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**Working Paper**

## Displacement due to violence in Columbia: Determinants and consequences at the household level

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ZEF Bonn  
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Stefanie Kirchhoff  
Ana Maria Ibañez

Number  
**41**

**Displacement due to  
Violence in Colombia:  
Determinants and  
Consequences  
at the Household Level**

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The **CENTER FOR DEVELOPMENT RESEARCH (ZEF)** was established in 1997 as an international, interdisciplinary research institute at the University of Bonn. Research and teaching at ZEF aims to contribute to resolving political, economic and ecological development problems. ZEF closely cooperates with national and international partners in research and development organizations. For information, see: <http://www.zef.de>.

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## Abstract

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The armed conflict over economic and political power in Colombia has led to the massive displacement of people living in the areas of violence. The design of appropriate policies of prevention, assistance, and resettlement requires improved information on the determinants and effects of displacement. This paper contributes to providing such information by using household survey data collected at expulsory and receptor locations.

First, we develop a conceptual framework for analyzing the factors which influence a household's decision to leave its area of origin for an uncertain future or to stay and risk being the victim of violence. Using econometric analysis, the framework is then used to examine the significance and relative importance of the hypothesized factors in the study region. Second, the impacts of displacement on the affected households are examined through a descriptive analysis of the survey data, and a method for estimating the welfare losses of the displaced is presented.

The results confirm the significant role of violence and perceptions of insecurity in motivating displacement. The analysis indicates that land owners, members of local organizations, and younger household heads face the highest risk of becoming the direct target of threats which appear to be the most important trigger of displacement. However, security considerations do not appear to be the only factors underlying the displacement decision. People decide to stay in their areas of origin despite being affected by violence. A significant percentage of the displaced appear to have reflected on their options and on the expected impacts of displacement. Considerations regarding the cost of leaving behind important assets and potential improvements in living conditions after displacement appear to impact the decision. The results also point to the important role of information in displacement decisions.

The descriptive analysis highlights the impacts of displacement on the affected households. The wide majority of the displaced had lived in the areas of origin for a very substantial amount of time. For many, displacement implies the loss of agricultural land and the associated way of life. At the receptor locations, households - particularly those from rural areas - have to look for types of employment they are not trained for. A very substantial proportion ends up being long-term unemployed. The surveys point to the need for programs which provide long-term opportunities to the displaced.

The paper concludes with policy recommendations and topics for future research.



## Kurzfassung

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Der bewaffnete Konflikt um die wirtschaftliche und politische Macht in Kolumbien hat in großem Ausmaß zur Vertreibung der Bevölkerung in den umkämpften Gebieten geführt. Die Entwicklung angemessener Präventions-, Hilfs- und Umsiedlungsmassnahmen erfordert bessere Informationen über die Rahmenbedingungen und Auswirkungen der Vertreibung. Mit Hilfe von Haushaltsumfragen in Vertreibungs- und Neuansiedlungsgebieten trägt der vorliegende Bericht dazu bei, diese Informationen bereitzustellen.

Zuerst wird ein konzeptueller Rahmen entwickelt, um diejenigen Faktoren zu untersuchen, die die Entscheidung der Haushalte beeinflussen, ihre Heimat zugunsten einer unsicheren Zukunft zu verlassen oder aber zu bleiben und damit zu riskieren, zum Opfer von Gewalt zu werden. Dieser Rahmen wird dann verwendet, um mit Hilfe einer ökonometrischen Analyse die Bedeutung und relative Wichtigkeit der aufgestellten Faktoren in der Untersuchungsregion zu ermitteln. Als zweites wird mit einer deskriptiven Analyse der Erhebungsdaten untersucht, in welcher Form die betroffenen Haushalte durch die Vertreibung beeinflusst werden. Zudem wird eine Methode vorgestellt, mit der die Minderung des Lebensstandards der Vertriebenen abgeschätzt werden kann.

Die Ergebnisse bestätigen die signifikante Rolle von Gewalt und dem Gefühl der Unsicherheit als Gründe für Vertreibung. Die Analyse zeigt, dass Landbesitzer, Mitglieder lokaler Organisationen und jüngere Haushaltsvorstände dem größten Risiko ausgesetzt sind, unmittelbares Ziel von Drohungen zu sein. Diese wiederum scheinen der wichtigste Auslöser für Vertreibung zu sein. Der Entscheidung über den Wegzug liegen jedoch nicht allein Sicherheitserwägungen zugrunde. Manche Bewohner bleiben trotz der Gefahr an ihrem Heimatort. Ein signifikanter Prozentsatz der Vertriebenen scheint seine Wahlmöglichkeiten sowie die zu erwartenden Auswirkungen der Vertreibung abgewogen zu haben. Überlegungen bezüglich des Verlusts zurückgelassener Immobilien oder potentielle Verbesserungen der Lebensbedingungen nach der Vertreibung beeinflussen scheinbar die Entscheidung. Die Ergebnisse weisen auch auf die bedeutende Rolle hin, die dem Informationsstand bei dieser Entscheidung zukommt.

Die deskriptive Analyse unterstreicht die Auswirkungen der Vertreibung für die betroffenen Haushalte. Die große Mehrheit der Vertriebenen hat den entscheidenden Teil ihres Lebens in der Heimatregion gelebt. Für viele bedeutet die Vertreibung zugleich den Verlust der landwirtschaftlichen Fläche und der damit verbundenen, spezifischen Lebensweise. In den Receptorstädten müssen sich die Haushalte – insbesondere diejenigen aus ländliche Regionen – nach Arbeitsstellen umsehen, für die sie nicht ausgebildet sind. Langzeitarbeitslosigkeit ist häufig die Folge. Die Erhebungen weisen auf den Bedarf an Programmen hin, die den Vertriebenen langfristige Möglichkeiten bieten.

Der Artikel schließt mit Empfehlungen für die Politik und mit Themen für zukünftige Forschung.

# 1 Introduction

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The armed conflict over economic and political power in Colombia has forced approximately 1.200.000 people, the majority of them women and children, to leave their homes during the period from 1985 to 1997 (El Tiempo, December 31, 1997). The Interamerican Commission of Human Rights (Comisión Interamericana de Derechos Humanos, 1999) describes a displaced person as

*anyone who has been forced to migrate within the national boundaries, leaving aside her residence or her habitual economic activities because either her life, her physical integrity or her freedom have been either violated or threatened by situations such as armed conflict, generalized violence, violations of human rights, and any other situation that may alter public order.*

Approximately half the displacements over the last 12 years occurred after August 1994. In 1997, every hour 28 Colombians saw themselves forced to abandon their homes as a result of political violence (El Tiempo, November 17, 1998). More recent figures indicate that there are now more than 2 million displaced people in Colombia (Oftringer, 2000). The outlook for the future is grim.

International Human Rights law considers forced displacement a human-rights violation. Moreover, the consequences of the phenomenon for the whole country are severe. Increases in unemployment, the violent redistribution of land ownership, strong inefficiencies in resource allocation, and the effects of large and unplanned demographic inflows into cities and regions which act as receptors of the displaced, are just a few of the many problems caused by displacement. The Colombian government, the United Nations, the European Union, as well as many non-governmental and religious organizations have responded by developing assistance programs.<sup>1</sup>

The wide majority of these programs have focused on mitigating the consequences of displacement, i.e., they attempt to help the displaced deal with the situation of arriving in an unknown place. However, the continuing and increasing trend of displacement and the limited ability of the receptor cities to absorb these immense masses of people are making it more and more urgent to design policies of prevention, assistance and resettlement. A *sine qua non* condition for defining such policies is to understand the decision-making process underlying displacement. By definition, violence is the trigger of the kind of displacement considered here. Nevertheless, people react differently to given levels of direct and indirect violence. Frequently, we observe that a substantial portion of the population in areas of violence decides to stay despite the risks this implies for them. In a sense, the decision whether to move or not, is a decision between the lesser of two “evils”: staying and accepting the everyday risk of being a victim of violence; or leaving behind one’s way of life and property and moving on, to an unfamiliar place, having to find new employment and a new place to live. Although some

hypotheses about the determinants of displacement decisions have been put forth in the literature, the relative importance of these factors and their direction and strength have not been analysed in a rigorous manner.<sup>2</sup> This paper develops a framework for the empirical analysis of displacement decisions and uses this framework to assess the determinants and their relative importance for the decision making process.

Furthermore, it is not clear whether current policies and programs are adequate responses to the true dimension of the problem. A prerequisite for defining policies in proportion to the size of the problem is to understand the extent of the losses imposed on Colombian society by displacement. Economic studies up to now have focused on determining the financial costs of government and NGO programs aimed at helping the displaced. Studies have also pointed to the productivity losses and the increase in unemployment caused by displacement. However, these studies have left aside the main person affected: the displaced. A displaced person suffers welfare losses from the deterioration of his quality of life. These losses, although not always manifested in monetary terms, are likely to be one of the most significant costs of displacement for Colombian society. The attachment of the displaced to their community, land, and way of life, causes a reduction in their welfare when having to abandon their home. Often, this is accompanied by the loss of land and other assets. The violation of human rights and the violence which they have experienced cause psychological traumas which will mark the displaced for the rest of their life. Moreover, the arrival in an unknown place causes high risks and uncertainty due to the difficulty of finding an adequate source of income and a place to live. When confronted with the impossibility of generating sufficient income, displaced persons often see themselves heading for beggary, prostitution, and delinquency. Families have to confront the reality of having to temporarily sacrifice the education of their children. All of this contributes to the dismemberment of the family. If these costs to the displaced themselves are left out of the evaluation of the dimension of the problem, the policies implemented to alleviate the problem are likely to be insufficient. Many displaced families never return to their hometown and have to face the unwanted challenges of starting a new life in an unfamiliar place. This costly new life is the consequence of a political conflict in which they have no interest. Appropriate ex post programs for the displaced that go beyond the commonly observed focus on emergency relief are much needed. This study contributes to this in two ways. First, a method for estimating the welfare losses of the displaced is developed by recurring to the theory of environmental and welfare economics. Second, descriptive analysis of data from household-level surveys is presented to provide a better understanding of the impacts on and needs of the displaced.<sup>3</sup>

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<sup>1</sup> For a detailed description of current policies and programs in place, see Erazo et al. (2000).

<sup>2</sup> For previous work on displacement see, for example, Deng (1995). Analyses of displacement in Colombia have been conducted by Arquidiocesis de Bogotá/CODHES (1997), CODHES (1996, 1997, 1998), Conferencia Episcopal de Colombia (1995, 1999a,b), and several more qualitative studies. For a detailed review of this literature, see Erazo et al. (2000).

<sup>3</sup> The data collected for this work contributes to the data from previous studies by focusing on different geographic areas and including additional aspects into the survey. For a detailed review of previous studies see Erazo et al. (2000).

The structure of this paper is as follows. Part II presents a short review of existing theories of migration and then builds on this literature – while incorporating the unique aspects involved in displacement - to develop a framework for the empirical analysis of the displacement decision. Moreover, additional considerations for future research and a method for the estimation of the welfare losses from displacement are presented. Part III discusses the data used for our empirical analysis and presents a descriptive analysis of the process and impacts of displacement and the current needs of the displaced. Using the framework developed in part II, an econometric analysis of the displacement decision was conducted, the results of which are presented in part IV. Finally, part V concludes and discusses the policy implications of our analysis.

## 2 Migration Theories and a Framework for Analysis of the Displacement Decision

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Our objective is to analyze the determinants and effects of displacement at the household level. As stated earlier, we argue that the displacement decision cannot be explained alone through the presence of violent activities in a particular region. Although violence in one form or another is the trigger leading to displacement, it does not seem to be the only factor in determining whether a person leaves her place of origin or not. In particular, we often observe that a substantial proportion of the population in areas with high occurrence of violence remains there despite the risk this implies for them. In general, we could think of two reasons for this phenomenon. First, those people who decide to stay may be confronted with a lesser risk of directly suffering from the violence (incl. death) than those who decide to leave. If so, we would like to know what determines this risk. Second, other factors might influence the displacement decision. Through displacement, people leave their traditional way of life and their property in order to move to an unknown territory, look for a job and a place to live. When taking the decision whether to leave their homes or remain in their place of origin, individuals have to consider the potential risks and benefits of the two options and choose the one that is best for them – or, perhaps more appropriately, choose the lesser of two evils. In so doing, individuals have to form expectations about their quality of life at both the place of origin and the potential destination in case of displacement. In turn, the expectations about the consequences of displacement depend on the possibility of finding employment, housing, education for their children, and more.

Our objective is to develop a framework for empirically analyzing the relative importance of the above mentioned potential reasons and factors in the displacement decision. Some of the considerations outlined above are similar to those described in the literature on voluntary migration from rural to urban areas. Obviously, the important role of violence in displacement decisions introduces significant differences that need to be addressed. In what follows, we provide a quick review of existing theories of migration and some of their main results and hypotheses. Then, building on this literature, together with the additional considerations introduced by the presence of violence, we present a framework for the empirical analysis of the displacement decision, which we will proceed to apply in part V of this paper. Additional considerations that could provide interesting subjects for future research are also discussed. Next, specific hypotheses for the empirical analysis are presented. Finally, we develop a method for the empirical estimation of the welfare losses from displacement.

### 2.1 A Brief Review of Some Major Results from Migration Theories

#### *Classical and Neo-classical Theories of Migration*

Over a century ago, Ravenstein (1885, 1889) highlighted differences in salary levels as the principal cause of migration. Many economists have since formalized and further developed this idea (e.g. Lewis, 1954; Ranis and Fei, 1961). The assumptions of the early models are restrictive and difficult to apply to the decision making process of displacement of a household. Todaro (1969) presents a formal model where an individual decides to migrate if the discounted stream of expected income differentials between the urban and the rural area exceeds migration costs. This model is important in that it introduces the idea that not only wage differentials, but also migration costs, the discount rate, as well as the probability of employment at the destination are determinants of the migration decision. The general concept that the expected gains from migration have to outweigh the costs is useful in thinking about displacement decisions as well. However, additional factors, such as the risk of suffering from violent acts, aspects of the quality of life other than income, and more, will affect the gains and costs to be considered. Displacement may very well take place in spite of negative income differentials or a decrease in household wealth and living conditions after displacement if, instead, the risk differential, i.e. the probability of suffering from a violent act, diminishes with displacement.

#### *Human Capital Theory and Migration*

Human capital theory provides a justification for the existence of differences between individuals in their propensity to migrate, relaxing the assumption of potential migrants as a group of homogeneous people. This literature (e.g. Sjaastad, 1962; Mincer, 1974; Becker 1964 and 1975; Todaro, 1976 and 1989; Todaro and Maruszko, 1987) considers salary levels, the probability of employment, migration costs and discount rates as variables which are dependent of individual characteristics. Results include the following hypotheses:

- The probability of migration increases with the individual's planning horizon. Thus, a higher migration of young people as compared to older people can be expected.
- Personal contacts at the receptor location and access to information about it decrease the costs of migration and increase the probability of finding new employment, consequently increasing the propensity to migrate.
- In urban centers, individuals with a higher level of education obtain higher salary levels. Therefore, the propensity to migrate to urban areas increases with the level of education.
- Individuals with lower levels of risk aversion are more likely to migrate.
- Specific human capital variables may yield higher returns at the place of reception than at the place of origin, thus increasing the migration propensity.

We would expect many of the results from human capital theory to be relevant to the displacement decision. Nevertheless, the opposite effects might prevail in some cases. For example, better access to information might decrease the propensity for displacement because knowing the precarious situation of already displaced people may dissuade some people from leaving their homes. Similarly, individuals with lower risk aversion could be more disposed to stay in their place of origin and to incur risks of suffering from violent action.

### *New Economic Theories of Migration*

Many authors have analysed the importance of imperfect and costly information for the migration decision, thus moderating the assumption that potential migrants have access to perfect information without any costs (e.g., Stark and Levhari, 1982; Dustmann, 1992; Maier, 1985). Results include the following (Fischer *et al.*, 1997):

- A minimum requirement for migration is that the costs of staying in the place of origin are lower than the basic information costs.
- If information costs exist, only a second best solution can be reached. Thus, migrants might be confronted with incentives of returning to their place of origin or incentives to migrate still further.
- An individual possessing more positive information about economic and social opportunities at the receptor location shows a higher propensity to migrate and a lower level of risk aversion.
- Information costs influence the direction of migration flows. In general, migrants direct themselves more towards places about which they have more information or for which it is less costly to obtain this information.
- The price of information tends to increase with the distance between the two places.

The consideration of imperfect information is particularly important in analyzing displacement decisions. Moreover, the New Economics of Migration moderates the assumption of individuals being autonomous without any social context, by considering individuals as an integral part of the household (e.g. Stark, 1991; Stark and Bloom, 1985). The central point of this literature is that often some members of the household migrate while others stay in their place of origin. The focus of the analysis is on the remittances transmitted by migrants to household members who stayed in the place of origin. The individual belonging to a household is acting as part of a collective, not just in order to maximize the household's income, but also to minimize risk and to alleviate restrictions caused by market failures (e.g. imperfections in capital and insurance markets). Some important results from this strand of the literature include:

- The decision making process on whether to migrate or not is influenced by the utility function of the household or other social groups.
- In developing countries, considerations like risk dispersion and missing access to capital markets increase migration propensity.

- Whenever the income at the receptor location is less risky or is not correlated with the rural income, we may observe migration in the absence of any positive difference between these income levels. In other words, migration emerges in order to reduce income risks.

These results are also relevant to the analysis of the displacement decision. Frequently, not all members of a household in a conflict zone are displaced. Some household members stay in the place of origin to keep an eye on the household's property and earn an income from it. In some cases the household head leaves the place of origin first, in order to establish minimal conditions at the receptor location before the rest of the household follows.

### *Other considerations*

The concept of bounded rationality is also useful in the comprehension of the decision making process underlying migration. Simon (1957, 1983) postulates that human actions are limited by the situations they are confronted with, previous experiences, emotional patterns and limited abilities to calculate the costs and benefits of a decision. The concept of bounded rationality is particularly applicable to the displacement issue. The population living in zones of conflict is subjected to tremendous stress imposed by violence and personal threats. As a consequence, we would not expect them to take completely rational decisions and consciously evaluate the costs and benefits related to displacement. The effects of bounded rationality are similar to those of incomplete information. An additional implication is that the more the information relevant to a particular decision is different from the information an individual usually processes, the more difficult it is for the individual to use all the information.

Finally, in an interdisciplinary study, Fischer et al. (1997) present determinants which contribute to limit migration. Focusing on the case of international migration, the authors point out that frequently, people do not migrate despite the existence of strong differences in salaries across countries. Some factors contributing to the tendency to remain at the place of origin include:

- Migration implies the loss of specific assets in the place of origin.
- The benefits from staying at a particular place may increase over time the longer an individual remains. This reconfirms the earlier hypothesis, that younger individuals can be expected to show a higher propensity to migrate.
- Migration propensity increases with the ease with which an individual can transfer her economic, social and political ability from one place to the other.
- Everything else being equal, the majority of individuals prefer to live in their place of origin, due to their knowledge of the region. Hence, risks of migration may be exaggerated in the decision making process.
- Discrimination against migrants at the receptor location will increase the costs and risks and decrease the benefits from migration.



The above considerations are applicable to the decision making process regarding forced displacement in some cases, in other cases not. The loss of location-specific assets from the place of origin can be particularly severe in the case of displacement because (i) the prevalence of violent conflict in the place of origin can be expected to lower the market demand for these assets and consequently lead to difficulties in selling these assets, and (ii) violent actors may force households to abandon their properties. The emotional and social roots of households in the place of origin are also expected to be important. On the other hand, assets and roots may not only affect the costs of displacement, but also the likelihood of becoming a victim of direct threats. Finally, discrimination and marginalization are common phenomena encountered by the displaced at receptor locations.

## 2.2 A Framework for Analysis of the Displacement Decision and Associated Hypotheses

We now proceed to develop a framework for the empirical analysis of displacement decisions. Although the migration theory constitutes a useful starting point, obviously there exist important differences between migration due to economic reasons and displacement due to violent action. In particular, two essential broad differences exist:

1. *Violence introduces additional elements of risk, including the danger of losing one's life, the death of other household members, the possibility of suffering some other kinds of violent acts, and the risk of losing property. Although economic reasons may play a secondary role, these risks are likely to represent the principal motivation for displacement.*
2. *Individuals living in areas with high levels of violence have to face unimaginable levels of stress. Hence, decisions may be taken impulsively and without adequate information.*

As was already noted at various instances above, these differences introduce additional factors to be considered in the empirical analysis and may also change some of the hypotheses about the direction of the effects of factors considered in migration analysis.

### 2.2.1 Conceptual framework for the analysis of the displacement decision

A very general way to present the displacement decision is the following: a household head decides to displace with the entire or part of his family if the expected utility of staying in the place of origin is lower than the expected utility from displacement, or

$$EU_{id} > EU_{in} \tag{1}$$

where

$U_{ij}$  is the indirect utility function of household  $i$  at place  $j$ , where  $j=d$  denotes the place of reception and  $j=n$  denotes the place of origin, and  
 $E$  is the expectations operator.

We can rewrite the expected utility as:

$$EU_{ij} = v_{ij} + \mathbf{e}_{ij} \quad (2)$$

where  $v_{ij}$  is the observable utility and  $\mathbf{e}_{ij}$  is a random term with a mean of zero. The random term includes all unknown or not quantifiable variables like stress and psychological traumas.

The observable utility of staying at the place of origin or displacing to the place of reception depends on a variety of factors. First of all, the perception of the safety level at the places of origin and that of reception is an important determinant of the utility function. Second, the income and quality of life at the two locations affect the level of utility. Third, migration and information costs, such as the loss of goods at the place of origin or family ties at the receptor location are important determinants for the estimation of the costs and benefits of displacement. Finally, the migration propensity might be affected by socio-demographic characteristics of the household, as these determine the household's preference structure. The latter will determine how the household evaluates the tradeoffs between the increased security from violence and the uncertainty of living conditions after displacement.

Thus, we write the observable utility as

$$v_{ij} = f(S_{ij}, Y_{ij}, C_{ij}, Z_i), \quad (3)$$

where:

$S_{ij}$  = perception of safety for household  $i$  at place  $j$ ,

$Y_{ij}$  = income and standard of living for household  $i$  at place  $j$ ,

$C_{ij}$  = migration and information costs,

$Z_i$  = household characteristics which influence preferences.

### 2.2.2 The endogeneity of direct threats

As stated earlier, one possible reason why we observe some households staying in their area of origin despite high incidences of violence is that they feel less threatened personally by the violence than those who decide to leave. One important indicator of this is whether any of the household members have received direct death or other threats. This is one of the proxies that should be included in the set of variables. However, we would expect that the occurrence of

direct threats to the household is itself endogenous.<sup>4</sup> For example, a greater number of wealthy households or those playing an important role in the community are likely to be the target of direct threats. This is because the armed groups themselves may follow specific strategies. The gains to the violent actors from the displacement of wealthier households and subsequent expropriation of their land and other assets increase with the wealth level of the household in question. By threatening households that play an important role in the community, armed groups can set an example for the rest of the population and thereby save on subsequent acts of intimidation to others.<sup>5</sup> Moreover, the likelihood of threats depends on the presence of armed groups in the region. This includes subversive groups as well as government forces, the latter of which may provide enhanced security but may also contribute to escalations of violence in the region.

Thus, we define the probability for a household of being threatened directly in the following way:

$$Prob_i(Threat) = f(W_i, V_i, A_i) + e_i \quad (4)$$

where:

$W_i$  = wealth of household  $i$ ;

$V_i$  = ties of household  $i$  with the place of origin/ importance of household  $i$  in the community;

$A_i$  = existing armed actors in the region of origin of the household;

$e_i$  = random variable.

The fitted values from this estimation will be used as an explanatory variable in the displacement decision described in equation (3). This permits us to distinguish between the direct effects of variables like household wealth on the displacement decision (i.e., the effect on living standards), and the indirect effect of these variables (i.e., the effect on perceptions of security).

### 2.2.3 Specific proxies and hypotheses

We now describe the proxies used for the general categories of factors in equations (3) and (4) and our corresponding hypotheses. It should be noted up front that some variables (e.g.,

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<sup>4</sup> The term “endogenous” here is used to indicate that the occurrence of threats is not an independent variable in the data, but will itself be a function of other variables measured. The decision-maker in our model – the household – is, however, not deciding to be “threatened” or to be the victim of violent acts. In that sense, this variable is not endogenous in the strict definition of the term. Rather, characteristics of the household or household behavior can reduce or increase the probability of being threatened. This is very similar to models in environmental economics where households maximize utility subject to a budget constraint and an equation specifying health outcomes. An explicit modelling of this aspect is intended as an extension of this paper.

<sup>5</sup> A very interesting venue for future work would be to model this issue formally as a two-player game between the armed groups and the population of the community. We would like to thank Oded Stark for this suggestion.

age and education) serve as proxies for several factors. If the hypothesized direction of their effect on the displacement decision differs, the aggregate impact of these variables may be ambiguous and the hypotheses cannot be tested in detail.

### Determinants of the Displacement Decision (equation (3))

#### 1) Perceptions of safety for household $i$ at place $j$ ( $S_{ij}$ )

This variable is of particular importance in the place of origin.<sup>6</sup> In general, we expect that the probability of displacement increases with the level of insecurity perceived by the household in the area of origin. The following proxies will be used:

- *Direct threats received by the household*: As mentioned earlier, fitted values will be used. We expect a positive sign on this variable.
- *Violent acts suffered (directly by a member of the household, or indirectly by other family members, friends, neighbours, or people of other neighbourhoods)*: We would expect that the occurrence of such acts also increases the household's perceived insecurity and therefore raises the probability of displacement.
- *Government presence in the region (military or other security forces)*: It is not clear *a priori* whether government presence increases or decreases the perception of security in violent areas. On the one hand, government presence may provide protection from subversive groups. On the other hand, it may increase the likelihood of the civil population being caught in the middle of the battle between the government and subversive groups. Moreover, incidents of government troops conducting human rights violations exist as well.

Our general hypothesis is that security considerations are significant determinants of the displacement decision, but that other factors play a significant role as well.

#### 2) Income and standard of living at place $j$ ( $Y_{ij}$ )

In general, we would expect the probability of displacement to decrease with the income and standard of living at the place of origin and increase with the expected income and standard of living at the receptor location.<sup>7</sup> The proxies for  $Y_{id}$ , the expected income and expected standard of living at the receptor location, include:

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<sup>6</sup> Considerations of security may also determine the household's choice of receptor location. For example, there are some indications that the displaced are more likely to move to more anonymous areas in order to avoid further persecution. Unfortunately, these considerations could not be addressed with the data available to us (described in the following section of the paper). However, an analysis of the location choice (e.g., in form of a multinomial logit model) would provide an interesting topic for future analysis.

<sup>7</sup> Unfortunately, the data collected did not permit measuring incomes directly. Although questions to this effect were included, the answers did not appear sensible. The usual difficulties of collecting income data are aggravated in the case of displacement by the high degree of informal sector activity, the high percentage of households with income from agricultural production, and the time lapses between displacement and the survey. Potentially, there may also have been strategic overstatement (understatement) of incomes before (after) displacement motivated by the hope that the survey results will affect actual compensations and other support programs.

- *Characteristics of the household head (age, education)*: In accordance with the migration literature, we would expect younger household heads to have a higher propensity for displacement because their planning horizon and, therefore, the stream of discounted income in the place of reception is higher. We would also expect that a higher level of education is associated with a higher probability of displacement because it increases the expected income in the urban setting of the receptor location. However, as we will see below, education might also have impacts on information provision and on preferences which may counteract this effect.
- *Expected probability of finding employment at the place of reception*: We would expect the probability of displacement to increase when the expected probability of employment increases.
- *Personal contacts at the place of reception*: We do not have an *a priori* expectation on this effect. On the one hand, in line with the migration literature, personal contacts at the place of reception may increase the expected standard of living because it can provide a potential support network in finding employment and housing in the new area. On the other hand, personal contacts may lower unrealistically optimistic expectations regarding the employment possibilities, living standards, and access to government support in the receptor locations.

The proxies for  $Y_{in}$ , the expected income and standard of living at the place of origin include:

- *Amount of land possessed by the household at the place of origin*: We would expect the probability of displacement to be decreasing in this factor.
- *Possession of important assets at the place of origin*: Again, we would expect a negative effect on the probability of displacement because such goods raise the household's standard of living in the place of origin and deter relocation.
- *Access to public services, educational services and health services at the place of origin*: A better access to these services is associated with a higher standard of living and is therefore expected to reduce the probability of displacement.
- *State of debt of the household*: The impact of this factor is not clear *a priori*. On the one hand, a household with debts may be more likely to leave its place of origin if the head of the household thinks that this reduces the probability that he will have to repay the debt later on. If this is not the case, an indebted household may be more reluctant to leave behind the assets that were financed with the debt.
- *Characteristics of the household head (age, education)*: The considerations here are exactly the counterparts of the ones discussed for the income at the receptor place.

### 3) Migration and information costs ( $C_{ij}$ )

These costs, which are mainly associated with displacement ( $C_{id}$ ), include:

- *Possession of land and important goods at the place of origin*: The possession of location-specific assets implies a potentially higher cost of displacement because the latter usually

implies a loss of the assets. These higher migration costs are expected to reduce the propensity for displacement. On the other hand, assets that are easy to sell could provide the necessary financial instruments for the displacement of the household.

- *Linkage to the region of origin (years lived in the region, ties to local organizations):* A stronger linkage to the place of origin implies a higher emotional cost of leaving this way of life behind, thereby deterring displacement. However, ties to local organizations may also provide important information networks. These networks could deter displacement if they reduce overly optimistic expectations regarding the receptor locations. On the other hand, these networks may lower the costs of adjustment in the receptor cities and thereby increase the propensity for displacement.
- *Education of the household head:* A higher education level may lower information costs, but again, the impact on displacement is ambiguous, depending on the kind of information obtained.
- *Contacts at the place of reception:* Similarly, contacts at the place of reception may improve information on actual living conditions and potentially deter displacement. The reverse effect on adjustment costs has already been discussed above.
- *Access to the media:* Once again, the effect will depend on the type of information provided and is not clear *a priori*.
- *Expected support in case of displacement:* We expect that the more optimistic a household's expectations regarding the support provided to the displaced by the government or other organizations are, the more likely the household will decide to relocate. We also expect that previous support obtained from governmental or non-governmental organizations increases a household's propensity for displacement.

#### 4) Household characteristics which influence preferences ( $Z_i$ )

This set of variables is meant to reflect the household's preference structure (e.g., utility function, discount rate, risk aversion). Proxies are:

- *Age and sex of the household head:* Younger household heads may be less risk averse, and female household heads may be more risk averse than male ones. However, contrary to the migration literature, risk aversion may not deter displacement but may rather spur it on due to the high risks to the household's security in the region of origin. The impact of education on preference structure is less clear *a priori*.
- *Number of household members and adults:* A possible hypothesis is that adults run a higher risk of being the target of armed groups than children. Therefore, households with more adults may be more inclined to displace. On the other hand, households with more children may be particularly concerned about the safety of the children and the traumas caused by the violence and might therefore be more likely to opt for displacement. Moreover, households may decide to displace to avoid forced recruitments of their children. Similarly, households with more adults may be able to overcome the loss of an adult more easily. Thus, the impact of this variable is not clear *ex ante*.

Determinants of direct threats (equation (4))

We now turn to the factors hypothesized to affect the probability of the household being the victim of direct threats.

*Wealth of the household ( $W_i$ ):*

In general, we expect wealthier households to be the more likely targets of threats from armed groups. Thus, from this perspective, wealthier households are hypothesized to be more likely to opt for displacement. Note that this counteracts the direct effect of household wealth explained above, i.e., wealthier households have more to lose from displacement and are therefore less disposed to leave their place of origin.

- *Possession of land at the place of origin:* Households owning land are expected to be more likely to be threatened than those who do not own land.
- *Possession of important assets at the place of origin:* Ownership of other location-specific assets is expected to increase the probability of being threatened. For more mobile assets (e.g., cars) the effect is expected to be less significant.

*Ties of the household to the place of origin/ importance in the region ( $V_i$ )*

We would expect that households which are more established in a region and play a more important role in the community are more popular targets for armed groups because they serve as an example to intimidate others. Moreover, by targeting community leaders, armed groups can reduce the chances of an organized community resistance. The proxies we use are:

- *Years lived in the region:* The longer a household has lived in the region, the more likely we would expect it to be threatened by armed groups.
- *Age of the household head:* The impact of age is less clear. On the one hand, we might expect older household heads to play a more important role in the community and therefore to be more likely targets of threats. On the other hand, young adults may be more able to resist violent attacks and might therefore be seen as a potential threat by the armed groups.
- *Membership in local organisations:* We would expect members of organizations to be the more likely targets of threats by armed groups.

*Existing armed actors in the region of origin of the household ( $A_i$ )*

Specifically, the armed actors considered are:

- *Guerrilla, Paramilitaries, and other subversive groups:* We expect the probability of a household to be threatened to increase with the presence of these groups in the region.
- *Military forces:* On the one hand, presence of the military may provide some protection to the civil population against being threatened by subversive groups. On the other hand, the military might itself pose threats or increase the pressure on subversive groups.

For those variables that appear to be determinants of both the probability of threats and the displacement decision, our approach will permit to distinguish between these indirect and direct effects on displacement.

### *Two types of displacement and the potential importance of interaction terms*

An additional theoretical consideration that should be mentioned, although our empirical analysis did not permit us to take this approach, is the following: we may want to distinguish between two types of displacement: preventive and reactive. Reactive displacement would refer to those displacements where people were directly threatened and left the region impulsively because they saw no other option to save their life. Preventive displacement would refer to the displacements of households that, given the presence of violence in the region, consider the risks involved in staying or leaving and then decide for either of these options. Obviously, factors other than violence itself would be expected to play a more important role for the latter group than for the former. One option for testing this hypothesis would be to use interaction terms between the variable reflecting whether a household has been threatened and the other (non-violence related) variables. If our hypothesis holds, the interaction term should be significant. Unfortunately, due to multicollinearity problems, our data did not permit following this approach. This idea would be an interesting subject for future research. However, it leaves open the question of why some households act preventively and others do not. In that sense, the approach followed in this paper may be more complete: we consider the probability of being threatened as endogenous and consider this as one factor in the displacement decision. In future studies, one might also consider representing the dynamics of the displacement process.<sup>8</sup>

### *The potential long-run endogeneity of household assets*

Another theoretical consideration worth mentioning is that in the long-run, we might expect households to consider the risk of displacement in their choice of assets. If violence prevails long enough in the region, households may consider investing more in mobile assets (e.g., human capital) and less in location-specific assets (e.g., land and housing). Testing for this potential long-run endogeneity would be another interesting subject for research.

## 2.3 A Method for Estimating the Welfare Losses from Displacement

Displacement imposes substantial welfare losses on the affected population, which have been ignored in calculations regarding the costs of violence and forced displacement to society. Psychological traumas, marginalization, the dismemberment of families, the loss of their home and way of life, and potential reductions in the standard of living after displacement are just a few of the costs borne by the displaced.

One way of measuring the welfare costs of displacement is by using the concept of compensation variation, following an approach used in the fields of welfare economics and environmental economics. The compensation variation for avoiding displacement is the amount of money that is necessary for an individual to become indifferent between moving away from or

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<sup>8</sup> “Dynamics” here refers to the following idea: When violent actors first move into a region some of the civil population gets taken by surprise, is attacked and then will respond “reactively” in the sense explained above. Other members of the community observe the violent acts and may then respond “preventively”. It would be very interesting to consider this idea in future research.



staying in her place of origin. Thus, the compensation variation can be interpreted as the willingness to accept money in return for not displacing oneself and facing political violence.

If we assume a linear formulation of the displacement decision in equation (3) we can write

$$v_{ij} = \mathbf{a}_j + \mathbf{b}S_{ij} + \mathbf{g}Y_{ij} + \mathbf{d}C_{ij} + \mathbf{f}Z_i, \quad (5)$$

From equation (1) and (2) we know that a household head will opt for displacement of all or part of his family if

$$v_{id} + \mathbf{e}_{id} \geq v_{in} + \mathbf{e}_{in}. \quad (6)$$

Using results by Hanemann (1982), we can say that the compensation variation (CV) can be defined as the measure that equalizes the maximum expected utility before and after displacement. For our model of forced displacement, the expected compensation variation for household  $i$  can be described as:

$$E(CV_i) = \frac{\mathbf{a} + \mathbf{b}S_i + \mathbf{g}Y_i + \mathbf{d}C_i + \mathbf{f}Z_i}{\mathbf{g}}, \quad (7)$$

where  $\mathbf{a} = \mathbf{a}_n - \mathbf{a}_d$ ,

$$S = S_n - S_d,$$

$$Y_i = Y_{in} - Y_{id},$$

$$C = C_n - C_d,$$

$$\mathbf{f} = \mathbf{f}_n - \mathbf{f}_d.$$

and where  $Y_{ij}$  refers to the household's income rather than the proxies used in our analysis.<sup>9</sup> The compensation variation measures the welfare losses of household  $i$ . In order to determine the total welfare losses the compensation variation should be aggregated for the whole population of displaced households. Unfortunately, the empirical application of this concept would require income data of reasonable quality for the displaced and non-displaced which we did not have available in our study.<sup>10</sup> An application of this framework in future studies would be promising.

<sup>9</sup> The fact that only income differences and not absolute levels of income appear in this expression is due to our simplifying assumption that the marginal utility of income does not change with displacement.

<sup>10</sup> see footnote 7.

### 3 Data and Descriptive Analysis

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#### 3.1 The Data

In order to analyze the process and impacts of displacement, the current needs of the displaced, and to test some of the hypotheses put forth above, we conducted a household survey of a sample of people who decided to leave their area of origin due to reasons of violence (referred to as “displaced” below) and those who remained in areas of violence (referred to as “non-displaced”). The survey included a wide variety of questions on socio-demographic characteristics, living conditions, access to support, current needs and more. Some descriptive statistics of the most relevant issues are presented and discussed below.<sup>11</sup>

For the surveys of the displaced, a total of 200 household interviews were conducted in three major receptor cities: Bogotá, Medellín, and Cartagena.<sup>12</sup> The sample was focused on identifying displaced people from the departments of Antioquia and Córdoba, as these are two of the principle zones of expulsion.<sup>13</sup> For the surveys of the non-displaced, three communities in these two departments were selected which showed a constantly high rate of displacement: Apartadó and Mutatá for the department of Antioquia and Tierralta for Córdoba. A total of 176 surveys of households remaining in these communities were conducted.<sup>14</sup> In each case, interviews were conducted with the household head.

#### 3.2 Descriptive Analysis

In this section we present descriptive statistics which shed some light on the displacement process, the impacts of displacement on the affected households, the effectiveness of current aid programs, as well as the needs of the displaced.

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<sup>11</sup> A third group we conducted surveys for was a group of people which participated in a resettlement project. The results from this survey as well as a substantial amount of additional descriptive statistics on the displaced and non-displaced are presented in Erazo et al. (2000).

<sup>12</sup> The number of surveys was distributed in the following manner: 100 in Bogotá, 50 in Cartagena and 50 in Medellín.

<sup>13</sup> For 1998, the department of Antioquia was the origin of 20,65% of the displaced people nationwide, and 8,37% came from the department of Córdoba. For further details regarding the survey and sample see Erazo et al. (2000).

<sup>14</sup> The number of households surveyed in the three communities was distributed as follows: 30 in Mutatá, 100 in Apartadó, and 46 in Tierralta. For further details regarding the selection of the samples see Erazo et al. (2000).

### 3.2.1 *Collective versus individual displacement*

One aspect that is of interest in understanding the displacement process is to what degree the displacement takes place individually or collectively. We found that only between 6 and 14 percent of the displaced interviewed in the three cities (with Cartagena showing the highest percentage) fled collectively with other people from their community or other communities. The remaining percentage fled only with relatives or close friends. This finding supports our modelling of the displacement decision at the household level for the data at hand.<sup>15</sup>

**Map 1: The Study Region.**



<sup>15</sup> Nevertheless, on a nationwide level we do find evidence of massive community displacement. This may have advantages for the affected population in terms of a better degree of organization and information and may facilitate the implementation of policies of prevention, return or resettlement. Moreover, a few communities have managed to avoid displacement and form a resistance against the violent actors. One interesting issue for future research would be to conduct a community-level analysis of the determinants favouring this type of collective action. Previous experiences with the collective provision of public goods within the community, and the homogeneity and size of the communities could be among the important determinants to be considered.

### 3.2.2 Factors of violence and perceived causes of displacement

The survey of the displaced solicited information on which armed groups provoked the displacement. The groups most named by the interviewed were the paramilitary groups (58.7%) and the guerrilla (27.9%).

**Table 1: Violent events suffered by household members or other persons**

(percentage of displaced interviewees who indicated such an event; percentage of non-displaced in parenthesis)

<b>Violent event</b>	<b>Household members</b>	<b>Other relatives</b>	<b>Friends</b>	<b>Other people within the community</b>	<b>People in nearby communities</b>
<b>Death Threats</b>	58.2 (9.1)	42.3 (5.7)	65.2 (15.9)	65.2 (30.1)	59.2 (31.8)
<b>Other Threats</b>	10.5 (9.0)	14.9 (2.8)	28.4 (9.1)	25.4 (10.8)	25.4 (13.6)
<b>Assassination attempt</b>	16.4 (2.8)	21.9 (0.6)	39.3 (5.1)	41.3 (11.9)	40.8 (14.8)
<b>Assassination</b>	29.4 (22.7)	40.3 (21.6)	61.2 (38.1)	66.7 (50.6)	62.7 (53.4)
<b>Disappearings</b>	13.0 (5.7)	16.9 (5.1)	48.8 (14.2)	51.2 (25.6)	50.7 (29.5)
<b>Torture</b>	4.5 (1.7)	19.9 (1.1)	55.2 (4.0)	45.3 (9.7)	43.8 (10.8)
<b>Air Attacks</b>	5.0 (0.6)	7.5 (0.6)	13.9 (0.0)	15.9 (5.7)	18.4 (6.3)
<b>Forced Recruitment</b>	1.5 (0.6)	9.5 (0.6)	17.4 (0.6)	20.9 (4.0)	20.9 (5.1)
<b>Masacres</b>	7.5 (0.6)	17.4 (2.3)	48.8 (2.3)	55.7 (16.5)	55.7 (21.6)
<b>Kidnapping</b>	2.0 (0.6)	5.5 (2.3)	20.4 (1.1)	23.9 (6.3)	25.4 (6.8)
<b>Bombardment</b>	2.0 (1.1)	8.5 (0.0)	15.4 (0.0)	18.4 (2.8)	18.9 (2.8)
<b>Other</b>	4.0 (0.6)	0.0 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)

Table 1 shows the violent events suffered by the interviewed households, their friends and family, as well as their knowledge of such events in their own or neighbouring communities. In general, the results are indicative of the immense exposure to violence which people in these conflict zones are exposed to. When asked about acts of violence suffered directly by household members, 58.2% of the displaced interviewed indicated that they or other members of their household had received death threats. As expected, the corresponding percentage is much lower (9.1%) for the sample of non-displaced. Other violent events, the major ones being attacks, assassinations and disappearances have also affected the displaced population on a larger scale than the non-displaced population. However, it is interesting to note that almost one fourth (23%) of the non-displaced interviewed had suffered the assassination of one or more members of their households. Thus, the results support our earlier hypothesis that violence plays a significant role in the displacement process, but also that we observe households remaining in

their area of origin despite being quite strongly affected by the violence there. Moreover, we found that 62% of the households owning land at the place of origin had received death threats while this was the case for only 30% of the landless households.<sup>16</sup>

In addition, violence can be less direct. We would expect that violent events suffered by others in the same or nearby communities also affect a household's perceptions of insecurity and own risks. Again, the survey results indicate that this indirect exposure to violence is less for the sample of non-displaced than for the displaced. However, once more, it is quite substantial for the non-displaced as well. For example, more than one third of them had friends and one fifth had relatives who were assassinated; almost 16 percent had friends who had received death threats.

Finally, we asked those displaced who indicated still having close relatives remaining in the region of origin (67% of the sample), why their relatives had decided to stay. Around 54 percent said that these relatives did not feel threatened; 42.9 percent indicated that they felt that it was too risky to leave everything behind; and 12 percent said that they had nowhere to go.<sup>17</sup> This again supports the idea that the perception of security is very important, but that considerations about the uncertainty associated with moving to a new location play a role in the displacement decision as well.

We also attempted to distinguish between the two types of displacement discussed earlier – preventive and reactive – by asking the sample of displaced directly for the principal reason underlying their displacement. 61.2 percent indicated that they were directly threatened and did not see an option other than leaving their place of origin, while 36.3 percent said that they had not been directly threatened, but were concerned that the situation would get worse.<sup>18</sup>

### 3.2.3 Impacts of displacement

#### *Changes in household composition*

The fragmentation of the family is considered one of the problems associated with displacement. Our results show that displacement and violence have a significant effect on household composition (see Figures 1 and 2). The percentage of household members below the age of sixteen increased from about 50% before displacement, to 58% after displacement, while the percentage of people older than 35 decreased from approximately 15% to 11%. These changes may represent a risk spreading strategy by the households, where some adult household members either stay in the place of origin or move to a different destination. Unfortunately, the

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<sup>16</sup> Results are based on the joint sample of displaced and non-displaced.

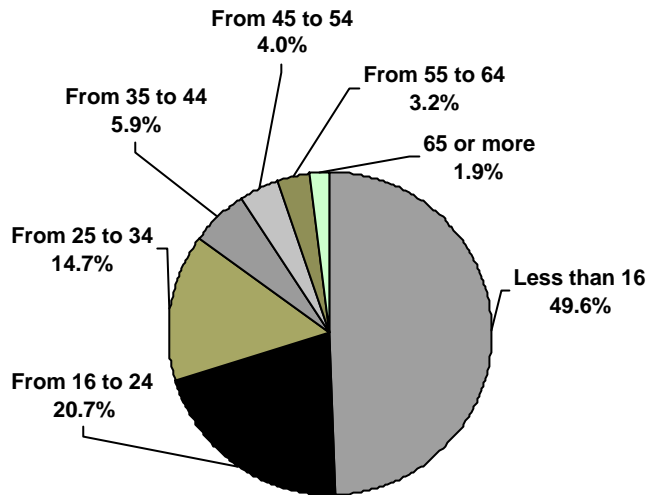
<sup>17</sup> Multiple answers were permitted in this question. 7.5% indicated that they did not know and 0.5% did not answer the question.

<sup>18</sup> The remaining 2.5% indicated other reasons.

data did not permit a more detailed analysis of this aspect, which would provide an interesting topic for further research.

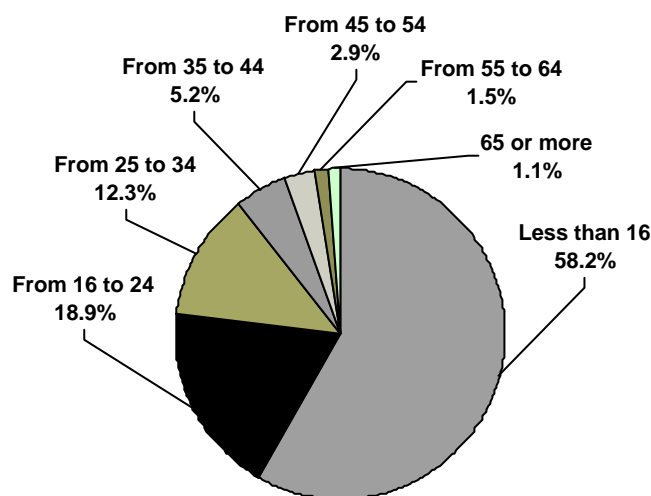
**Figure 1: Age of Other Household Members After Displacement**

(% of interviewees in Bogotá, Medellín and Cartagena)



**Figure 2: Age of Other Household Members After Displacement**

(% of interviewees in Bogotá, Medellín and Cartagena)



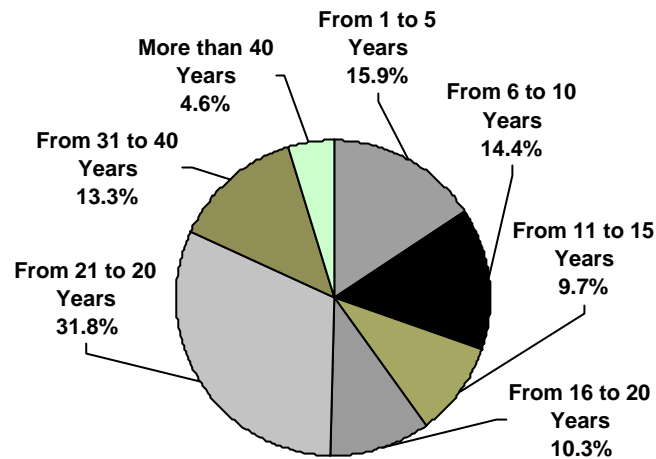
### *Loosing their roots*

Displacement implies the loss of a way of life and the social network in the place of origin. We would expect this impact to be stronger the longer a person has lived in a certain area. The results presented in Figure 3 indicate that more than two thirds of the displaced households interviewed had lived in their region of origin for more than ten years and approximately half had lived there for more than 20 years. Thus, for these people, displacement implies loosing the place they have considered their home for a long time and of the social ties they have established

there. Membership in local organizations in the place of origin can be another indicator of the ties a household has to its community. We found that 41,3% of the displaced households surveyed had members who were part of some organisation in their place of origin.

**Figure 3: Number of Years Lived in the Region Before Displacement**

(% of interviewees in Bogotá, Medellín and Cartagena)



### *Loss of property*

Loss of property held in the place of origin can be another important impact of displacement. Location-specific assets such as land and associated structures have to be left behind, and violence in the area makes market transactions such as the sale of the assets difficult. The survey results indicate that 44 percent of the displaced held land for agricultural purposes in their place of origin. Of these, 88 percent relied on the land as the principal source of household income and sustenance. This indicates another aspect by which the displaced leave behind a way of life: when moving to the receptor cities, they will generally not have access to land for agricultural production, and will have to earn a living by other means. Moreover, of those who held land, 58% legally owned the land and another 17% were owners without a legal title. Only 5.7 percent of the interviewed were able to sell or rent their land, while more than 83 percent indicated that they abandoned the land or it was taken from them. 84 percent of the landholders also had houses on the land. Of all the displaced interviewed, 30.8 percent had animals for transportation and 23 percent had other important assets which they left behind, including houses, electric appliances, fishing equipment, utility animals, and others.

### *Changes in living conditions*

Living conditions, such as the type of housing, access to public services, health services, and schools for the children, may change considerably with displacement as well. However, the direction of these changes is not clear *a priori*. Many of the displaced come from rural areas, and hence, some of these conditions may have improved when moving to one of the three major cities considered. On the other hand, the displaced population often becomes marginalized and

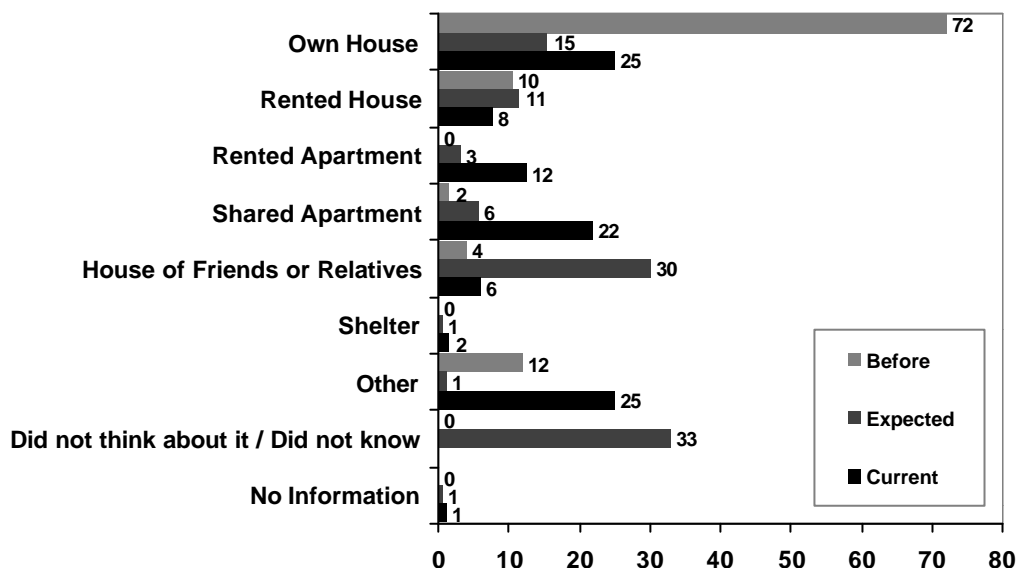
## Displacement due to Violence in Colombia

may not be able to benefit from the services provided in the cities. The provision of services may also differ between receptor cities.

Figure 4 indicates the housing conditions of the displaced before and after displacement as well as the expectations held by the interviewed prior to displacement. The results indicate that the percentage of households living in own or rented houses decreases substantially with displacement while the percentage of households living in rented or shared apartments, with friends or relatives or in shelters increases. Comparing the expected to the actual outcomes reveals significant differences. However, these results are difficult to interpret because the survey solicited expectations regarding the time right after displacement, immediately after the affected had arrive in the receptor cities. Nevertheless, it is interesting to note that about a third of the interviewed indicated that they did not think about or did not know where they would stay, while the remaining two thirds did have some expectation about this.

**Figure 4: Type of Housing of the Displaced**

(% of interviewees in Bogotá, Medellín and Cartagena)



Comparing the access to public services before and after displacement, our investigation shows that for people questioned in Bogotá, the situation improved while the results were mixed for Medellín and Cartagena (see Figures 5.a-5.c). In Medellín, access to electricity and gas pipes improved with displacement, while access to piped water and sewage decreased quite substantially. In Cartagena, access to electricity and piped water improved and the provision of gas and sewage deteriorated as compared to the place of origin. In general, access to public services was better for the displaced interviewed in Bogotá than for those in Medellín and Cartagena, where the percentage of households without access to piped water or sewage was quite high.



Figure 5.a: Access to Public Services Before and After Displacement  
(% of interviewees in Bogotá)

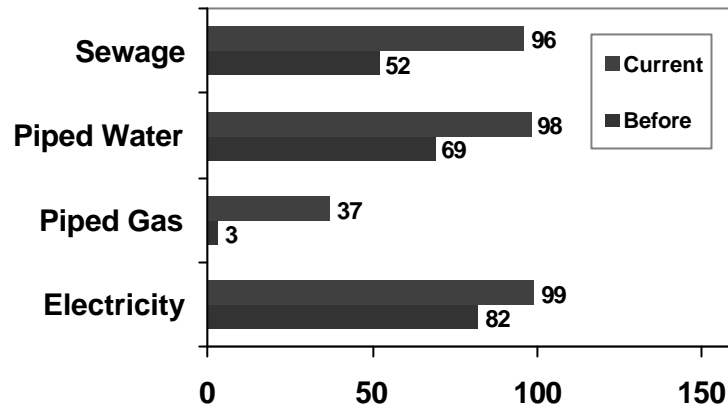


Figure 5.b: Access to Public Services Before and After Displacement  
(% of interviewees in Medellín)

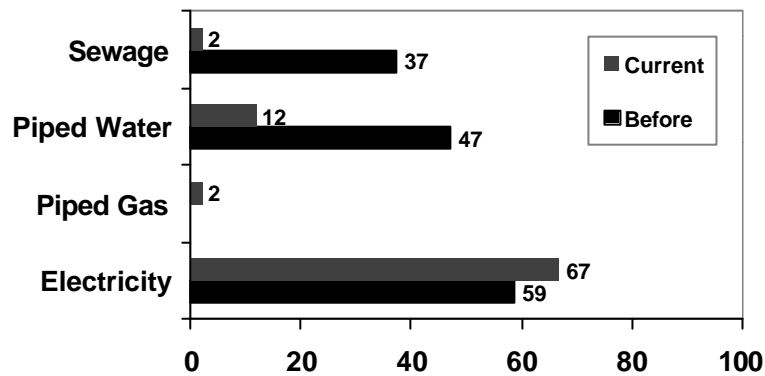
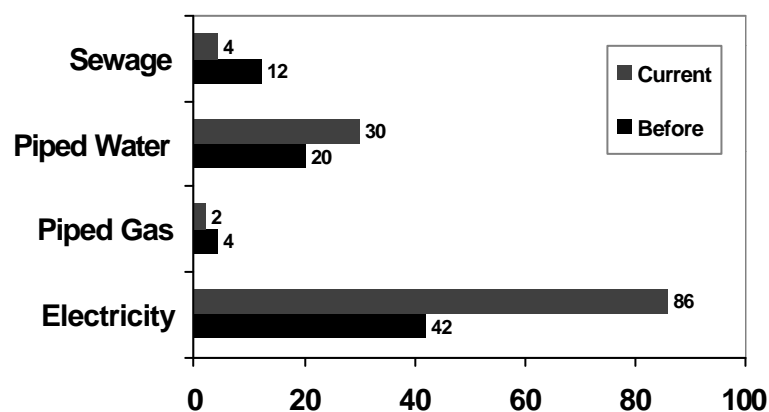


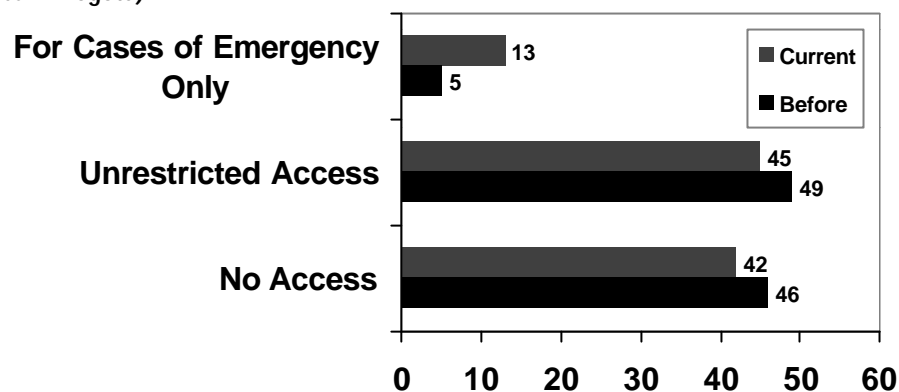
Figure 5.c: Access to Public Services Before and After Displacement  
(% of interviewees in Cartagena)



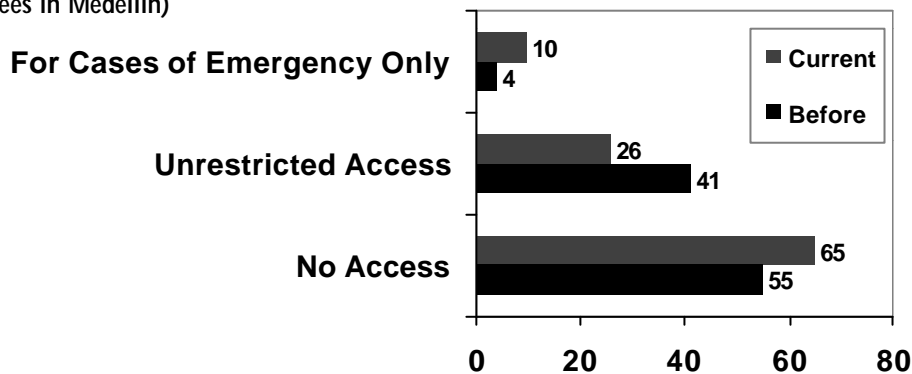
## Displacement due to Violence in Colombia

Figures 6.a-6.c show the access to health services before and after displacement, as indicated by the interviewed. For the displaced in Medellín, the situation improved as compared to their area of origin: the percentage of households with no access or coverage of emergencies only decreased, while the percentage with access to unrestricted health care increased. In Cartagena, displacement was associated with deterioration of households' access to health services: 18 % of the households interviewed lost access to health services. In Bogotá, the situation was mixed. On the one hand, the percentage of households without any access to health services increased; on the other hand, for those who did have access to services, the extent of coverage improved.

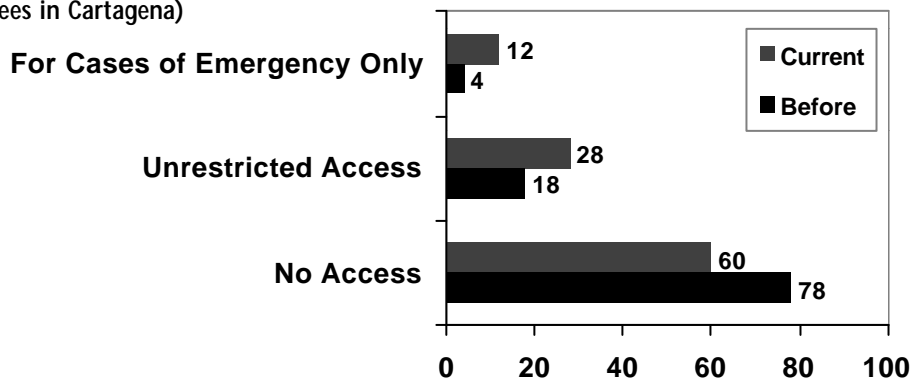
**Figure 6.a: Access to Health Services Before and After Displacement**  
(% of interviewees in Bogotá)



**Figure 6.b: Access to Health Services Before and After Displacement**  
(% of interviewees in Medellín)



**Figure 6.c: Access to Health Services Before and After Displacement**  
(% of interviewees in Cartagena)



Finally, access to schools for the children improved with displacement for the households interviewed in Cartagena, but deteriorated in Bogotá and Medellín (see Figures 7.a-7.c).

Figure 7.a: Access to School Before and After Displacement  
(% of interviewees in Bogotá)

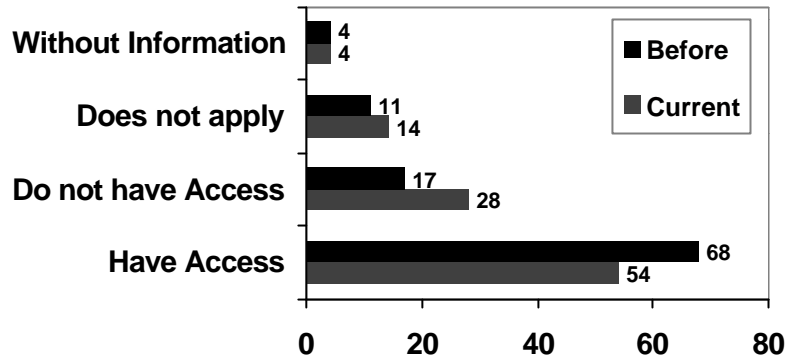


Figure 7.b: Access to School Before and After Displacement  
(% of interviewees in Medellín)

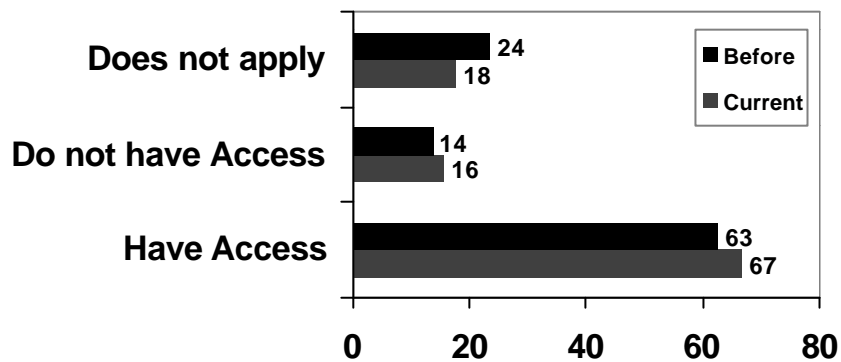
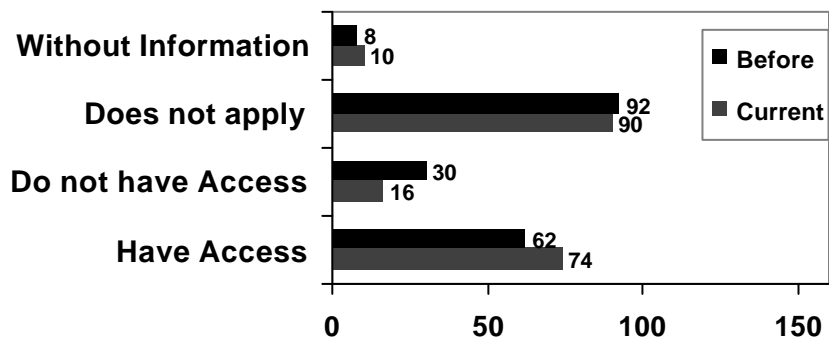


Figure 7.c: Access to School Before and After Displacement  
(% of interviewees in Cartagena)

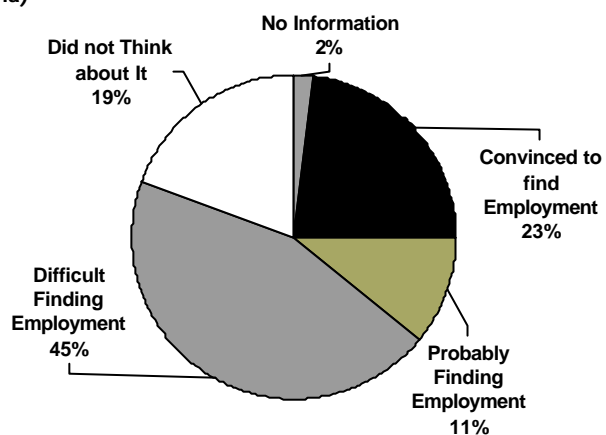


### *Changes in employment conditions*

Displacement has a significant impact on the work situation. The majority of the displaced interviewed came from rural areas where they worked in the agricultural sector. Moving to the receptor cities implies that they have to compete for jobs that they are not usually prepared for. Figures 8 and 9 show the expectations before displacement of the employment opportunities in the receptor cities. Approximately 45% of the interviewed had expected difficulties in finding employment while about 34% were optimistic about it. More than half of the displaced indicated that they had expected to earn the same or more in the city of origin, while only 12.4% expected a fall in incomes after displacement.<sup>19</sup> Only about every fifth person indicated that they had not thought about work opportunities when they decided to leave their place of origin.

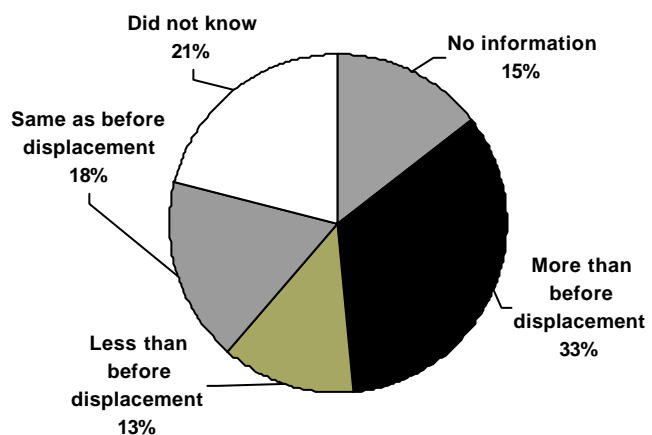
**Figure 8. Perceived Possibilities of Finding Employment at the Place of Reception before Displacement**

(% of interviewees in Bogotá, Medellín and Cartagena)



**Figure 9. Expected Earnings at the Place of Reception**

(% of interviewees in Bogotá, Medellín and Cartagena)

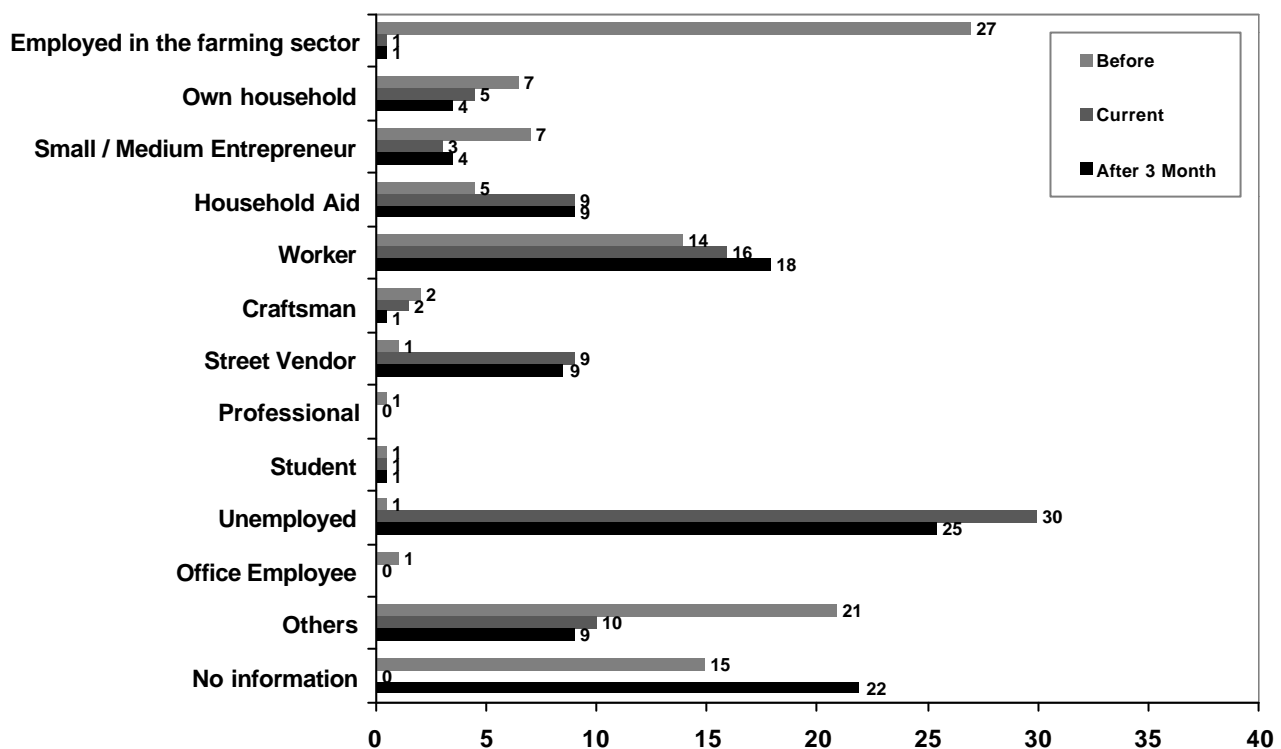


<sup>19</sup> The fact that the percentage of interviewees who expected a high income after displacement is higher than the percentage of those who expected to find employment could be considered as contradictory. However, we expect that this is due to the interviewees referring to the income level in case of finding employment rather than the expected income.

The survey results indicate that reality often appears worse than expectations. Figure 10 shows actual employment conditions of the household heads after displacement. The high degree of unemployment is particularly notable. This unemployment appears to be permanent rather than temporary: it increased from 25.4% three months after displacement to 30% at the time of the interview. Moreover, if we include those working as street vendors, who can be considered underemployed, the percentage rises to 33.9% three months after displacement and to 39% at the time of the interview. In general, the most common types of employment after displacement were as worker or household aid.

Figure 10. Occupation of the Household Head: Current, Before and 3 Months After Displacement

(% of interviewees in Bogotá, Medellín and Cartagena)



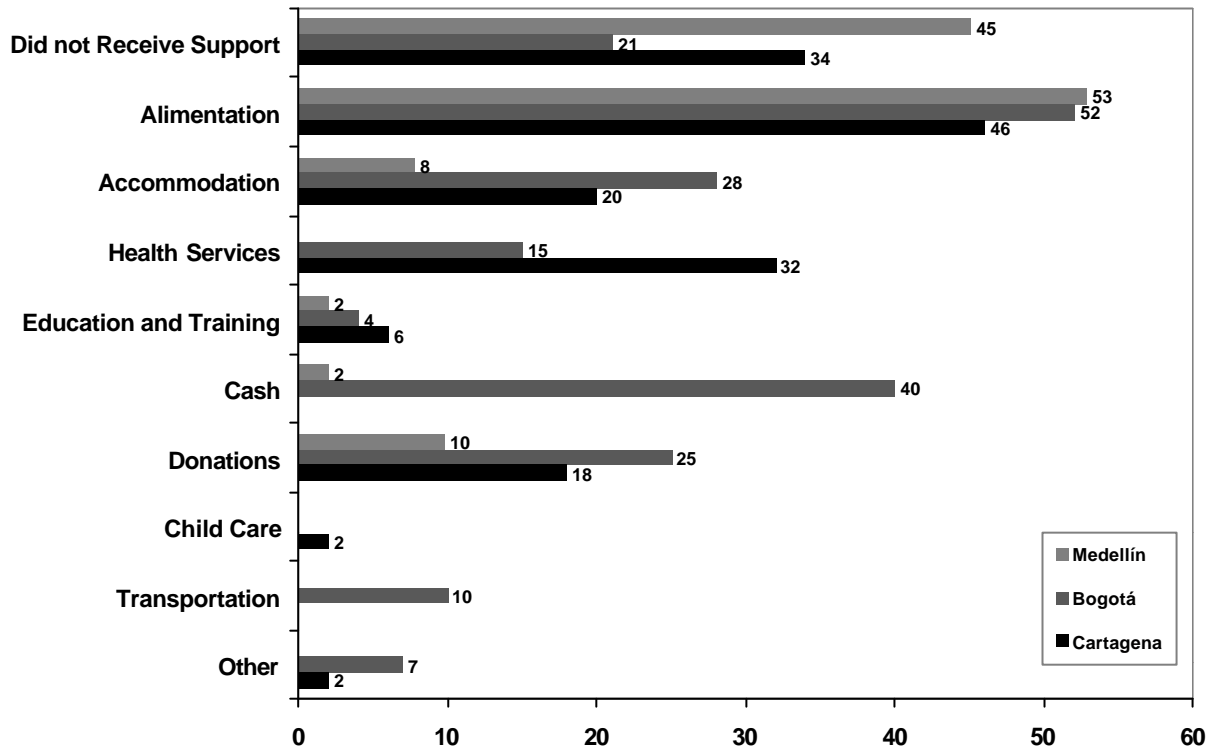
### 3.2.4 Expected, received and required support

The survey included question on the expected and actual support received during and after displacement. It is interesting that actual support generally exceeded expectations. However, it needs to be stressed that almost half of the displaced (49.3%) did not expect any type of support and almost one third (30.3%) did not receive any. Among the organizations that did provide support to the displaced, the Red Cross (providing support to 40.3% of the interviewed) and government organizations (41.8%) stand out. Moreover, about one quarter of the displaced interviewed (23.4%) had received help from relatives or friends, a fifth (18.4%) from non-governmental organizations (NGOs) and a tenth (9.5%) from the church.

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Figure 11 provides more information on the type of support received. In all three cities the most common support obtained by the displaced was food. Other support frequently mentioned included cash, accommodations, and donations. In Cartagena, health services were more frequently provided than in the other cities.

**Figure 11. Type of Support Received During and After Displacement**  
(% of interviewees)



To better understand the distribution of various types of support, Table 2 differentiates the type of support by organization. The Red Cross, government organizations, and the church focused mainly on food, cash, and housing. In addition, NGOs provided health services for more than a quarter of the displaced interviewed. The help received by relatives and friends consisted mainly of food and housing. It is important to point out that almost no services geared specifically towards children and adolescents exist. As Kunder (1999) puts it, being confronted with unimaginable scenes of violence these individuals may become the “future soldiers, parents of potential enemies and leaders of revenge acts”.

Table 2: Type of Support by Organization

	Red Cross	NGOs	Church	Governmental Organisations	Family Members or Friends	Particular Persons	Other
<b>Alimentation</b>	31.3%	13.4%	7.5%	30.9%	19.9%	1.5%	2.0%
<b>Accommodation</b>	10.5%	5.5%	4.0%	9.5%	19.9%	0.0%	1.5%
<b>Health Services</b>	8.0%	3.0%	0.0%	25.9%	2.0%	0.0%	0.5%
<b>Education and Training</b>	1.5%	3.0%	0.5%	5.0%	0.0%	0.0%	0.5%
<b>Cash</b>	16.4%	7.5%	4.5%	19.9%	3.0%	0.0%	1.5%
<b>Donations</b>	20.4%	5.5%	2.0%	8.5%	6.0%	1.5%	1.5%
<b>Child Care</b>	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%
<b>Transportation</b>	4.5%	0.5%	1.5%	4.5%	1.5%	0.0%	0.0%
<b>Other</b>	0.5%	3.0%	3.0%	2.0%	0.5%	0.0%	1.5%

The survey also asked about the current necessities of the displaced (see Table 3). Preoccupations about future incomes were the most prevalent: 45.8 percent of the interviewees indicated that they need financial aid to start a small business and 44.3% felt the need for help in finding employment. The second most important concern among the displaced was the need for education of their children (indicated by 38.3% of the interviewed). It is particularly worrisome that over a quarter of the displaced indicated that they needed money to buy food. A significant percentage of the interviewed also mentioned other needs. These included medical attention, housing or materials to improve it, as well as cash for current necessities. It is remarkable that only 3% of the displaced interviewed were conscious of needing psychological support for themselves and their family, although a high percentage indicated that they were feeling sad (58%), depressed (33%), scared (20%) or without the will to carry on (58%).

Table 3: “What do you and your families need most at the moment?”

	<b>Percentage of displaced people interviewed who indicated a given need (Bogotá, Medellín, and Cartagena)</b>
<i>Money to buy food</i>	27.9
<b>Financial support to start up a business</b>	45.8
<b>Support in finding employment</b>	44.3
<b>Cloth</b>	2.5
<b>Psychological support to overcome the traumas of violence and displacement</b>	3.0
<b>Spiritual support</b>	2.5
<b>Participation in an organization to defend the rights of the displaced</b>	2.5
<b>Child education</b>	38.3
<b>Special programs for children</b>	7.5
<b>Others</b>	22.9

### 3.2.5 Conditions for Resettlement or Return

Once displacement has occurred, three policy options exist: integration into the place of reception, return to the place of origin, or resettlement to a new area.

When asked about the perceived probability of returning to their area of origin in the near future, 31.3% of the displaced said that they did not want to return and only 13% believed that they would return. The others found it little likely (9%) or very unlikely (7.4%) that they would return, while 29.3% did not believe they would return and 10% did not know. The survey also asked about the minimum conditions for a return. 60% of the displaced indicated the end of violent conflicts in their region of origin and 46% the provision of financial help or subsidised credits for starting over. Protection by the military forces, allocation of lands and titles to land, each were named by about a third of the displaced interviewed.

Similarly, we asked the displaced what would be the minimum conditions under which they would participate in a resettlement program. Again, the absence of violent conflict in the region was the most frequently named reply (88%), followed by financial aid (79%), rights to a house (70%), rights to a piece of land (62%), anonymity (47%), and climatic conditions similar to the place of origin (46%). However, actual motivations for participation in a resettlement program reported in detail by Erazo et al. (2000) were much less demanding than the conditions given here, indicating that the interviewees were probably expressing wishes or demands rather than minimum conditions.



## 4 Econometric Analysis

The survey data from the samples of displaced and non-displaced were used to empirically assess the determinants of the displacement decision and of the probability of a household being threatened by violent actors. We now present the results from the econometric estimation of equations (3) and (4). We used a linear specification without interaction terms and assumed a logistic distribution of the random error terms. The definitions of the variables used in the regressions are given in Table 4 and Table 5 shows the descriptive statistics for these variables.

**Table 4: List of Variables Used in the Econometric Analysis**

AMENAZA	=1 if the any household member had been directly threatened by violent actors (death threat or other), =0 otherwise.
PROPIET	=1 if the household owns/owned of lands (with or without title) at the place of origin, =0 otherwise.
CARROS	=1 if the household owns/owned a car at the place of origin, =0 otherwise.
MOTOS	=1 if the household owns/owned a motorcycle at the place of origin, =0 otherwise.
ANIMALES	=1 if the household owns/owned transport animals at the place of origin, =0 otherwise.
OTROBIEN	=1 if she the household owns/owned any other important asset at the place of origin, =0 otherwise.
ANOSREG	Number of years lived/ living in the region of origin
EDAD	Age of the household head
GUERRILLA	=1 if there existed/exists guerrilla at the place of origin, =0 otherwise.
PARAS	=1 if there existed/exists paramilitary at the place of origin, =0 otherwise.
MILITAR	=1 if there existed/exist military forces at the place of origin, =0 otherwise.
OTRACTOR	=1 if there existed/exist other violent groups (drugtraffickers, urben militia, unknown groups, selfdefence groups, or other subversive groups (excluding guerrilla and paramilitary)) at the place of origin, =0 otherwise.
NUMORG	Number of categories of organisations at the place of origin in which any of the household members used to be/is a member
AMENPRED	Predicted probability of AMENAZA
VIOLDIR	=1 if any household member suffered directly from violent acts (incl. attempted or actual assassination, torture, disappearings, air attacks, forced recruitment, massacres, kidnapping, bombardment, others), =0 otherwise.
VIOLIND	=1 if the asked person knows of family members, friends, people from the neighbourhood or village, or people in nearby neighbourhoods/villages who suffered violent acts (as above), =0 otherwise.
GOBIERNO	=1 if there existed/exists government security forces other than the military (National Security Department or National Police) at the place of origin, =0 otherwise.
PROPPRED	Number of hectares of land formerly owned/owned by the household (with or without title) at the place of origin, =0 if the household did not have/ does not have lands for agricultural production or if it was not/ is not the owner).
BIEN	=1 if the household owned/owns any of important asset at the place of origin (cars, motorcycles, transport animals or others), =0 otherwise.
CASAPROP	=1 if the household owned/owns their own house at the place of origin, =0 otherwise.
NOSERVPU	=1 if the household did not have/does not have access to any public services (electricity, piped gas, sewage, piped water system), =0 otherwise.
SALUDIRR	=1 if the household had/has access to unrestricted health services at the place of origin, =0 if it had/has access to emergency services only or no access at all

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**Table 4: List of Variables Used in the Econometric Analysis (continued)**

ESCUELA	=1 if school-age children had/have access to a school or college at the place of origin, =0 otherwise.
DEUDASAB	=1 if the household had/has unpaid debts or is still cancelling debts at the place of origin, =0 otherwise.
CONEC	=1 if the household has close family or friends in other regions of the country (for displaced: if the household had close family or friends at the place of reception before displacement) , =0 otherwise.
ESPAYUDA	=1 if the interviewed expected/expects any support during and after displacement, =0 otherwise. PROBTRAB=1 if the interviewed expected/expects to obtain employment at the place of reception, =0 otherwise.
RECAYORG	=1 if the household received support from any organisation at the place of origin, =0 otherwise.
ADULTOS	Number of household members older than 16 years (before displacement).
HOGAR	Number of household members (before displacement).
HOMBRE	=1 if the household head is a male, =0 if female.
GRADO	Number of years of education of the household head.
MSUM	Number of categories of public media (radio, newspaper, television, periodicals, telephone, others) to which the household had or has access to at the place of origin

**Table 5: Descriptive statistics for the variables used in the econometric analysis**

Variable	Mean	Standard Deviation	Minima	Maximal	Cases
AMENAZA	.433139535	.496231305	.000000000	1.000000000	344
PROPIET	.204244032	.403683866	.000000000	1.000000000	377
CARROS	.371352785E-01	.189344517	.000000000	1.000000000	377
MOTOS	.558510638E-01	.229939863	.000000000	1.000000000	376
ANIMALES	.183510638	.387600364	.000000000	1.000000000	376
OTROBIEN	.289893617	.454317351	.000000000	1.000000000	376
AOSREG	21.4164420	13.9766127	.000000000	80.0000000	371
EDAD	41.0906667	14.3637725	2.000000000	89.0000000	375
GUERRILLA	.706199461	.456116809	.000000000	1.000000000	371
PARAS	.790884718	.407223117	.000000000	1.000000000	373
MILITAR	.815508021	.388404496	.000000000	1.000000000	374
NUMORG	.503978780	.835139229	.000000000	5.000000000	377
OTRACTOR	.563002681	.496681019	.000000000	1.000000000	373
AMENPRED	.437125749	.248341350	.264626725E-01	.959325928	334
VIOLDIR	.488372093	.500592909	.000000000	1.000000000	344
VIOLIND	.859042553	.348441311	.000000000	1.000000000	376
GOBIERNO	.703208556	.457455809	.000000000	1.000000000	374
PROPPRED	5.29910027	19.0852983	.000000000	175.0000000	377
BIEN	.462765957	.499276072	.000000000	1.000000000	376
CASAPROP	.720744681	.449231021	.000000000	1.000000000	376
NOSEVPVU	.165311653	.371965948	.000000000	1.000000000	369
SALUDIRR	.530503979	.499731854	.000000000	1.000000000	377
ESCUELA	.878048780	.327673764	.000000000	1.000000000	369
DEUDASAB	.273936170	.446570859	.000000000	1.000000000	376
CONEC	.716180371	.451449497	.000000000	1.000000000	377
ESPAYUDA	.538461538	.499180999	.000000000	1.000000000	377
PROBTRAB	.265415550	.442147316	.000000000	1.000000000	373
RECAYORG	.106100796	.308375842	.000000000	1.000000000	377
ADULTOS	3.27127660	1.88349306	1.000000000	16.0000000	376
HOGAR	5.50000000	2.61380948	1.000000000	20.0000000	376
HOMBRE	.680000000	.467099366	.000000000	1.000000000	375
GRADO	4.69168901	3.85613052	.000000000	16.0000000	373
MSUM	2.78648649	1.45774488	.000000000	6.00000000	370

## 4.1 Determinants of direct threats

The results from the econometric estimation of equation (4) are presented in Table 6.

The results support our hypothesis that households owning greater location-specific assets are more likely to be threatened by violent acts. Specifically, ownership of land and of transport animals were found to have a significant positive effect on the probability of being threatened. As expected, more mobile assets like automobiles and motorbikes did not have a significant impact. The category “Other assets” was also not significant.

**Table 6: Logit regression results for the probability of being directly threatened**

<b>Variable</b>	<b>Estimated Parameter (t-statistic)</b>	<b>Marginal Effect</b>
CONSTANT	0.41444 (0.702)	
PROPIET	0.85645 (2.298)**	0.2084
CARROS	-0.9530 (-1.359)	-0.2319
MOTOS	-0.5123 (-0.882)	-0.1246
ANIMALES	1.0395 (2.784)**	0.2529
OTROBIEN	-0.0472 (-0.165)	-0.01148
AOSREG	-0.0041 (-0.423)	-0.00101
EDAD	-0.0327 (-3.202)**	-0.00795
GUERRILLA	0.6019 (1.779)*	0.1465
PARAS	0.7807 (1.951)*	0.0190
MILITAR	-1.3136 (-3.287)**	-0.3196
NUMORG	0.3158 (1.980)**	0.07683
OTRACTOR	0.6252 (2.002)**	0.1521

\*Significant at the 10% level, \*\*Significant at the 5% level. Dependent variable: AMENAZA.

The hypothesis that households which are more established in the region and play a more important role in the community is partly supported by the results: the more organizations a household is member of, the higher the probability that household members will be the targets of violent threats. However, counter to our expectations, the number of years a household has lived in their region of origin did not have a significant impact on threats. Regarding the age of the household head, the results indicate that younger ones are more likely to be threatened. As discussed earlier, this could be due to the fact that young adults represent the highest potential threat of resistance for the armed groups.

As expected, the presence of guerrilla, paramilitary, or other subversive groups increases the probability of direct threats significantly. By contrast, the presence of military forces in the region decreases the likelihood of threats. This seems to indicate that military presence does deter subversive groups from posing direct threats to specific households in the community to some extent. This effect stands in contrast to some studies by NGOs and other research on violence. It is important to conduct further research to assess whether our result can be generalised or whether it is a particular result of our sample. Moreover, it should be stressed that so far we have only considered the military's impact on direct threats. As we will see below, military presence may very well worsen other security aspects, e.g., by increasing armed conflicts in the region and thereby increasing the danger for the civil population of being caught in the middle of the battle.

### 4.2 Determinants of the displacement decision

The results from the econometric analysis of the displacement decision are presented in Table 7.

The results support the hypothesis that security considerations play a significant role in determining displacement. As expected, a household is more likely to opt for displacement if the probability of becoming the target of direct threats is high or if household members have been victims of violent acts in the past. Knowledge of violent acts in the area surrounding the household (including nearby neighbourhoods and villages) also increased the probability that a household would leave the area of violence. The results regarding the presence of government forces in a region are interesting. While government security forces, like the national police or national security department seem to provide some sense of security and significantly reduce the probability of displacement, the presence of the military had the opposite effect (although only significant at the 22% level). Thus, the results seem to indicate that the military increases security in the sense of reducing the likelihood of direct threats by subversive groups (therefore reducing the probability of displacement), but at the same time leads to more insecurity and displacement directly, e.g., by increasing the occurrence of armed conflict in the region and the danger to the civil population of being caught in the middle of the battle.<sup>20</sup> As we will discuss next, the econometric results also support the hypothesis that security considerations are not the only determinants of the displacement decision.

As expected, the greater the amount of land owned by a household, the lower the probability of displacement. This supports the hypothesis that households consider the potential loss of this important asset in their displacement decision. Of course, as we have seen above, this effect is counteracted by the indirect effect of land ownership increasing the probability of being the target of violent threats, which acts to increase the likelihood of displacement. Ownership of

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<sup>20</sup> Another possible explanation for the positive effect of military presence on the probability of displacement is that military forces also violate human rights whereas the police and other authorities do not.

other assets did not show the expected negative effect on the probability of displacement, although the effect was not significant either. Other aspects of the standard of living do appear to have an impact on the displacement decision. We found that those households with no access to public services (electricity, piped gas and water, and sewage) and those who did not have access to education for their children were more likely to opt for displacement. The effect of access to health services was as expected, but was not significant. Finally, the results indicate that households with debts in the place of origin were significantly less likely to opt for displacement. This may be due to the fact that debts in rural areas are often linked to specific assets and that households would fear abandoning the asset and being left with the debt.

Table 7: Logit regression results for the probability of displacement

Variable	Estimated Parameter (t-statistic)	Marginal Effect
CONSTANTE	-7.4950 (-1.949)*	
AMENPRED	16.2870 (4.957)**	4.0531
VIOLDIR	1.5021 (2.352)**	0.3738
VIOLIND	6.0298 (2.223)**	1.5005
MILITAR	1.5294 (1.221)	0.3806
GOBIERNO	-3.0846 (-2.847)**	-0.7676
PROPPRED	-0.0679 (-2.377)**	-0.0169
BIEN	0.7828 (1.103)	0.1948
CASAPROP	0.7400 (0.946)	0.1842
NOSERVPU	4.1574 (2.076)**	1.0346
SALUDIRR	-0.7634 (-1.206)	-0.1900
ESCUELA	-3.3509 (-2.440)**	-0.8339
DEUDASAB	-2.6131 (-3.161)**	-0.6503
AOSREG	0.0111 (0.478)	0.0028
NUMORG	0.8146 (1.728)*	0.2027
CONEC	-0.2669 (-0.392)	-0.6643
ESPAYUDA	0.0645 (0.105)	0.0160
PROBTRAB	2.3448 (3.016)**	0.5835
RECAYORG	2.1115 (1.939)*	0.5255
ADULTOS	0.2675 (0.848)	0.0666
HOGAR	0.0579 (0.259)	0.0144
HOMBRE	0.4169 (0.663)	0.1037
EDAD	-0.0267 (-0.758)	-0.0066
GRADO	-0.1178 (-1.146)	-0.2931
MSUM	-0.7150 (-2.614)**	-0.1779

\*Significant at the 10% level, \*\*Significant at the 5% level. Dependent variable: DES.

The analysis also supports the hypothesis that expectations regarding the employment opportunities at the receptor location have an impact on the displacement decision. Households which thought that it would be difficult to find employment were significantly less likely to opt for displacement than those who had more optimistic expectations. Other proxies for the expected standard of living in the receptor cities (age, education, and personal contacts) were not significant in the regressions. However, this is not surprising in some cases as the same variables served as proxies for other factors with opposite expected effects. For example, younger household heads are hypothesized to have longer planning horizons and are less attached to the region of origin, which may increase their propensity for displacement. But at the same time, younger household heads may be less adverse to risks, and may therefore be more inclined to stay in the area of violence. Unfortunately, the reduced form estimation does not permit a distinction between these potential effects. Given the insignificant direct effect and the significant indirect effect through the higher probability of threats to younger individuals, we would expect that overall, younger household heads are more likely to choose displacement.

Overall, the results on the variables reflecting access to information appear to support the hypothesis that improved information actually lowers the probability of displacement by reducing overly optimistic expectations regarding the conditions encountered by the displaced in the receptor cities. This result stands in contrast to the migration literature, where improved information is usually associated with a higher propensity to migrate. More specifically, our results indicate that access to public media has a significant negative effect on the probability of displacement. This may be due to the frequent reports in the Colombian media about the precarious situation of the displaced. The other proxies for improved information did not have a statistically significant effect on the displacement decision. However, if we consider that these variables also serve as proxies for other factors there is reason to believe that the effect of improved information on displacement is negative. For example, if the hypothesis that contacts in the receptor cities reduces migration costs is correct, then the negative sign on this variable must reflect some stronger counteracting effect. This could be the effect of improved information explained before. Similarly, we would usually expect higher education levels to raise the expected income in the receptor-city and thereby increase the likelihood of displacement. The opposite effect revealed in our study could support the hypothesis that more educated persons have more realistic expectations regarding the situation of the displaced. Of course, this is only one possible explanation and we cannot say for certain whether it is the correct one. Moreover, it is interesting that the effect of membership in local organizations has an effect opposite to the one expected. Households with members active in local organizations are significantly more likely to opt for displacement. This may be due to the fact that these networks lower the costs of adjustment in the receptor cities.

The results do not support the hypothesis that households with stronger ties to the region of origin (more years lived in the region or membership in more organizations) have a lower propensity for displacement. It seems that this factor only has the indirect effect of leading to a

higher probability of being threatened and thereby increase the probability of displacement. For the membership in organizations, the result may however be explained through the presence of counteracting effects.

As expected, previous support by governmental or non-governmental organizations and more optimistic expectations regarding the support provided to the displaced by the government or other organizations enhance the propensity for displacement. The proxies for household preferences were found insignificant, but again, interpretation is made difficult by the fact that some of these variables also serve as proxies for other factors.

In general, the regression results were reasonably robust to changes in the set of independent variables included. The level of predictive power is also quite high. The estimated relationship for the probability of being threatened correctly predicts 72.5% of the observations, while the displacement regression correctly predicts 93.6% of the observations.

### 5 Conclusions and Policy Implications

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Obviously, any real solution of the displacement problem requires the end of violent conflict in Colombia. However, as long as peace remains unlikely we need to consider other options to alleviate the problem. An improved understanding of the determinants and effects of displacement is an important prerequisite for the definition of appropriate policies of prevention, assistance, and relocation. This paper contributes to such an understanding through the development of a conceptual framework for the empirical analysis of the determinants of displacement decisions at the household level as well as the impacts on the people most affected by this phenomenon – the displaced themselves. The conceptual framework has permitted us to provide a more rigorous assessment of hypotheses on the factors involved in displacement decisions as well as the determinants of becoming a victim of direct threats by armed groups.

Our analysis has confirmed the very important role of violence and perceptions of insecurity in motivating displacement. The presence of government security forces and the national security department (DAS) may help to reduce insecurity in areas of high violence. Our results indicate that the effect of military presence in the areas of violence is ambiguous. On the one hand, military presence may reduce the risk of direct threats by subversive groups. On the other hand, it may increase the danger to the civil population of being caught in the middle of the battle between the military and subversive groups. Given that direct threats are probably the most important trigger of displacement, government protection should also concentrate on those groups who are most at risk of being threatened. The econometric results show that households owning land, members of local organisations, and younger household heads carry a higher risk of being the target of such threats.<sup>21</sup>

The results also support our hypothesis that security considerations are not the only factors underlying the displacement decision. People decide to stay in their areas of origin despite being affected by violence. On the other hand, a significant percentage of the displaced appear to have reflected on their options and on the expected impacts of displacement. Considerations regarding the cost of leaving behind important assets, particularly land for agricultural production, appear to impact displacement decisions. Moreover, households living without access to public services or child education are more likely to opt for displacement as it may in fact improve their living conditions in these respects.

The results also point to the important role of information in displacement decisions. It appears that expectations regarding the conditions in receptor cities are sometimes overly

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<sup>21</sup> It should be stressed that our analysis was focused on lower income households with fairly small landholdings. Large landowners are potentially more able to provide for their own protection.



optimistic. Improved information on the problems encountered after displacement reduces households' propensity to opt for displacement. Therefore, an important policy recommendation is to improve the flow of such information. Of course, policies should not stop there. They should also provide alternatives to the households who feel threatened by the violence. In addition to the security considerations discussed above, one option might be to build up a more decentralized support network close to the areas of expulsion. This could also help reduce the immense pressure on some of the main current receptor cities. A fundamental mechanism within the "attention for the displaced population law" (law 387), is the creation of the National System for Integrated Attention to People Displaced by Violence (SNAIPDV). Within this system, the law promotes "Municipal and Departmental Committees of Attention" as the organisms in charge of the appropriate attention to displaced persons. All of these are steps in the right direction, in practice however, the majority of the displaced do not receive any support from these committees.

Households that opt for displacement for preventive reasons are more likely than those reacting to sudden threats to consider the potential advantages and disadvantages of alternative options, including the choice of receptor location. They may also be able to avoid some of the losses implied in a sudden departure. Moreover, policies of return may be more viable for these households than for those who did not have an opportunity to organize their departure and avoid the traumas of extreme violence. Therefore, improved information predicting future "hotspots" of violence and assessing alternative destinations would be desirable. The Displacement Information System supported by the United Nations, the main objective of which is to alert about possible displacement incidents, monitor the number of displaced persons and work with households in the process of displacement, appears to be a move in the right direction in this regard.

Although our data did not permit an empirical application of the method developed for the estimation of the welfare losses of the displaced, the descriptive analysis does provide some indications of the impacts of displacement on the affected population. Our results indicate that the wide majority of the displaced had lived in the areas of origin for a very substantial amount of time. For many, displacement implies the loss of agricultural land and the associated way of life. At the receptor locations, households - particularly those from rural areas - have to look for types of employment they are not trained for. A very substantial proportion ends up being unemployed, which our results indicated to be a rather long-run phenomenon.

One of the proposed objectives of law 387 within the SNAIPDV is "to create and apply mechanisms that provide legal and juridical assistance to the displaced population in order to guarantee the investigation of events (leading to displacement), the restitution of violated rights and the defence of the goods affected (by displacement)" (Chapter II, Section 1 of Law 387, from 1997). It is important to generate more aggressive policies to establish the actual state of the abandoned land properties, to find out who is using them at the moment and to generate a process of recognition of property rights.

Employment programs and/or financial aid for the start up of small businesses are essential to provide long-term opportunities for the displaced to escape poverty and the everyday struggle to get by. Assessing the over 15 years experience of public and private entities fostering micro-enterprises in Colombia, including their successes and failures, could provide useful information for the design of financial aid programs.

Current assistance programs focus mainly on the provision of the basic necessities at the time of arrival in receptor locations. While these programs are very important, their outreach could be improved. Moreover, additional support measures are needed. In addition to the employment issues already mentioned, specific programs for children and adolescents – who represent a high percentage of the displaced – are needed. Problems of access to education and of the psychological traumas these children have had to endure can otherwise contribute to a continuation of the cycle of violence in Colombia. Psychological aid programs would also be desirable for the adults to avoid the frequently observed phenomena of family violence and criminality among the displaced.

Return or resettlement programs are alternative options to deal with displacement. Our results indicate that the absence of violent conflict and the provision of financial aid and/or assets like land or housing are preconditions for participation by the displaced in such programs. The memories of violence – if not dealt with – may present hurdles to the return of displaced households to their regions of origin. On the other hand, the conditions for participation in resettlement programs indicated by the interviewees are stricter than those for returning. This needs to be considered, given that in some cases, resettlement has been approached as a more attractive option as compared to return.

Finally, several interesting and interrelated topics for future research emerged. First, it would be interesting to further examine the differences between preventive and reactive displacement, the determinants of being in one or the other group, and the dynamics of this process. Second, we could think of modelling the displacement process as a game between violent groups and the local community and examine the conditions that allow communities to resist displacement. This approach may also be useful for the consideration of the long-run endogeneity of households' choice of assets and other factors. Third, the collection of reliable income data in order to apply the method for the estimation of welfare losses from displacement would be an important step towards improving the awareness of the dimension of the impacts on the displaced.

## References

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- Becker, G. (1964): *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, New York and London.
- Becker, G. (1975): *Human Capital*, Columbia University Press, New York..
- CODHES (1996): *Niños Desplazados por Violencia. Rostros Inocentes de una Tragedia Acumulada.*, Bogotá.
- CODHES (1997): *Desplazamiento Rural: Violencia y Pobres*, Bogotá.
- CODHES (1997): “Desplazados: Entre la Violencia y el Miedo” *Boletín no. 6*, Bogotá.
- CODHES (1998): *Desplazamiento Forzado y Políticas Públicas. Entre la Precariedad del Estado y el Asistencialismo*, Bogotá.
- COMISIÓN INTERAMERICANA DE DERECHOS HUMANOS (1999): “Desplazamiento Forzado Interno”. Chapter VI of *Tercer Informe sobre la Situación de los Derechos Humanos en Colombia*. Organization of American States, Washington, DC.
- CONFERENCIA EPISCOPAL DE COLOMBIA (1995): *Desplazados por Violencia en Colombia.*
- CONFERENCIA EPISCOPAL DE COLOMBIA (1999 a): “RUT Informa sobre Desplazamiento Forzado en Colombia” *Boletín Trimestral No.1., Enero-Marzo*.
- CONFERENCIA EPISCOPAL DE COLOMBIA (1999 b): “RUT Informa sobre Desplazamiento Forzado en Colombia” *Boletín Trimestral No.2., Abril-Junio*.
- Deng, F. (1995): “Internally Displaced Persons: Report of the Representative of the Secretary-General” *UN Document: UN/E/CN.4/1995/50* in Refworld CD-Rom.
- Dustmann, C. (1992): *Migration, Savings and Uncertainty*, Department of Economics, European University Institute, Firenze, Italy.
- Erazo, J.A., F.A. Galán, A. M. Ibáñez, and S. Kirchhoff (2000): *Different Reasons and Costs of Displacement: Who is compensating them?*, Final Project Report prepared for the Departamento de Planificación Nacional, Bogotá, Colombia.
- Fischer, P.A. et al. (1997): “Should I Stay Or Should I Go?”, in Hammar, T. ed., *International Migration, Immobility and Development*, Berg, Oxford.
- Lewis, W.A. (1954): “Economic Development with Unlimited Supplies of Labour”, *The Manchester School of Economic and Social Studies*, vol. 22, pp. 139-91.

- Maier, G. (1985): "Cumulative Causation and Selectivity in Labour Market Oriented Migration Caused by Imperfect Information", *Regional Studies*, vol. 19, pp. 231-41.
- Mincer, J. (1974): *Schooling, Experience, and Earnings*, Columbia University Press, New York.
- Oftringer, S. (2000): "Hinter dem Krieg steckt die Ungerechtigkeit", *Food First* Nr. 3/00.
- Ranis, G. and J.C.H. Fei (1961): "A Theory of Economic Development", *American Economic Review*, vol. 51, pp. 533-65.
- Ravenstein, E.G. (1885): "The Laws of Migration", *Journal of the Royal Statistical Society*, vol. 48, no. 2, pp. 167-227.
- Ravenstein, E.G. (1889): "The Laws of Migration", *Journal of the Royal Statistical Society*, vol. 52, no. 2, pp. 241-310.
- Simon, H.A. (1957): *Models of Man*, John Wiley, New York..
- Simon, H.A. (1983): *Reason in Human Affairs*, Basil Blackwell, Oxford.
- Sjaastad, L.A. (1962): "The Costs and Returns of Human Migration", *Journal of Political Economy*, vol. 70, pp. 80-93.
- Stark, O. (1991): *The Migration of Labor*, Basil Blackwell, Cambridge, Mass.
- Stark, O. and Bloom, (1985): "The New Economics of Labor Migration", *American Economic Review*, vol. 75, pp. 173-8.
- Stark, O. and D. Levhari (1982): "On Migration and Risk in LDCs", *Economic Development and Cultural Change*, vol. 31, pp. 191-6.
- Todaro, M.P. (1969): "A Model of Labor Migration and Urban Unemployment in Less Developed Countries", *American Economic Review*, vol. 59, pp. 138-48.
- Todaro, M.P. (1976): *International Migration in Developing Countries: A Review of Theory*, ILO, Geneva.
- Todaro, M.P. (1989): *Economic Development in the Third World*, Longman, New York.
- Todaro, M.P. and L. Maruszko (1987): "Illegal Immigration and US Immigration Reform: A Conceptual Framework", *Population and Development Review*, vol. 13, pp. 101-14.

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