle models and more generally neoclassical utility models rely on perfect information assumptions. In a conflict environment, this is a particularly troubling assumption because access to information is constrained, it is manipulated and politicized and there is little time to verify or gather information. People act out of very incomplete information and act irrationally because of that. Contemporary press offers numerous example where people have been driven to

violence out of false information circulated by the media. A very good understanding of how information is managed and used in a fragile and conflict environment is key to model decision making in such context.

Recent developments in economics and utility theory may offer a good theoretical base to address issues of uncertainty and incomplete information. Neoclassical economic theory has for long relied on the axiom of perfect information whereby agents are perfectly informed about the outcomes of choices and take decisions accordingly. Modern economics has attempted to overcome this simplification and has developed a tradition of modelling choice under uncertainty.⁶ Within this tradition, the most popular model and the backbone of most existing models is the von Neumann-Morgenstern Expected Utility (EU) model generally described as:

$$\chi = (E_i: x_i, \dots, E_n: x_n)$$

where χ denotes a *prospect*, $E_j, j = 1, \dots, n$ denote possible events of which only one is true but it is unknown and x_j denotes a utility metrics such as income, which is the *outcome* if the prospect E_j is true. As in standard decision theory, it is said that χ *dominates* γ if the decision maker prefers prospect χ over prospect γ . In this framework, decision makers maximize EU:

$$E(U) = \sum_{j=1}^n p(E_j)U(x_j)$$

where $U(\cdot)$ is the utility (or value) function and $p(E_j)$ is the probability of the event occurring. Consequently, χ *dominates* γ if and only if:

$$\sum_{j=1}^n p(E_j)[U(x_j) - U(y_j)] \geq 0.$$

Given that the decision maker does not know which event is true, this choice setting is known as *decision under uncertainty* and the probabilities of the event occurring are referred to as *subjective probabilities*. (Savage, 1954). If probabilities are well known to all, these are referred to *objective probabilities*. In this case, the EU function becomes $\sum_{j=1}^n \pi_j U(x_j)$ and economists refer to *decision under risk*, which is a sub-set of the decision under uncertainty models. Note that in EU empirical applications, decision makers are expected to be risk averse and the utility function is expected to be concave ($u'' < 0$).

One critique to the subjective expected utility theory is the Ellsberg paradox (Ellsberg, 1961) or the question of ambiguity aversion. When individuals are put in front of two alternatives one with a certain low outcome and one with an uncertain high outcome, they would generally opt for the certain low outcome because of preferences for known odds to unknown odds. This ambiguity aversion violates the postulates of the subjective expected utility theory and offers a possible insight into why some people may choose to live under a conflict where risks are known rather than escaping elsewhere where risks and conditions are unknown.

⁶ See de Palma et al. (2008).

A more recent critique to the EU model include Khaneman and Tversky (1979) prospect theory. The central theme of the critique is that people underweight outcomes that have very low probability of occurring and overweight outcomes that have a very high probability (this is called the *certainty* effect). Considering equal weighting as in EU theory can lead to the Allais paradox (Allais, 1953) where different choice frameworks can lead to opposite conclusions about dominance of alternative choices. Khaneman and Tversky (1979) also showed that, for negative prospects, preferences are reversed as compared to positive prospects (this is called the *reflection* effect). Therefore, “(...) *certainty increases the aversiveness of losses as well as the desirability of gains*”. (Khaneman and Tversky, 1979, p. 269). Hence, the authors introduce the notion of decision weight π to weigh the importance that people give to different probabilities so that the expected utility function becomes:

$$E(U) = \sum_{j=1}^n \pi[p(E_j)]U(x_j)$$

One can also study decision making in a *game theory* setting. Expected utility can be looked at as a one person game but the value added of game theory in the context of forced displacement relates to multiple persons games. Suppose that actions taken by individuals under conflict situations affect the actions of others and ultimately one own's action (the classic prisoner's dilemma for example). This is what game theory is good in modelling and it could provide valuable contributions to the study of collective behavior under forced displacement situations (see for example Zeager and Bascom, 1996).

New branches of economics such as *neuroeconomics* and *behavioral economics*, which combine elements of psychology and neuroscience with elements of economics, offer alternative new avenues to the construction of utility models in a forced displacement context. For example, neuroeconomics developed a hierarchical module oriented approach (Sanfey et al., 2006) whereby individuals take decisions in a hierarchical manner where multiple systems of specialized processing modules transform specific inputs into outputs in organized decision stages. This process can be observed in people's brains with scans and can be modelled empirically using specifically designed questionnaires. This literature shows how the short-term decision process is different from the long-term process in terms of how we value potential outcomes. For example, small rewards in the short-term may be more appealing than large rewards in the long-term depending on the conditions under which we make choices (McClure et al., 2004 and 2007).

The EU model and the introduction of uncertainty is evidently a good starting point to model forced displacement. Decision makers (refugees and IDPs for example) experience a shock (conflict, violence) and suddenly face sets of uncertain events that will lead to alternative outcomes in terms of personal utility. Prospect theory is also important in this respect because introduces the notion of the weight function. Given the short-term nature of the decision to be taken on whether to stay or move during conflict, people may behave very differently as

compared to normal situations and attribute very different weights to these probabilities as also shown by recent advances in neuroeconomics and behavioral economics. Therefore, while the specificities of a forced displacement model based on expected utility theory have yet to be designed, the fundamental framework is in place and it will be a question of tweaking this framework to identify the utility maximization process that best describes agents taking decisions during a conflict.

3.2. Modelling choice

If utility theory applies to forced displaced populations, we should expect choice models that derive from this utility theory to be suitable to study forced displacement situations. This reasoning reflects indeed the economics behind migration studies. The economics literature on migration originates from the labor economics literature on job seeking and wage differentials. Essentially and similarly to people seeking or changing job, migrants chose between moving and not moving and move if the difference between income prospects in the origin and destination areas (net of the moving costs) is positive (Harris and Todaro, 1970; Borjas, 2014). The natural step forward would be to use the economics of migration literature for the study of forced migration. In doing so, however, we are hampered by some of the specificities related to forced displacement situations.

In labor or migration studies, the choice set is between opportunities across occupations or geographic areas and the pay-offs are largely known to the decision maker. In such contexts, one can use job search models borrowed from the labor economics literature, an approach that has also been used for refugees in the past (Damm and Rosholm, 2010). However, forced migrants are “forced” to live the place of origin because of conflict, violence or more generally a life-threatening hazard. In economics terms, their choice set is more limited than the choice set of an economic migrant. Some people may just have to run and leave everything behind, while some other people under the same circumstances may opt to stay and face the hazard. Therefore, it is correct to model forced migration in a choice framework but the choice set is more limited, information is scarcer, uncertainty is higher and the role of risk more important. This also implies that behavioral traits such as personality may be more important to assess in the context of forced migration as compared to economic migration, or the behavioral traits that matter may be different. The decision to migrate under conflict may also depend on the collective behavior of peers, for example if most people in my village have decided to move or not. When the decisional time is short, peer effects may be very powerful factors in determining choice.

From an econometric perspective, we are interesting in modelling the probability of individuals fleeing the conflict or staying. As in standard probabilistic models, we model the probability of choice j as:

$$P_{itj} = \text{Prob}(\text{individual } i \text{ makes choice } j \text{ at time } t \mid \text{choice set})$$

where the choice indicator is:

$$d_{itj} = 1 \text{ if individual makes choice } j \text{ at time } t, \text{ and } 0 \text{ otherwise.}$$

And the probability distribution of choice j is:

$$P_{itj} = \text{Prob}(d_{itj} = 1 | X_{it}, z_{it}, u_{it}, \beta, \gamma, \dots), j = 1, \dots, J_{it}$$

where X_{it} represent the set of attributes of all J_{it} choices such as income, z_{it} are individual and household characteristics, u_{it} are the random unmeasured factors and β, γ are the parameters to be estimated.

These models are part of the probabilistic choice models family and can be estimated with logit and probit functions in a cross-section setting or their corresponding fixed or random effects models if one has panel data. The essential econometrics issues behind these models such as unobserved heterogeneity, multicollinearity, or reversed causality are not expected to be different in the context of forced displacement. However, the choice of dependent and independent variables and the data form have their peculiarities and need to be rethought in a forced displacement context.

The dependent variable can be simply set as a binary outcome of moving versus not moving but the attributes of the alternative choices X_{it} can be very different from a labor or economic migration scenario. As already discussed, the role of income, wealth and savings are different and there are factors that are non-monetary such as risks to personal security, health hazards and relations with the perpetrators of violence. For example, one could measure the number of casualties due to conflict across geographical areas and use this variable as a proxy of insecurity but this applies to all people living in a geographical area and does not help to explain why, violence being equal, some people move and other not. Some people may also gain from conflict in terms of income and wealth and this may explain why some people do not move. The defining attributes of the alternative choices are very different from any other model and the task of economics is to understand what these defining attributes should be.

In terms of independent variables, “push” factors become more important than “pull” factors in forced displacement models. The intensity of a conflict may be more important than the income opportunities in potential destination areas. In addition to the classic socio-economic variables, risk aversion, stress, anxiety, other traits of personality and behavioral factors in general have to be well understood and measured. Hence, one could think of four essential blocks of independent variables including individual or household socio-economic characteristics, “push” factors, “pull” factors and behavioral factors. Also, access and dissemination of information related to the conflict in the place of origin but also in the potential places of destination may be crucial for people to make choices. This is where social psychology, behavioral economics and neuroeconomics may offer insights into such choices.

Forced displacement data are also unusual in their form. Deciding on whether to flee or not to flee a conflict (the migration choice) can be an individual or household choice and risk coping strategies may include temporary migration, shuttling between places, migration of only selected members of the households or migration of the whole household. This implies that individuals may stay put throughout the period observed, join or leave the household during the period,

or have several episodes of out and immigration. Household may decide to leave and come back several times. In econometric terms, this means that longitudinal data may be left and right censored and have spells within. They are therefore the most complex set of panel data possible and require particular treatment of data and modelling. Survival or duration models can usually accommodate many of these complexities but it is very rare to find similar data sets used in published articles. Collecting such type of data is also not obvious, particularly if conflict is intense and survey areas cannot be reached. This is an issue where empirical economics could provide a real contribution by defining the optimal data format and adapting panel models to this format.

3.3. Macro models

Macroeconomics has attempted to model forced migration using models borrowed from the trade and economic migration literature such as the gravitational model (Echevarria and Gardeazabal, 2016) or used other macro models to test the impact of refugees on trade (White and Tadess, 2010). A more recent body of work is adapting trade models to take into account stochastic shocks in a dynamic framework (Cameron et al., 2007; Artuc et al., 2008). These are rational expectations models that are able to model the unpredictability of shocks and recent work has tried to adapt these models to the context of violent shocks and refugee crises (World Bank, 2016). This literature remains in its infant stage but provides a baseline for further macroeconomic studies built on the very rich tradition of trade models.

4. DATA ISSUES

As already illustrated, the forcibly displaced are essentially represented by two large groups: Refugees and IDPs. Data collection, data management and data dissemination are historically different for these two groups.

4.1. Refugees

Data on refugees have been collected since the creation of the UNHCR in 1950. The UNHCR's main mandate is the protection of refugees and since its early days the UNHCR has collected data on refugees by registering individuals and households seeking asylum and refugee status. Once granted, refugee status provides access to rights and assistance. For this reason, the UNHCR keeps and updates records of asylum seekers and refugees on a continuum basis.

These records are used for a variety of purposes such as legal protection purposes, identify beneficiaries of social assistance programs, or produce statistics on the people of concern to the UNHCR. Records included into the UNHCR registry are organized in different levels depending on urgency of the information required. Refugee crisis often result in thousands of people crossing the border daily and the first priority is to register large numbers of people quickly. Therefore, the first set of information recorded include only a few key individual socio-economic characteristics such as names, age, education, former occupation, place of origin and destination. In a second stage, the UNHCR conducts a more formal interview where existing records are verified and other records are added trying to reconstruct, for example, family structure and relations, types of

special assistance and protection needed and other information necessary for protection and assistance purposes.

Because of the very protection mandate of the UNHCR, registry data are very rarely shared. A few exceptions to this rule occurs when UNHCR implementing agencies need information for running programs with refugees or if the UNHCR needs to carry out a study on a particular group of refugees. Recently, the UNHCR has also collaborated with the World Bank to carry out a study on the welfare of Syrian refugees and for this purpose the UNHCR shared some of its data with the World Bank.⁷ However, unit records, anonymized or not, are not available on-line or upon request from the UNHCR. This is perhaps the main single factor that explains the scarce amount of research on refugees as documented at the outset of this paper.

In addition to the UNHCR registry, data on refugees are collected via home visits and sample surveys by a variety of organizations including the UNHCR, the World Food Program (WFP), other UN organizations and many NGOs working independently or on behalf of UN organizations. However, it is important to stress that any home visit or sample survey will have to rely on the UNHCR registry. The UNHCR registry system functions *de facto* as the only existing population survey for refugees. By definition, refugees are not included into national censuses unless governments make a special effort to do so. Ministries of interiors would generally keep records of people coming into and out of the country, including refugees, but these data are seldom shared, records are not always accurate and these records only include a handful of information strictly necessary to border police to grant entry and exit. Therefore, in many countries, the UNHCR registry system is the only system that contains population information on refugees and if this system does not exist or is managed by the host government information is scarce or not available. In a sense, the UNHCR is the statistical agency of refugees and the UNHCR registry system is the population census of refugees, which means that any other survey on refugees will have to rely on this registry, unless proper government registry systems are in place.

In addition to being scarcely available, the UNHCR registry also suffers from a number of deficiencies that span from records that are not filled or incomplete to data input and data cleaning issues to data management and data use. The quality of the UNHCR data registry varies significantly across countries with better quality usually available in middle-income countries and lower quality data available in low-income countries. Moreover, where data are generally perceived to be of good quality, many records may be missing and variables not usable. In other cases, data entry errors pollute the data while in some cases existing good data are not centralized and available for analysis.

These are problems that affect any data collection exercise but they tend to be exacerbated in a refugee context because of the urgency of the operations and because field staff are not necessarily data experts or users. For example, the UNHCR registry system is largely managed by IT specialist in collaboration

⁷ See Verme et al. (2016) and the following section.

with field registry staff and it is rare to have economists or social scientists involved. That is because the UNHCR had historically low demand for research on refugees and the focus was on protection rather than research on programs. Because of the shift in paradigm from the humanitarian to the humanitarian-development approach, this is now changing. The UNHCR is increasingly searching for social scientists to improve on their data collection system and data use for analytics and development organizations such as the World Bank are increasingly paying attention to data and analytics on refugees. However, this process has started only recently and will require time to bear its fruits in terms of improved research on refugees.

For obvious reasons, the quality of refugee data is also very different depending on whether refugees are in camps or outside camps. In camps, refugees are assisted with shelter, education, health and any other requirement for conducting a decent life. Outside camps, refugees would normally receive cash and food assistance but they are on their own to find shelter and services. Refugees outside camps have an incentive to register because registration provides access to protection and assistance but contacts with UNHCR staff are more difficult and less frequent than in camps, which result in information that may be less accurate or up to date. In some countries, like Jordan and Lebanon over 90 per cent of refugees are outside camps.

4.2. IDPs

Data collection on IDPs is more scarce and fragmented than the one illustrated for refugees. By definition, IDPs remain in their nation of origin and data collection should, in principle, be easier. In reality, IDPs derive from an internal shock such as a civil conflict where large number of people move quickly within a country. These people are then expected to return to their place of origin once the conflict is over and governments are typically over optimistic about the duration of civil conflicts and about return of IDPs. In some cases, government have also an interest in denying the very existence of IDPs for political purposes. Therefore, little time is spent in surveying IDPs or trying to find durable solutions in the place where they migrated. Moreover, national censuses are usually conducted every ten years and statistical agencies have little incentives to revise censuses, master samples and sample survey structure for situations that are perceived as short-term. In most cases, new surveys are suspended or carried out under the pre-crisis frameworks and, in either case, information on IDPs is not collected or poorly collected.

This leaves specialized government agencies or international organizations in charge of IDPs statistics (and care). However, unlike refugees, the IDPs do not benefit from a specialized international agency such as the UNHCR. IDPs assistance is currently provided by a multitude of organizations including ministries of interiors, specialized government agencies, the UNHCR, the International Organization for Migration (IOM), the UN Office for Humanitarian Affairs (UN-OCHA), specialized NGOs and others. Some of these organizations collect information on IDPs and make this information public while other collect information that is not published and others do not collect information and focus on providing assistance. Most data collected are for the simple purpose of

counting IDPs and do not include individual or household socio-economic information. In some cases, information on socio-economic information is collected at the individual or household level but more often information is collected at the community level. It is extremely rare to have unit record data sets on IDPs, which explains why we found only 18 studies in the Econpaper repository as already documented.

Recognizing the problem of scarcity and availability of information on IDPs, international organizations have set up in several countries coordination mechanisms to count IDPs usually coordinated by IOM, UN-OCHA or the UNHCR. There are also global efforts to centralize this information on the part of organizations such as the UNHCR, UN-OCHA, the international Displacement Monitoring Centre (iDMC) or the Joint IDP Profiling Services (JIPS). These efforts are making good progress on harmonizing counts of IDPs but remain short of establishing proper data collection systems that could deliver in the years to come unit data of quality for research. Hence, research on IDPs remains constrained by lack of data, lack of blueprint on how to collect data and lack of an organization dedicated to IDP data collection.

4.3. Some data challenges common to refugees and IDPs

Irrespective of the specific questions related to refugee and IDPs data, there are also general questions that refer to the forcibly displaced in general and that are distinct from data collection of regular populations or even migrant populations. We explore here selected issues including sampling, unit of analysis, welfare measurement, multi-dimensional aspects, and the measurement of risks and vulnerabilities.

Sampling. As mentioned, the UNHCR is really the only statistical agency for refugees and the UNHCR registry the only population census. As for any other populations, sampling requires the preparation of a master sample that derives from the population census. With various degrees of knowledge and accuracy, this is also what happens with refugees. However, the master sample is more difficult to construct than for regular populations because refugees live in camps and outside camps and are diluted in a host population with different types of arrangements. Some households rent, other stay at relatives' places, other live in makeshift shacks and other stay in camps. The information available in the UNHCR registry (the census) can also be quite inaccurate as already discussed and the degree of accuracy changes for different groups of refugees. Stratification by urban and rural areas, a typical approach in sampling, may mean little for a population that is mostly in urban areas whether in camps or outside camps. Refugees and IDPs are also mobile and more difficult to track over time than other populations. Several statistical institutes worldwide have developed methodologies to track and measure mobile populations such as herders, nomads or homeless people. However, tracking refugees from other countries has been in the past less of a priority for national governments and is only recently and with the numbers of forcibly displaced people increasing that this is becoming an issue. Experiments are now being conducted with innovative technologies such as remote sampling with aerial or satellite imagery and

also with non-sampling techniques but there is still no blueprint for sampling refugees and IDPS and more generally very mobile populations.

Unit of analysis. As for other studies based on micro data, the primary unit of analysis for refugees and IDPs are the individual and/or household. The added difficulty in the context of refugees and IDPs is how to identify the household and allocate individuals to single households. Refugee households are complex by definition. Some household members may stay behind or join later, other may leave or shuttle between places. Some families travel as clans with multiple families living together, others travel as single families. Sometimes individuals or families try to register in multiple places to claim more benefits. Deciding what constitute a household or a family is not simple. The UNHCR has its own definitions of family and household but is not always straightforward for field workers to apply such definitions. Again, while for national household budget surveys these questions are largely resolved, for mobile populations such as refugees and IDPs they are not and this is of key importance for economists working with unit data.

Welfare. How to measure the welfare of refugees? Welfare is perhaps the main outcome to measure for economists. Welfare economists would typically use income, expenditure or wealth to measure welfare but refugees and IDPs have a very peculiar situation when it comes to these measures. They have probably left behind most of their wealth and assets with the exception of what they could carry with them. Income from work, if any, is informal and very low whereas other incomes are mostly represented by cash grants provided by humanitarian organizations. Expenditure is probably restricted in terms of items purchased and largely driven by what can be purchased with food vouchers. Expenditure is also done in bulk, when money becomes available and in places that offer low prices or predetermined stores that accept food vouchers. Should food vouchers be considered income or expenditure? As we will see further in the paper, the study on the welfare of Syrian refugees addressed many of these questions but was limited to refugees in areas that benefitted from an unusually rich set of data. There is still no blueprint on how to measure welfare of forcibly displaced populations.

Multidimensional deprivations. Refugees and IDPS have also special needs that exist but are rare in regular populations. Refugees and IDPs are typically traumatized, injured or ill, in need of psychological and health assistance. They have difficulties in accessing basic services such as health and education because they often have no legal rights in the host country or the host country may simply not have the capacity to offer these services. Many may be at risk of violence or trafficking. These are very important aspects from the perspective of welfare economists interested in measuring well-being but these measurements are complex and not usually included in multi-dimensional indicators of deprivation or poverty. The dimensions of deprivations to consider are more numerous and more complex to measure. Again, there is very little research in welfare economics dedicated to the special needs of these populations.

Risks and vulnerabilities. The analysis of risk and vulnerability is also much more complex in the context of the forcibly displaced. Welfare economics

has only approached these topics recently, in the past decade or so. Essentially, the idea is to measure the risk of being poor or falling poor in the future using cross-section or panel data studying spells of poverty over time. This is work that requires accurate and complex data sets that would be rarely available in a refugee or IDPs context. More importantly, the nature of the problem changes. Refugees and IDPs are by definition more at risk and more vulnerable than regular populations and these vulnerabilities are not only linked to skills and efforts but to legal status, discrimination, limited mobility and other factors that are unique or much more acute with refugees and IDPs. How to take these factors into account with risks and vulnerabilities studies is a question that has not really been addressed yet by the economics profession.

5. AN ILLUSTRATION: THE WELFARE OF SYRIAN REFUGEES

In this section, we review a study on the welfare of Syrian refugees in Jordan and Lebanon jointly conducted by the World Bank and the UNHCR in 2014. The study relied entirely on existing data collected by the UNHCR and provides an example of what welfare economics can do for the forcibly displaced from an analytical and policy perspective.

At the height of the crisis in 2014, Syria had an estimated 6.5 m IDPs, 4.4 m. refugees, and 1.5 m. additional migrants, which amounted to about half of the Syrian pre-conflict population. Despite these numbers, relatively little was known about the wellbeing of these populations aside from anecdotal information and some data collected for the purpose of assistance of refugees. The UNHCR had the data to conduct such studies but not the time or the expertise and was understandably concerned about data protection whereas specialized organizations such as the World Bank did not have access to data and did not see refugees as part of their core mandate of reducing poverty worldwide. This changed in 2014 when the two organizations decided to join forces to prepare a welfare assessment of refugees in Jordan and Lebanon. It was the obvious step forward in overcoming these problems and the answer to the increasing demand for evidence around the Syrian crisis.

The study benefitted from a unique and unprecedented set of data. The UNHCR registry data in Jordan and Lebanon were among the better quality registry data available worldwide and the UNHCR also conducted home visits in Jordan that, at the time of the study, covered over a third of all refugees. There were also sample surveys in both Jordan and Lebanon that were small in size but representative of the population present in the registry. The home visits and the surveys included questions on income and expenditure that could be used for the welfare assessment. Using these data, the study addressed ten questions defined as follows: 1) Who are the refugees? ; 2) How different are refugees from “regular” populations?; 3) How poor are refugees? ; 4) What are the main predictors of refugees’ welfare and poverty? ; 5) How vulnerable are refugees from a monetary and non-monetary perspective? ; 6) Do poverty and vulnerability statuses overlap? ; 7) How effective are refugee assistance programs? ; 8) What is the potential for alternative policies? ; 9) How does welfare compare across countries and data sets?; 10) How transferable are the findings between countries and data sets?

The study findings opened a window on a population little known to economists. Refugees were found to be a population with specific characteristics that derived from a multi-stage selection process that started well before the conflict in Syria for economic and environmental reasons. Each stage of this selection process further impoverished those who eventually would seek refugee status. The resulting profile of refugees was rather different from that of Syrians before the crisis and that of host populations, a relevant finding to study the impact of refugees on host populations. Poverty was found to be very high. Over 70 percent of refugees in Jordan and Lebanon resulted to be poor if the income threshold used to assign cash grants by the UNHCR was used as poverty line. It was estimated at over 90 percent in both countries if the poverty lines of the host countries were used. It was also found that refugees tend to leave poorer areas in the country of origin to reach poorer areas in the countries of destination inflating poverty numbers where they arrive. Predictors of poverty were relatively few if one compares with poverty assessments of regular populations. As refugees have little assets and constrained consumption, household size, the ability to pay rent, and few other individual and household characteristics were sufficient to predict poverty well. Predictors of vulnerability were also found to be similar to predictors of poverty and similarly few in number although poverty status did not always overlap with vulnerability status.

The study also found the existing UNHCR cash program and the WFP food voucher to be very effective in reducing poverty. The two programs combined had the potential to reduce poverty to almost seven percent if applied universally. However, reduced funding from donors forced these organizations to reduce the coverage of these programs and start targeting refugees based on welfare indicators. A targeting analysis showed that leakage (non-poor people targeted) was a relatively small issue but that under coverage (poor people non-targeted) was large.

Policy simulations based on welfare modelling were also conducted to test the potential poverty reduction capacity of alternative policies to handouts. It was found that, in the absence of access to the formal labor market, labor supply policies would have no effect on welfare. This pointed to the need of focusing on growth and job creation in areas affected by refugee inflows rather than focusing on redistributive social protection policies. Finally, findings were found to be almost inter-changeable between Jordan and Lebanon despite the slightly different populations of refugees that migrated to these two destinations and the different initial conditions of the host countries.

The study contributed to changing policies towards refugees in several respects. The welfare modelling used for the study has been adopted by the UNHCR to define predictors of poverty, improve its targeting capacity and its cash program. The organization shifted from the use of income to the use of expenditure to target cash assistance and is now paying increasing attention to the collection of variables that predict poverty well. The UNHCR has also been testing alternative targeting systems based on welfare modelling. Based on this experience, the UNHCR is now revising its worldwide data collection system and is

making an effort to shift to a more data savvy and analytical framework, something the organization calls a “data revolution”.

The World Bank, on its part, now considers refugees a population of concern and stepped up its cooperation with the UNHCR. The number of programs assisting refugee populations has grown dramatically between 2014 and 2017. Donors have responded and promoted these changes as witnessed by the IDA18 replenishment that has earmarked two billion USD for work on refugees alone. The World Bank is also testing innovative financial facilities and growth programs to support countries that host refugees such as the new credit facility and the special economic zones currently being tested in Jordan and Ethiopia. The new humanitarian-development paradigm discussed at the outset of this paper is being already implemented in a trial and error fashion. Economics can have a clear role in designing the trials and mitigate the errors.

6. CONCLUSION

The paper provided a first non-technical introduction to the economics of forced displacement. It showed how the forced displacement agenda came to global attention relatively recently because of the Syrian refugee and the EU migration crises and because of soaring numbers of forcibly displaced people. This renewed attention to the problem generated a response from the international community and the development of a new paradigm that sees humanitarian and development organizations joining forces to face the challenge.

In the wake of these changes, economics finds itself unprepared to respond to the challenge. For a combination of reasons that span from lack of data to lack of interest for a phenomenon largely considered as marginal by the profession, the number of published papers in journals is small for refugees and tiny for IDPs. These works are also all empirical in nature and there is no macro or micro theory on the economics of forced displacement that could help to structure the empirics.

To start filling this gap, the paper has highlighted some of the peculiarities of working on forced displacement and provided some initial references from neo-classical and modern economics that could serve as baseline to develop the economics of forced displacement looking, in turn, at utility theory and the modeling of choice in theoretical and empirical terms. We remarked how some branches of economics such as expected utility theory and game theory, or more recently neuroeconomics and behavioral economics, could provide useful models to develop the economics of forced displacement. We also remarked that data remain a big challenge. Good micro data are scarce, particularly for IDPs, and the work ahead to improve on this front is costly and time-consuming. Vast amount of micro data suitable for economics research will not be available anytime soon.

Using a recent study on the welfare of Syrian refugees, we then illustrated some of the benefits for research and policy that the economics profession could bring to refugee and IDPs studies. Welfare modelling, for example, can provide insights into poverty and vulnerability but also help to improve targeting of programs or model alternative policies for refugees and IDPs. These are not

potential benefits of future work but concrete contributions that can materialize quickly with available data. While the economics profession works on improving data and models, there is much that can be done with existing data and models.

Forced displacement is here to stay for the foreseeable future and the scale of the problem does no longer justify silence on the part of the economics profession. The World Bank president, the new UN Secretary General (former head of UNHCR) and the UN High Commissioner for Refugees now meet regularly to discuss joint refugee and IDPs initiatives. OECD countries as donors and as recipients of refugees and migrants are dedicating increasing resources to manage forced displacement crises. Funding opportunities for researchers are increasing. This is the time for the economics profession to rise to the challenge.

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L'ÉCONOMIE DU DÉPLACEMENT FORCÉ : UNE INTRODUCTION

Résumé - Les déplacements forcés – définis comme le déplacement de réfugiés et de personnes déplacées à l'intérieur de leur propre pays – ont atteint une ampleur et une attention sans précédent au cours des dernières années, en particulier avec la crise syrienne des réfugiés depuis 2011. Peu d'économistes ou d'institutions travaillent sur le déplacement forcé et peu d'articles sont publiés dans les revues scientifiques sur cette question. Les données sont rares, peu fiables ou inaccessibles. L'économie peut-elle relever le défi ? Comment jeter les bases d'analyse de l'économie du déplacement forcé ? Cet article fournit une première réponse à ces questions. Nous avançons à partir des travaux sur le développement et la pauvreté que les approches en termes d'utilité, de choix, de risque et d'information sont des clés d'entrée possibles. L'économie néoclassique manque de certains ingrédients théoriques qui sont nécessaires, mais les développements récents de la théorie des jeux, de la neuroéconomie et de l'économie comportementale peuvent fournir des outils d'analyse pertinents. Les approches empiriques sont limitées par la qualité des données, mais un exemple est donné qui montre comment les économistes du bien-être social peuvent déjà exploiter utilement les données existantes.

Mots-Clés - CONFLIT, RÉFUGIÉS, DÉPLACEMENT FORCÉ