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The Democratic Security Policy: Socioeconomic Effects in the Rural Areas, 2002-2006

Por: Gerson Javier Pérez V

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The Democratic Security Policy: Socioeconomic Effects in the Rural Areas, 2002-2006 [*]

Gerson Javier Pérez V.[♣]

Banco de la República

Abstract

This paper measures the impact of strengthening the security policy on the rural labour market in Colombia by exploiting the structural change in the number of rural seizures. The new policy produced dissimilar effects across gender, age-groups, and types of occupation. For adults, especially for women, there were important reductions in the labour participation, with simultaneous reductions in the income across the most representative types of workers, self-employees and day-laborers. For male youths and children there was an increase in the labor participation through the day-labor activities, while females seemed to participate less as self-employees. In general there was a socioeconomic loss in terms of reductions of adult's labour supply and income, while for youths and children there is a differentiated effect by gender in the labour participation, and no significant connections were found with school enrollment.

Keywords: Labour supply; crime; regional economics

JEL-Classification: J21, K15, R23

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[♣] Economist at Centro de Estudios Económicos Regionales (CEER) – Banco de la República. The opinions expressed here are those of the authors and not necessarily of the Banco de la República, the Colombian Central Bank, nor of its Board of Directors. Any remaining errors are my own.

I. Introduction

Historically, it has been shown that there is not a single country or society without the threat of corruption and organized crime. However, all countries differ with each other on the way they try to tackle the problem and their ability to overcome it. Criminal organizations have had the ability to permeate and deteriorate the normal functioning of governments, sometimes to the point of challenging and even worse of overlapping with governmental authorities and institutions. Once this happens in countries where the state is weak, organized criminals find the perfect opportunity to get involved in a very lucrative business.[1]

Although organized criminal activities have had a long history, it is only recently that it has drawn the attention of the general society. Formal analyses on this subject have been developed since the late 1960s, when pioneering research by Gary Becker opened the spectrum of possibilities to explain the rationality behind crime and its deterrence. Becker (1968), in particular, used a cost-benefit approach to analyze the optimal amount of actions minimizing social loss. In the same line of research, Isaac Ehrlich has also contributed extensively in the economics of crime (Ehrlich, 1973, 1977, 1981). More recent studies have shown evidence of the controversial relationship between the increase in police force and crime reduction (Machin and Marie, 2005, and Draca, Machin, and Witt, 2011).

This paper analyzes the case of Colombia, in particular the socioeconomic impact of fighting criminal organizations in the rural areas. Using a quasi-experiment design I intend to measure the effects of the first version of the Democratic Security Policy (2002-2006) on the labour market by exploiting the structural change in the number of rural seizures. In particular, I exploit a sharp change in the legislative system, concerning the procedures to make it easier to trace and take over properties and proceeds from organized criminals. Accordingly, I see the increase in coca production in the early 1990s as initiating an exogenous change causing the highest levels of violence in Colombia and the

[1] There have been many attempts to approximate concise definitions of what organized crime is. According to the United Nations an organized criminal group can be roughly defined as "…a structured group of three or more persons, existing from a period of time and acting in concert with the aim of committing one or more serious crimes or offences […] in order to obtain, directly or indirectly, a financial or other material benefit" (United Nations, 2004a, pag.5). Clearly the aim of every criminal organization is to illegally achieve large economic profits and power in the shortest possible time.

corresponding necessity of changes in the security strategies.[2] Under this framework I argue the conditional independence assumption which, in this case, means that the decision of choosing the treatment regions does not depend on the labour market and education outcomes, after controlling for the variation induced by differences in individual level covariates. As I shall mention later, within the wide set of seizures, rural real estate has special characteristics. These properties are located in particular areas of the countryside which are likely to be used in productive activities and for the generation of employment.

The new security policy, carried out by the President Alvaro Uribe since August 2002, broke the increasing and alarming violence trend in Colombia (Pérez 2012, and Cortés *et al*. 2011). Since the late 1970s, with the strengthening of guerrillas and drug trafficking activities and the emergence of paramilitaries (the 'right-wing' self-defence groups), Colombia suffered one of the bloodiest spells in its history. Reaching the first position in the annual rate of homicides during several years (according to the United Nations Office on Drugs and Crime (UNODC)), and with a staggering number of kidnappings, Colombia had been considered one of the most violent countries in the world. Rabasa and Chalk (2001) mention for Colombia that "… it is estimated that drug-related violence currently [in 2001] accounts for a high proportion of the country's 30,000 annual murders …" (Rabasa and Chalk, 2001, pg.17).

Legislative changes and a strong security policy, as part of the Democratic Security Policy (DSP), drastically weakened organized crime in Colombia. President Uribe's government fought since then, not only militarily but also financially, the criminal structure of the illegal armed groups. Just few days after taking office as President, Alvaro Uribe proclaimed the so called *Internal Commotion Status* in order to be legally empowered to implement special security measures to reduce the high levels of violence in the country.

At this stage it is important to refer to the mechanisms through which the policy is expected to affect labour market and education outcomes. As mentioned by Pérez (2012) the DSP strengthens the legal instruments to increase the number of seizures, giving rise to the

[2] There was a significant reduction in the coca leaf production in the other two main producers, Peru and Bolivia, which made coca crops to move up and settle in southern Colombia. Details of these changes will be given in the following sections.

reduction of crime throughout two main channels. On the one hand, the reduction of the economic and therefore military and corruptive power of criminals and, on the other, by means of the deterrent effect with which criminals faced either reductions in the profits or the increase in the costs of carrying out their illegal activities.

For the particular case of rural seizures, there are at least two possible channels depending on whether the effect is expected to take place in the short or the long term. In the second case, a better quality of life implied by a safer place to live and work, and the restitution of stolen and abandoned land, will translate into the return of displaced farmers to the rural areas where they will find more and better job opportunities for them and more education for their children. In the short run though, the situation is more complex since seizures might translate into temporal loss of jobs for those farmers whom, because of the conflict, where forced to work in illegal activities such as coca cultivation and found a higher income than within legal jobs, case in which we might expect reductions in labour participation and wages. Given that the post-policy period in this analysis covers only the first version of the DSP (2002-2006) we expect the described short run effects.

The main question considered in this paper is whether or not the DSP (through the increase in the number of rural seizures) affected the socioeconomic conditions of the rural population in whichever of the ways described before, as well as whether or not such effects remained across gender, age and employment status. Recently, Angrist and Kugler (2008) showed evidence of the effects of changes in coca cultivation on the labour market and violence in the rural areas of Colombia during the 1990s. Although these results seemed to be modest, they found a positive relationship between the increase in coca cultivation and both labour supply and violence. In my research particular characteristics of the rural real estate, together with the sharp changes in security and legislation, support the argument of potential effects on rural socioeconomic indicators.

The results found in this paper are consistent with Angrist and Kugler (2008), in the sense that drug related activities in the rural areas has been source of employment and income by farmers who have found more profitable coca cultivation than other legal farming activities. Once criminal organizations are weakened, in particular those related to the drug production, the labour market within this industry suffers accordingly.

This chapter is organized as follows. Section II discusses the nature of the policy, paying particular attention to the legislative features regarding illegally acquired goods. Section III describes the data and the strategy used to classify the regions providing some descriptive statistics. Section IV discusses the empirical approach used to compute the impact of the DSP on crime rates. Section V presents the results and section VI concludes.

II. Democratic Security Policy

The DSP was a national policy introduced and implemented by President Álvaro Uribe since August 2002 in Colombia as part of his new four years presidential term. The new President had already spoken, during his political campaign, about his plans of intensifying the prosecution of drug cartels, guerrillas, paramilitaries and every other criminal organization. In particular the new National Development Plan, titled *Towards a Communal State*, included in its first chapter all the issues related to what is called the "Democratic Security Policy" (Government of Colombia, 2003). This chapter included the main targets of the presidential four-year term regarding fighting organized crime, human rights and the social and economic amending for victims and vulnerable population (Appendix A shows a detailed legislative background on measures adopted by the government since the country joined the Convention on Narcotic Drugs in 1961).

Only four days after his new presidential term, starting the 7th of August, the new President proclaimed the Internal Commotion Status, which automatically empowered him, as head of the executive power, to take special measures regarding security and socio-economic issues. According to the article 213 of the Colombian National Constitution, the Internal Commotion is an emergency situation which can be declared by the President (with the approval of the whole cabinet of Ministers) in the following cases: "… serious perturbations of law and order threatening institutional stability, the security of the State, or the civic coexistence, which cannot be invoked by means of the ordinary Police functions..." [*in Spanish*], (Government of Colombia, 1991).[3] By law, the duration of the

[3] The Interior Commotion Status was regulated by means of the Law 137 of 1994.

commotion status is ninety days, with the possibility of two additional equally-lasting terms.[4]

The reasons given by the government for proclaiming the commotion status were the following: serious and increasing terrorist attacks (especially from FARC) against the national infrastructure (electricity, water and roads), drug trafficking, extortion, forced displacement, massacres, and kidnappings. As a result of this status, the president was entitled to proclaim new decrees and other actions in order to solve the serious law and order perturbations. Some of the most significant measures adopted by the new government in August 2002 are related to the national security: temporary taxation over the net worth with destination to the security sector, budget increases in investment and national defence, the creation of rehabilitation areas adopting special measures in order to guarantee the safety of the civil population, the strength of the legal actions for fighting smuggling, and modifying the existing *Extinción del Dominio Law* (EDL).

The main changes carried out by the new government involved new legislations and modifications to some others in order to make them applicable for fighting criminal organizations and reducing the levels of violence and crime in the country. Essentially, what made the difference in getting positive results, relative to previous governments' attempts, was not only fighting criminal groups militarily but more importantly financially. The new government focused its efforts in tracing and seizing goods and proceeds coming from organized criminals.

Within the main actions carried out as part of the DSP was the improvement of the legislation affecting illegally acquired goods and proceeds (Law 333 of 1996)[5]. Under this new policy the government was seeking the financial and military weakening of criminal groups, and simultaneously the corresponding increase of the government's economic sources. These resources would then be used to increase the police and army forces, and to improve the antiterrorist legislation and reward's system for the apprehension of criminals. In the past, this legislation had modest effects in tracing and seizing financial sources derived from criminal activities, reason for which the new government by means of Decree

[4] For the case of a second extension, it requires the previous approval of The Senate.
[5] Congress of Colombia (1996).

1975 of 2002,[6] made some changes over the existing EDL. This legislation has become the cornerstone in fighting criminal organizations.[7]

The following were the main changes affecting the seizures. First, the centralization of the EDL processes in the National Attorney's Office contributed to speeding up the confiscation actions. Second, people under investigation for the possible possession of illegally acquired properties, are no longer allowed to use third party representatives during the legal proceedings, at least at the beginning of the process. The implication of this measure is that, by law, the owners of these properties, most of them prosecuted by the justice, would have to go in person before the authorities with the possibility of being captured. According to the legislation, if the owner does not attend within the three months the government is enabled to declare null the ownership over those properties.

Finally, a third factor was the removal of the penal nature for illegally acquired properties. The argument is that previous legislation (Law 333 of 1996) established that only properties under penal processes would be prone to the application of the EDL, which had been delaying the seizures. Now, under the new legislation, the process is autonomous over the goods and proceeds and does not have to be tied to long lasting penal crimes. All these measures ended up in 2003 with a steep increase in the number of properties under control of the Anti-Drugs Office.

According to the current legislation, once the legal process is opened the Anti-Drugs Office is in charge of the goods and proceeds related to the illegal activities. When the legal process is finished there are two possible actions for the properties: 1. being returned to the owner with the proceeds if any, or 2. the ownership of the properties is declared null, in which case the new permanent owner is the government. It is important to mention that all these regulations, despite being concentrated at the beginning on the illegal drugs-related crimes and properties, the new *extinción del dominio* legislation comprises all types of organized crime proceeds, and not only those related to drug-trafficking.

[6] Government of Colombia (2002).
[7] As recognized by Ehrlich, "a major "efficiency parameter" which affects the production of police and court activity […] is the *legal environment*…" (Ehrlich, 1987, p. 100).

III. Data and Classification of Regions

1. Data

Properties and proceeds from illegal criminal activities come from the Dirección Nacional de Estupefacientes (DNE, the Colombian Anti-drugs Office). This database includes the properties seized from criminals and under control of the DNE's Division of Assets. This division has collected, organized, and managed information for each asset and proceeds since its creation. This database includes detailed information for urban and rural properties since the early 1980s. In particular, for most of the real estate it is possible to determine the geographical location (department, municipality and address), as well as the temporary or permanent custodian whom the property was given to.

Although there is a wide range of different types of properties, I only use rural seizures since I analyse the effects on the socioeconomic outcomes of rural population. Unfortunately, information on the area of the land is found only for a small fraction of the properties. Nevertheless, the date of each property's entry on the inventory is available for virtually the whole set of assets. The total inventory of the rural real estate includes about 4,750 properties within 31 departments and the capital city. For the purpose of the study a total of 1,845 rural properties will be considered, corresponding to those included in the DNE's inventory between 2001 and 2006 for the 23 departments for which the household surveys are available.

For labour market variables I use the rural module of the Continuous Household Surveys (CHS) of the National Statistics Department (DANE). The CHS is a monthly-repeated cross sections database, a series of independent sampling surveys where different individuals belonging to different households are interviewed each time.

For geographical and administrative purposes Colombia is divided into 5 regions, and these in turn into 32 departments plus the capital city. The following are the regions and their corresponding departments: 1. *Caribbean* (Atlántico, Bolívar, Cesar, Córdoba, La Guajira, Magdalena, and Sucre); 2. *Pacific* (Chocó, Cauca, Nariño, and Valle); 3. *Central* (Antioquia, Caldas, Caquetá, Huila, Tolima, Quindío, and Risaralda); 4. *Eastern* (Cundinamarca, Boyacá, Norte de Santander, Meta, and Santander); 5. *New Departments*

(Amazonas, Arauca, Casanare, Guainia, Guaviare, Putumayo, San Andrés y Providencia, Vaupes, and Vichada); and finally Bogotá D.C., the capital city.

The coverage of the CHS includes 23 departments (out of the 32), all belonging to the first four regions and the capital city. The remaining departments correspond to those in the New Departments' region which has a participation of just 4% of the national population. According to DANE, the CHS is representative according to the following criteria: 1. Monthly: at national level, and for the aggregation of the 13 main metropolitan areas; 2. Quarterly: at national level, for both urban and rural areas, and for each of the 13 main metropolitan areas; 3. Semi-annually: at regional level, and for each of the 13 metropolitan areas; and 4. Annually: at department level.

According to DANE the sampling methodology of the CHS has the following characteristics: 1. probabilistic (the selection of sample units is defined a priori); 2. stratified (sectors in every city are previously classified into 6 socioeconomic strata, homogeneous within them but heterogeneous between them); 3. multi-stage (carried out according to three main stages: sections, blocks, and segments); 4. by conglomerates (compact segments with an average of 10 houses are chosen, where every house, household and individual is included). The universe in the CHS is made up with civil no-institutional population living in private accommodations. The average number of households per year increased from about 9,000 before 2004 to over 16,000 thereafter, which means an average of about 40,000 and 70,000 individuals, respectively. DANE is also the primary source of population data and the gross domestic product (GDP) per-capita by department.[8]

The period covered for the analysis is from April 2001 to June 2006. The reason is that during this period of time the CHS remained unchanged along the main identification and labour market variables. Furthermore, this time span satisfies the needs of the analysis since the policy object of this study took place late in 2002, leaving almost two pre-policy years and almost four post-policy years.

[8] For the GDP per-capita by department I joined two series constructed differently since there was a change in methodology in 2000. In particular, I assumed a time-depending gap, in such a way that the gap disappeared when the old methodology started in 1990.

2. Classification of Regions and Descriptive Statistics

Even though my research is based on a national policy, I exploit the disproportionate effects of the new security policy across the different regions of the country.[9] In particular, I will analyze how this policy implemented in 2002, through a sharp increase in the number of seizures, might have caused unbalanced effects in the labour market and education across the different regions. The main reasons for this argument, based on the fact that I will focus my attention on the rural properties, are the following: first, is that the war against criminal organizations in Colombia was mainly carried out in the rural areas, at least within the first version of the security policy, since the main perpetrators (guerrillas, paramilitaries and drug-dealers) use the isolation, the difficult access due to lack of road infrastructure, and the limited presence of the authorities in the countryside, as a perfect hub for planning and carrying out illegal activities.

Second is that opposite to other types of seizures, such as vehicles and urban properties, rural real estate is more prone to jobs creation or destruction. Nevertheless, the analysis can be affected due to the high levels of corruption discovered recently in the DNE, in the way that some properties were given in custody to the criminals' relatives, friends, and figureheads. This might create potential endogeneity problems since confiscations figures are likely to be more affected in areas where criminals have more control. Nevertheless, I believe that the seizures data is still valid since, despite the corruption, the legislative changes implemented did work, relative to previous governments' attempts, by increasing the number of confiscations in about 600% percent between 2001 and 2006. Moreover, previous studies (Pérez, 2011) revealed that, despite the potential corruption within the DNE, there is clear evidence on how successful was the policy regarding the financial fight against criminal organizations.[10]

The classification of regions is based on percentage changes in the number of rural seizures between 2001 and 2006. The best natural way to classify the regions would be through

[9] This approach has been considered by Card (1992), and Angrist and Kugler (2008) in their empirical studies. Card, exploits the fact that a national change in the minimum wage gave rise to disproportionate changes across the regions in the USA. On the other hand, Angrist and Kugler analyzed drug production in Colombia by exploiting unequal regional effects caused by a general change in coca cultivation.

[10] In this regard, Angrsit and Kugler (2008) have shown, for example, positive relationships between coca cultivation and the labour participation in Colombia's rural areas.

relative changes between the area of the seizures and the total area of the regions. Nevertheless, since just a small number of rural seizures have information about the area, it is not possible to use such a strategy. One might think that another option would be using relative changes using population information, under the assumption that the more populated areas are also the ones with the highest number of confiscations. Nevertheless, this is not necessarily true for the particular rural properties, compared with urban properties, and for the specific characteristics of the conflict in Colombia. The reason is that rural properties are used by criminals for different purposes, some of which are: recreation, agricultural production, and coca cultivation amongst others, which does not let us use either population or the total area of the regions as a reference given the variety of activities and types of location where the properties are situated.

Under this strategy I classify the treatment and control groups of departments according to whether or not they had a high percentage increase in the number of rural seizures. In order to decide the threshold dividing the two groups (high versus low increase), I use the spatial distribution of the number of rural confiscations. Appendix B shows the distribution according to the different levels of increase in the rural seizures.[11] The first group is made up of those departments for which the number of rural seizures did not change, or even decreased, between 2001-2006. Five out of the eight departments belong to Caribbean region (La Guajira, Cesar, Bolivar, Sucre y Córdoba), plus one in the Pacific region (Chocó), and two of the Central region (Quindío and Risaralda).

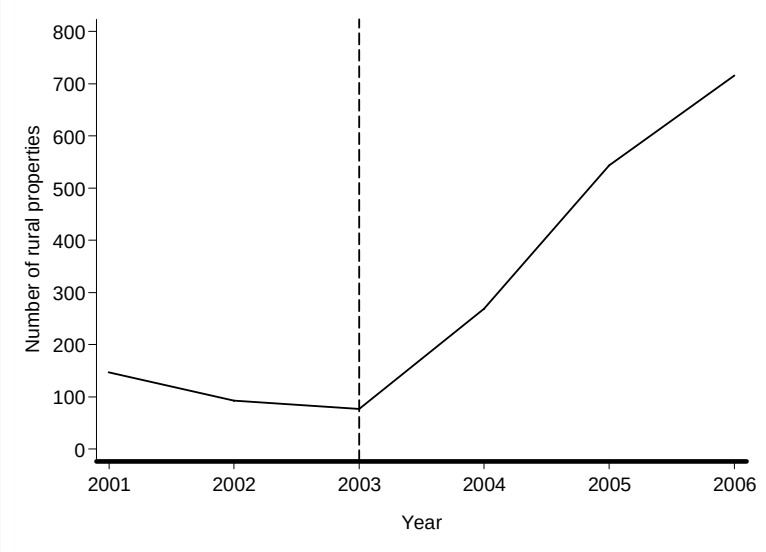
The next group in the classification (low-increase) is the one with increases between 1% and 3.900% during the same period of time. Within this group we find four departments from the Central region (Antioquia, Caldas, Tolima and Huila), one from the Pacific region (Valle), and the last one from the Eastern region (Meta). The next group, which is the base for the threshold between the treatment and control groups, refers to those departments with increases up to 13.900% in the number of seizures (high increase). Two of them belong to the Caribbean region (Atlántico and Magdalena), four from the Eastern region (Norte de

[11] There is a particular group of departments not considered in the analysis, those located in the eastern part of the country, since they are not included in the household surveys given the very low population density in this area. It is important to mention that this may be problematic for the analysis, and the results have to be carefully interpreted, since these regions, even though representing around five percent of the population, are large tracts of land attractive to coca growers and prone to multiple jobs creation.

Santander, Santander, Boyacá and Cundinamarca), two from the Pacific region (Cauca and Nariño), and one from the Central region (Caquetá). Under this strategy a total of 9 and 14 departments belong to the treatment and control groups, respectively.

In terms of the seizures, Figure 1 shows the dynamics of the total number of rural properties seized from criminal organizations. As can be seen, the number of seizures before the incoming government in August 2002 showed not only a modest performance, just 100 properties seized in average, but also a constant decline.[12] There are two possible reasons for this, one is the lack of decision in enforcing the existing legislation, and the other is the weakness and legal vulnerability of the legal system. The other part of the story is related to the start of the new security policy late in 2002. Government's determination in enforcing the legislation, and its decision to strengthen and to improve the system, made possible a staggeringly sharp increase in the number of rural seizures, reaching more than 700 in 2006. In terms of the regional distribution, seizures are concentrated in the wealthiest departments, Antioquia (8%), Cundinamarca (20%), and Valle (34%).

Figure 1. Total Number of Rural Seizures, 2001-2006



Source: Author's calculations based on the DNE.

[12] A similar trend is present in the rest of goods and proceeds coming from the illegal activities, such as urban properties, cash, fire arms, vehicles, and a wide range of other assets.

In terms of labour force and the basic socioeconomic characteristics, Table 1 provides a pre and post-policy comparison along different indicators.[13] Columns (1) through (4) provide details for adults aged between 21 and 59; columns (5) through (8) show the attributes for children aged between 6 and 15;[14] and the last four columns of the table show information for boys and girls aged between 16 and 20 years old.

Table 1. Pre and Post-Policy Labour Market Characteristics

Variable	Adults				Children				Youth			
	Men		Women		Boys		Girls		Boys		Girls	
	2001 (1)	2006 (2)	2001 (3)	2006 (4)	2001 (5)	2006 (6)	2001 (7)	2006 (8)	2001 (9)	2006 (10)	2001 (11)	2006 (12)
Employed	0.926	0.931	0.410	0.395	0.318	0.200	0.107	0.071	0.712	0.615	0.238	0.220
Monthly monetary wages	218,136 (305,370)	286,304 (306,686)	63,040 (191,202)	78,918 (236,953)					85,651 (176,284)	98,424 (143,739)	20,283 (70,124)	21,440 (70,599)
Monthly total (monetary+in-kind) wages	244,888 (319,891)	312,095 (314,175)	72,062 (203,028)	88,410 (247,649)					105,832 (195,460)	116,195 (164,825)	29,378 (95,191)	30,347 (95,618)
Self-employee only	155,743 (257,301)	249,638 (283,701)	98,070 (154,356)	155,752 (222,826)					100,688 (193,679)	157,936 (139,270)	72,947 (122,170)	89,724 (99,306)
Enrolled	0.074	0.119	0.113	0.104	0.783	0.896	0.820	0.913	0.283	0.362	0.267	0.318
Level of education (none=1, pre-school=2, primary=3, secondary=4, higuer=5)	2.948 (0.97)	3.059 (0.94)	3.042 (0.93)	3.121 (0.94)	2.997 (0.74)	3.210 (0.61)	3.066 (0.71)	3.242 (0.60)	3.419 (0.77)	3.515 (0.78)	3.493 (0.73)	3.670 (0.65)
Age	36.94 (10.71)	37.72 (10.79)	36.87 (10.61)	37.30 (10.66)	10.42 (2.83)	10.50 (2.83)	10.39 (2.84)	10.35 (2.82)	17.91 (1.42)	17.70 (1.40)	17.93 (1.45)	17.89 (1.41)
HH Size	5.68 (2.93)	4.92 (2.39)	5.81 (2.94)	5.12 (2.37)	6.84 (3.00)	6.05 (2.36)	6.81 (2.99)	6.03 (2.25)	6.68 (3.25)	5.96 (2.53)	6.41 (3.11)	5.73 (2.58)
Single	0.277	0.259	0.132	0.141	1.000	0.999	0.9863	0.991	0.929	0.938	0.675	0.684
Max N	11,429	7,944	10,278	11,197	6,585	6,815	6,004	6,007	2,735	2,479	1,567	1,544

Source: Author's calculations based on the CHS 2001-2006.

For adults, men participate in the labour market in a proportion of 93%, while women do so in about 40% for both 2001 and 2006. On average, total and monetary wages for men increased by about 28% between 2001 and 2006, and about 24% for women.[15] Wages of self-employed individuals on the other hand, increased by about 60% for both men and women in the same period of time.[16] Appendix C shows the time series graphs for employment rates and wages evolution across the different groups of age as an alternative perspective.

[13] Calculations were made using information from 2001 through 2006, but for convenience only those for 2001 and 2006 are shown.
[14] Since labour market variables are only available for those individuals aged more than 10 years old, only children over 10 will be included for describing work-force characteristics.
[15] Monetary and total wages were computed in real Colombian pesos (Dec-2008=100) using the Consumer Price Index.
[16] Self-employees represent nearly 50% of the work force in the rural areas.

Children and youths, on the other hand, show a decrease in labour participation between 2001 and 2006, with an average decrease of about 35% for children, and 10% for youths. Regarding schooling, there was a generalized increase for both children and youths in their participation in the education system. For example, children's participation increased from 0.783 to 0.896 and from 0.820 to 0.913 for boys and girls, respectively. Even though for youths the increase in school enrollment was slightly smaller, it was also significant, from 0.283 to 0.362 for boys, and from 0.267 to 0.318 for girls. Regarding educational attainments there seems to be a similar pattern.

By type of region, Appendix D shows a more detailed set of academic achievements. Columns (1) and (2) show that there does not seem to be any difference between control and treatment groups regarding school enrollment for those aged between 5 and 17, apart from the evident, and not surprising, results for the comparison between urban and rural populations. A similar situation can be seen from the educational attainments (columns 3 through 12), where apart from minor differences between treatment and control groups across urban and rural areas, the circumstances are roughly the same.

IV. Methodological Approach

The methodological strategy in this paper takes advantage of the following particular characteristics: 1. the repeated cross-section household surveys over the period 2001-2006. In this regard, it is important to keep in mind that since cross-section data do not follow up people from year to year, outcomes cannot actually be considered changes in labour participation, wages, and school enrollment across the same individuals; 2. the individual and regional level of disaggregation; and 3. the regional differences in the number and growth of rural seizures coming from the new security policy.

Therefore, the empirical framework focuses on the interaction between growing-departments and post-security-policy. These characteristics allows for the following specification:

$$Y_{idt} = \gamma_d + \lambda_t + \delta D_{dst} + X_i'\mu + \varepsilon_{idt}, \qquad (1)$$

where γ_d is the department effect; λ_t is the time effect; D_{dst} indicates the growing departments when $t = s$, where s indicates the post-security-policy period (2003-2006); and X_i includes a set of individual characteristics such as gender, age, marital status, education, and household size. The parameter of interest is δ which represents the region/time interaction term (or diff-in-diff estimator). It is also assumed that $E(\varepsilon_{idt} \mid d,t) = 0$. The dependent variable in this model will be continuous or binary, depending on whether the log of real wages or an indicator variable of labour participation is utilized. Given that wages are conditional on employment, Heckman selection models are estimated, using the number of children less than five years old as the exclusion variable for the probability of selection. For binary dependent variables a logit version of equation (1) will be used. For both the continuous and binary dependent variables, the standard errors will be calculated clustered by department, allowing for correlation across individuals within a department and within departments over time.[17]

Under this estimation approach there are two main assumptions. The first is related to the independence between the labour market and education outcomes (Y_{idt}) and the new security policy (D_{dst}). This is known in the literature as the *conditional independence* assumption. It means that the choice of the treatment group does not depend on the outcome variables, after controlling for the variation induced by differences in the set of covariates.[18]

The second assumption is that $E[Y_{0idt} \mid d,t] = \gamma_d + \lambda_t$, where Y_{0idt} represents the non-treatment state of the dependent variable. This assumption indicates that, without a change in the security policy in Colombia, the employment conditions in the rural population follows the joint trends of the time-invariant department effect and the year effect common across departments. In this case γ_d plays the same role of the unobserved individual effect

[17] Additionally, the models will include type-of-department-specific time trends in order to allow treatment and control departments to follow different trends. As mentioned by Angrist and Kugler (2008), this additional identification strategy will also work as a control for serial correlation and omitted variables problems. In this case γ_d in (1) should be replaced by $\gamma_{0d} + \gamma_{1d} t$.

[18] More formally it can be written as $y_0, y_1 \perp D \mid x$, where y_0 and y_1 correspond to the outcome variables for the control and the treatment group, respectively, and D is the treatment variable.

in a panel data setting (Angrist and Pischke, 2009). Based on these facts the causal effect can be derived as follows:

$$E[Y_{idt} \mid d = no-growing, t = post-treatment] - E[Y_{idt} \mid d = no-growing, t = pre-treatment]$$

$$= \left(\gamma_d + \lambda_{post-treatment}\right) - \left(\gamma_d + \lambda_{pre-treatment}\right)$$

$$= \lambda_{post-treatment} - \lambda_{pre-treatment} \qquad (2)$$

$$E[Y_{idt} \mid d = growing, t = post-treatment] - E[Y_{idt} \mid d = growing, t = pre-treatment]$$

$$= \left(\gamma_d + \lambda_{post-treatment} + \delta\right) - \left(\gamma_d + \lambda_{pre-treatment}\right)$$

$$= \lambda_{post-treatment} - \lambda_{pre-treatment} + \delta\,. \qquad (3)$$

Using results from (2) and (3) we obtain the population causal effect of interest:

$$\{E[Y_{idt} \mid d = growing, t = post-treatment] - E[Y_{idt} \mid d = growing, t = pre-treatment]\} -$$

$$\{E[Y_{idt} \mid d = no-growing, t = post-treatment] - E[Y_{idt} \mid d = no-growing, t = pre-treatment]\}$$

$$= \delta$$

For this particular case, this parameter represents the diff-in-diff estimates and can be interpreted as the causal effects of the new security policy on the socioeconomic conditions in the Colombian rural areas.

A potential drawback of having only two years of pre-policy data, given that the methodology of the household surveys changed early in 2001, is double. On the one hand, it is important for the diff-in-diff approach to assure similar pre-policy trends of the outcome variables across the different groups of departments. And on the other hand, it is important to see if no other policy or program affected the same group of outcomes before the DSP, which if so might call into question whether or not the estimates are capturing the effect from the DSP. In order to reduce concerns in these regards, Appendix E shows the pre-DSP (1984-2000) trends of the main outcomes across different groups of the

population. These graphs were built with data coming from the household surveys' previous methodology. Although this is just a general view, all variables have quite steady trends and patterns along the seventeen years, which leads me to be confident with the assumption of similar pre-DSP trends necessary to use diff-in-diff.

V. Main Results

This section presents the most relevant findings of the effects of fighting organized crime on the labour market and education outcomes. For this purpose the population has been divided into three groups of age: adults, children, and youths. Additionally, for each one the analysis distinguishes between the main sectors of economic activity in the rural areas. For adults I consider the private sector, the government, the day-labour workers, and the self-employees; for youths: relatives without payment, private sector, day-labour and self-employees; and for children I consider: relatives without payment, day-labourers and self-employees.[19] Furthermore, the effects on both monetary and total wages were computed, but since the effects were very similar only the effects on monetary wages will be reported.[20]

An additional issue regarding the estimation strategy has to do with the potential methodological problems. The main relevant concerns, given the estimation strategy and the database attributes, could be heteroskedasticity, serial correlation, omitted variables or other type of misspecification, and selection bias. Cluster-robust standard errors of the estimates were computed in order to allow for correlation across the individuals within each department and within departments over time. The second measure was to include type-of-department-specific time trends in order to control for possible omitted variable bias and serial correlation.[21] As mentioned in the previous section, this action also allows both treatment and control departments to follow different trends.

Potential confounding factors are also of major relevance in this analysis. The first natural concern is the fact that identification of the treatment group of departments could be

[19] Appendix F shows in detail the definitions on the types of job.
[20] For this purpose total wages involve the sum of monetary and in-kind type of earnings.
[21] Serial correlation in this context refers to a possible relationship between departments, rather than individuals, across time. The reason is the repeated cross-section type of household surveys.

potentially compromised. The reason is that the change to a government that has promised to be tough on crime may in itself have changed people's behavior that could have changed the figures without any other intervention.

In order to assess this possibility I checked if the regions with the highest seizures (treatment group) are the same where the candidate Alvaro Uribe won the presidential elections. In a preliminary exploration I found that only six out of 23 departments coincide. Additionally, I computed the correlation between the percentage increase in the number of seizures and the percentage of valid votes obtained by the candidate during the presidential elections and I found that the correlation is just 0,053. Even further I explored the possibility of any spatial correlation between the two variables and I found no significant spatial correlation between them, with a Moran's I statistic of 0,1301 and 0,112 as the corresponding *p-value*.[22]

The second complication could be any pre-existing agricultural and development program carried out in the treatment departments, making the real effects from the new security policy unclear. Nevertheless, in the country there does not seem to be any differential public policy for the particular case of the growing regions (treatment group) apart, of course, from the obvious investment gap according to the particular degree of development and regional policies of each department.

A third possible complication comes from migration. In developing countries there are several causes apart from the obvious migration for economic reasons, such as violence, health, education opportunities, or the usual urbanization process when people migrate from rural to urban areas. Setting apart the effects of migration is far from obvious. The implications of a new security policy on the decision to stay, to leave, or to return to the countryside are not straightforward. Expectations of the new policy could lead to different decisions for those currently living in the rural areas. First, some people could decide to

[22] The Moran's I bivariate version can be computed between two variables x_k and x_l as follows: $I_{kl}\frac{[x_k-\bar{x}_k]W[x_l-\bar{x}_l]}{n}$, where W corresponds to the first order "queen-contiguity" weight matrix, which defines the neighbor set for every observation and has zeros on the diagonal as convention. In this context Moran's I asses to what extent the percentage of votes won in a particular region is correlated with the weighted average (computed over the neighboring locations) of the increase in seizures.

leave, based on the assumption of an increase in the number of confrontations between the governmental forces and the organized crime. Second, some others would feel more confident and would decide to stay, waiting for a successful outcome. Similar reasoning can be made for those already outside the rural areas, who will have to decide whether to return to the countryside or to stay in the urban or unaffected areas. All these factors, together with the lack of information about migration for the complete set of household surveys make the policy's effects unpredictable.[23]

1. Labour Market

1.1 Adults

This group of the population participates with about 80% of the work force in the rural areas and, within the total of adults, women represent 30%. Additionally, the distribution across the different types of occupations indicates that for both men and women, self-employment is the main activity with a participation of about 50%. Nevertheless, the second main activity differs for men and women since the second most popular occupation for men is the day-labour, with a participation of 25%, and for women it is the private sector, with about 11%.

Table 2 reports the causal effects of the new security policy on the adult labour market outcomes. Four types of jobs have been considered: private sector (columns 1 and 2), government (columns 3 and 4), day-labour workers (columns 5 and 6), and self-employees (columns 7 and 8). Additionally, two outcomes are reported, the first column for each work-force group shows the marginal effects from a logit version of equation (1). The dependent variable in this case is a labour participation dummy variable for the corresponding work-force group. The next column for each group reports the effects on the log monetary wages.

[23] From 2001 household surveys include a special migration module which, however, is only available for the months corresponding to the first quarter of each year. Additionally, Angrist and Kugler (2008) recently analysed the causal effects on the Colombian rural labour market outcomes and they found no clear contributions of considering controls on migration.

Table 2. Labour Market Outcomes - Adults

A. Men

	Private Sector		Government		Day-Labor Workers		Self-Employees	
	Status (Binary Indicator) (1)	Wage Income (logs) (2)	Status (Binary Indicator) (3)	Wage Income (logs) (4)	Status (Binary Indicator) (5)	Wage Income (logs) (6)	Status (Binary Indicator) (7)	Wage Income (logs) (8)
Interaction term	0.039***	0.040	-0.000	-0.015	-0.018	-0.113	-0.020	-0.110**
	(0.014)	(0.080)	(0.002)	(0.138)	(0.034)	(0.078)	(0.030)	(0.046)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Departments	23	23	23	23	23	23	23	23
Sample Size	64,555	63,643	64,555	64,394	64,555	63,688	64,555	57,883

* p<0.10, ** p<0.05, *** p<0.01

B. Women

	Private Sector		Government		Day-Labor Workers		Self-Employees	
	Status (Binary Indicator) (1)	Wage Income (logs) (2)	Status (Binary Indicator) (3)	Wage Income (logs) (4)	Status (Binary Indicator) (5)	Wage Income (logs) (6)	Status (Binary Indicator) (7)	Wage Income (logs) (8)
Interaction term	-0.030***	0.286*	-0.001	-0.076	0.003	-0.342**	-0.092**	-0.340**
	(0.010)	(0.167)	(0.003)	(0.111)	(0.004)	(0.160)	(0.037)	(0.147)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Departments	23	23	23	23	23	23	23	23
Sample Size	26,535	26,252	26,535	26,393	25,746	26,454	26,535	24,130

* p<0.10, ** p<0.05, *** p<0.01

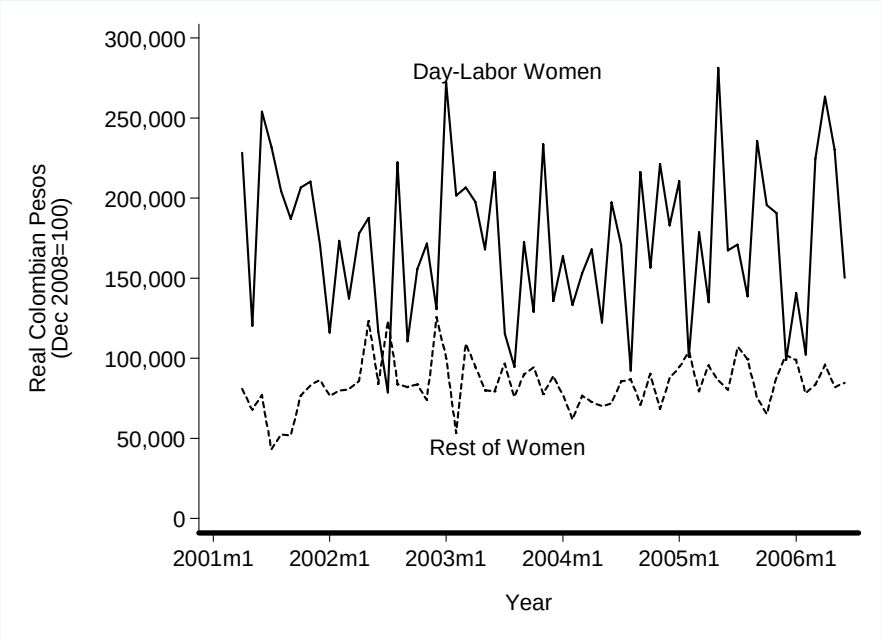
Note: These tables report estimates (growing-region/post-DSP) of a regression using equation (1). For both panel A and B marginal effects from a logit model are reported in columns 1, 4, 7, and 10. Regressions include controls for gender, age dummies, household size, education attainment, and marital status. Standard errors are reported in parenthesis and were adjusted for department (state) clustering.

Estimates for both men and women show interesting results. In terms of labour participation, for men there does not seem to be any significant effect, apart of a slight increase in the private sector (3.9 percentage points). On the other hand, for women, there were important reductions in their participation in the labour market, with significant effects going from -0.03 in the private sector (panel A column 1) to -0.092 in the self-employment sector (panel A column 2). This is relevant for women's labour market since more than 60% of them are enrolled in these two types of job. In terms of income, there is a clear and generalized reduction for both men and women in the most representative occupations, with the only exception for women's wages in the private sector where there was a 28% increase (panel B column 2). For example, the most affected group of the population was that of self-employees since there was an 11 percentage points (panel A column 8) and 34 percentage points (panel B column 8) reductions in their wages for men and women, respectively. Additionally for women, the second most representative

occupation for them, day-labour, faced another 34 percentage points decrease (panel B column 6).

The unexpectedly significant reductions in women's wages in these two types of occupation made me analyze further what could have caused this situation. A first exercise was to compute yearly interaction effects. I found for the particular case of female day-laborers significant and increasing reductions from -0.21 in 2003 to -0.441 in 2006. A deeper analysis for this particular group, regardless of the age range, allowed some reasonable explanations.

Figure 2. Women's Wages Comparison: Day-Labour versus The Rest, 2001-2006.



Source: Author's calculations based on the CHS, 2001-2006.

Figure 2 shows that for day-laborers, although wages are higher than for the rest of women's labour market, their variance is also significantly higher, which can be explained by the fewer number of women working as day-labourers on the one hand, and because of the particular characteristics of this job market on the other. Instability and informality are the two main attributes ruling this type of job, where everyday people in the rural areas are looking for a day-long occupation in farm-related activities. Wages in this environment are

mostly set up in a bargaining process which, together with the small size of the job market, suggests a feasible explanation for the large effects on wages.

In summary, there were general negative effects on both labour participation and wages for adult workers living in high-increase departments compared to low-decrease ones after the implementation of the DSP.

1.2 Children

I will consider people between 10 and 15 years old for analyzing child labour outcomes. The reason is that the Colombian Household Surveys includes only people over 10 years old within the labour market variables. Only the effects on labour participation will be analysed.[24] For children the most representative labour market activities are: relatives without payment, day-labor, and the self-employment.[25] Table 3 reports the marginal effects from a logit version model in which, as before, in the left-hand side there is a dummy variable for the employment status.

Table 3. Labour Market Outcomes – Children

A. Boys

	Relatives without Payment (1)	Day-Labor Workers (2)	Self-Employees (3)
Interaction term	-0.039	0.147**	-0.018
	(0.050)	(0.066)	(0.025)
Controls	Yes	Yes	Yes
Departments	23	23	23
Sample Size	6,227	6,223	6,227

* p<0.10, ** p<0.05, *** p<0.01

[24] For a detailed review of child labour in the international context, and the potential economic and social policies see Bachman (2000).

[25] The group 'relatives without payment' is made up of those individuals who work at least one hour per week in a business run by someone of their own household. Some additional characteristics of this job are: 1. workers are mostly children and teenagers; 2. they do not receive any monetary payment for their job; 3. they usually can do their job at home; and 4. the job can be done in after-school time.

B. Girls

	Relatives without Payment (1)	Day-Labor Workers (2)	Self-Employees (3)
Interaction Term	0.056	0.068	-0.060*
	(0.073)	(0.051)	(0.036)
Controls	Yes	Yes	Yes
Departments	23	23	23
Sample Size	2,063	1,569	2,068

* p<0.10, ** p<0.05, *** p<0.01

Note: These tables report estimates (growing-region/post-DSP) of a regression using the logit version of equation (1), in both panel A and B. Regressions include controls for gender, age dummies, household size, education attainment, and marital status. Standard errors are reported in parenthesis and were adjusted for department (state) clustering.

As can be seen in panel A there seem to be significant effects in boys' labour participation as day-labour workers. The effect is not only significant but it is also appreciable (15 percentage points increase), in particular taking into consideration that 20% of male children work in this type of job. This is consistent and might be interpreted as the result of the reduction in adult's participation in the labour market. For girls, panel B shows an opposite effect since there was a 6 percentage points reduction in the labour market in the type of occupation that for female children is also the second most representative, with a participation of 14% of this group of the population.

Table 4. Education Outcomes (Enrollment Status) – Children

	Boys (1)	Girls (2)
Interaction Term	0.02	-0.019
	(0.020)	(0.017)
Controls	Yes	Yes
Departments	23	23
Sample Size	23,341	21,179

* p<0.10, ** p<0.05, *** p<0.01

Note: Note: These table report estimates (growing-region/post-DSP) of a regression using equation (1). Marginal effects from a logit version model are reported in both columns 1 and 2. Regressions include controls for gender, age dummies, household size, education attainment, and marital status. Standard errors are reported in parenthesis and were adjusted for department (state) clustering.

One question that remains is whether or not these changes in children's participation in the labour market are reflected in the dynamics of the school enrollment during the same period

of time.[26] This because at this stage children have two main options, move from one to another type of job or go back to school. According to Table 4 for both boys and girls there are no evidences of any movement in the school enrollment as a consequence of the implementation of the DSP and the corresponding changes in the labour participation. This despite the fact that, as shown in Table 1, there was a significant increase of around 10% in children's school enrollment between 2001 and 2006.

1.3 Youths

Within the group of youths I consider four types of workers: relatives-without-payment, private sector employees, day-labour workers, and self-employees. For this group of the population three are the most popular jobs with almost the same participation: for both men and women, self-employment and relatives-without-payment are the most common activities, with a participation of about 30%, and additionally men working as day-labourers participate with another 30% in the labour market. In this section effects on both labour supply and wages will be analyzed.

Table 5. Labour Market Outcomes – Youths

A. Boys

	Relatives without Payment	**Private Sector Employees**		**Day-Labor Worker**		**Self-Employees**	
	Status (Binary Indicator) (1)	Status (Binary Indicator) (2)	Wage Income (logs) (3)	Status (Binary Indicator) (4)	Wage Income (logs) (5)	Status (Binary Indicator) (6)	Wage Income (logs) (7)
Intercation Term	-0.014	-0.046**	0.030	0.100*	-0.381***	-0.009	-0.097
	(0.029)	(0.020)	(0.284)	(0.054)	(0.119)	(0.045)	(0.135)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Departments	23	23	23	23	23	23	23
Sample Size	10,756	10,756	10,598	10,756	10,489	10,756	10,054

* p<0.10, ** p<0.05, *** p<0.01

[26] It is important since those children more able to work are also those less likely to attend school (Mancorda, 2006).

B. Girls

	Relatives without Payment	Private Sector Employees		Day-Labor Worker		Self-Employees	
	Status (Binary Indicator) (1)	Status (Binary Indicator) (2)	Wage Income (logs) (3)	Status (Binary Indicator) (4)	Wage Income (logs) (5)	Status (Binary Indicator) (6)	Wage Income (logs) (7)
Intercation Term	0.015	0.072	-0.516	0.026	-1.07	-0.083*	0.231
	(0.064)	(0.055)	(2.302)	(0.027)	(2.064)	(0.047)	(0.266)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Departments	23	23	23	23	23	23	23
Sample Size	3,334	3,324	3,291	2,829	3,319	3,339	3,138

* p<0.10, ** p<0.05, *** p<0.01

Note: Note: These tables report estimates (growing-region/post-DSP) of a regression using equation (1). For both panel A and B marginal effects from a logit model are reported in columns 1, 2, 5 and 8. Regressions include controls for gender, age dummies, household size, education attainment, and marital status. Standard errors are reported in parenthesis and were adjusted for department (state) clustering.

Table 5 shows the estimates of the high-increase/post-DSP interaction terms for boys in panel A, and for girls in panel B. In terms of the labour participation, columns 2 and 4 in panel A show two opposite significant effects. On the one hand a 4.6 percentage points' reduction in boys' participation in the private sector, and a 10 percentage points increase as day-labor workers. On balance, considering that a third of male youths take part in day-labour activities and only 12% in the private sector, as a whole the effect is an increase in male youths' labour participation. For girls, panel B shows the opposite effect, a clear and significant reduction of 8.3 percentage points in the labour market in the occupation where nearly 30% of female youths are involved: self-employment. In terms of wages although there is an almost generalized negative pattern, it is only significant in the case of male youths (panel A column 5) with a 38 percentage points increase, which is consistent with the increase in the labour supply for the same group of the population.

Table 6. Education Outcomes (Enrollments Status) – Youths

	Boys (1)	Girls (2)
Interaction term	0.023	0.014
	(0.032)	(0.030)
Controls	Yes	Yes
Departments	23	23
Sample Size	14,983	13,389

* p<0.10, ** p<0.05, *** p<0.01

Note: This table reports estimates (growing-region/post-DSP) of a regression using equation (1). Marginal effects from a logit version model are reported in both columns 1 and 2. Regressions include controls for gender, age dummies, household size, education attainment, and marital status. Standard errors are reported in parenthesis and were adjusted for department (state) clustering.

As for children, the potential effects in education were considered through the estimation of the high-increase/post-DSP interaction effects on the school enrollment. Table 6 shows how the estimates are positive, although not significant. Youths as the adults, given that they have already crossed the compulsory-school threshold, are able to take different decisions other than choosing to attend the school, making it more difficult to distinguish any effect coming from changes in the labour participation. Within their choices youths might decide to move from one to another type of employment rather than going back to school. This is particularly true for rural population for whom the educational attainments are quite lower than the urban counterpart, especially in secondary and university degrees. Therefore, for youths the pattern of results offers no robust evidence of a trade-off between labour participation and school enrollment.

VI. Summary and Conclusions

The start of a new government and its decided determination to break down the high levels of criminality in Colombia provided a unique opportunity to assess the impact of the new security policy on the rural population's social and economic gains or losses. Additionally, the set of policies, carried out by the new government between 2002 and 2006 had high levels of success concerning security. Results from the analysis can be divided into two groups: economic and social gains or losses. The former set of results have to do with changes in adults' labour supply and income. On the other hand, social gains or losses are related to children and youths' participation in the labour market and the school enrollment.

I found supportive evidence of changes in adults' labour participation: small and positive effects for men working in the private sector, but more importantly, there was a negative and substantial reduction for women working as self-employees. In terms of wages, there was a generalized fall, with the only significant exception for women working in the private sector. For the other most representative types of jobs for adults (self-employment and day-labour) there were considerable reductions. Under these conditions, the overall effect of the

security policy was negative, with reductions in the labour participation and wages simultaneously. These results are consistent with those found by Angrist and Kugler (2008) since criminal organizations, especially those related with drug production, use labour force intensively, which is reduced once the government strengths the fight against illegal organizations.

For children and youths, the results are similar and consistent to those for adults in terms of labour participation: increases for boys and reductions for women where the effects are stronger in those jobs where these two groups of the population are more prone to be involved (day-labour, self-employment, and relatives without payment). In terms of youths' income, as for adults there was a substantial and significant reduction for male population working as day-labourers. In terms of education, neither for children nor for youths the effects on school enrollment were significant as a consequence of changes in the labour market.

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APPENDIX

Appendix A. Legislative Background

This section is mainly based on DNE (2002).

The Colombian Government's efforts in fighting organized crime date back to the early 1960s, when the government joined the Single Convention on Narcotic Drugs (New York, 1961). The importance of this agreement was based on two main aspects. First, the success of congregating an important number of countries in the purpose of improving controls on narcotic drug trafficking. And second, the substitution of the many and very disperses multilateral treaties with a single international anti-drug instrument (United Nations, 1961).

One decade later, the Single Convention on Narcotic Drugs and its subsequent modifications, led the Colombian Government to the first National Anti-Drugs Enactment (Decree 1188 of 1974). This mandate included not only regulations concerning trafficking and consumption, but also regulations regarding the possibility of taking over properties from drug trafficking activities. Under this setting, arises the concept of confiscation of properties in favor of the government.[27]

The next step in the legislation was Law 30 of 1986. Although this law was concerned with a wide variety of issues on the problem of drugs, there was a special mention of the properties resulting from these illegal activities, ranging from production, transportation, and trading. Precautionary measures on individuals committing such crimes gave rise to the confiscation of properties related with their illegal activities. In order to do so, the government empowered the National Anti-Drug Council to carry out the administrative confiscation of the properties and to decide their final destination. According to the legislation these properties can be intended for official purposes, common-good legally established organizations or given for rent or deposit (Law 30 of 1986).

Despite the fact that previous legislation and reforms against the proceeds of illegal activities were carried out earlier in Colombia, it was only until the early 1990s when stronger measures were adopted. Based on the Vienna Convention, the Colombian Government embraced additional measures heading to strengthen the pursuing of what is

[27] The concept of 'confiscation' was replaced later for that of *extinción del dominio* [in Spanish]. This concept refers to the action, from the government, of ending the ownership to those properties and proceeds coming from organized crime activities, and not only from drug-traficking business.

called proceeds of crime.[28] In particular there was an important mention in the Vienna Convention about these proceeds, which the Colombian Government adopted by means of Law 67 in 1993. These proceeds were considered not only the properties directly or indirectly derived from committing a crime but, more importantly, the properties legally acquired but mixed with illegally acquired proceeds (equivalent goods): "If proceeds have been intermingled with property acquired from legitimate sources, such property shall, without prejudice to any powers relating to seizure or freezing, be liable to confiscation up to the assessed value of the intermingled proceeds" (United Nations, 1988, pag.7). One additional improvement in the Colombian legislation was the strengthening of the international cooperation fighting drug trafficking and, in general, any other type of organized crime.

Discussion around all these concepts and their implications gave raise to the concept of *extinción de dominio*.[29] This new instrument has played one of the most important roles in the success in fighting organized crime in Colombia. The Criminal Procedure Code of 1991, in order to develop the new legal figure of *extinction de dominio*, established the following as its main sources: illicit enrichment, actions to the detriment of the Treasury, and the severe deterioration of the societal principles (drug trafficking, crimes against the natural resources, money laundering, arms trafficking, figure-heading, influences trafficking, kidnapping, extortion, and others). Some years later, in 1996 (Law 333 of 1996) and 1997 (with a reform of the Criminal Procedure Code), it was explicitly mentioned the final use of those illegally acquired properties. They must have a social role, such as rehabilitation programs, social investment, and fighting organized crime (Dirección Nacional de Estupefacientes, 2002).

The following are some of the most important characteristics of the *extinción de dominio* law (DNE, 2002): 1. it proceeds even with the disposal of the property to third parties, or because of cause of death; 2. it is directed against the titular of the property or any beneficiary; 3. it is retrospective, safeguarding the legality principle; 4. it does not require a

[28] It is important to notice that at this stage, international legislation was intended to fight proceeds not only from drug trafficking but also from every type of organized crime.

[29] Notice that, several years ago, the government had already empowered the Anti-Drug Office as the institution in charge of those properties and proceeds from the organized crime in Colombia.

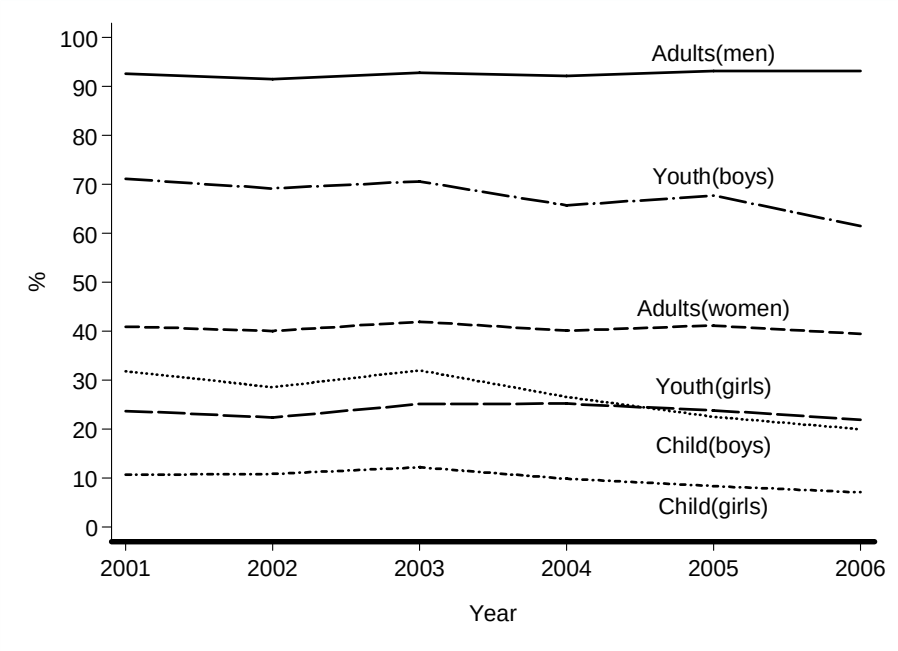
condemnatory judgment to start with the extinction of the domain; 5. it is imprescriptible and does not shelter the familial patrimony regime; 6. Properties will be taken by the government (through the Anti-Drugs Office) without any compensation or retribution.

Appendix B. Spatial distribution of the increase (2001-2006) in the number of rural seizures.

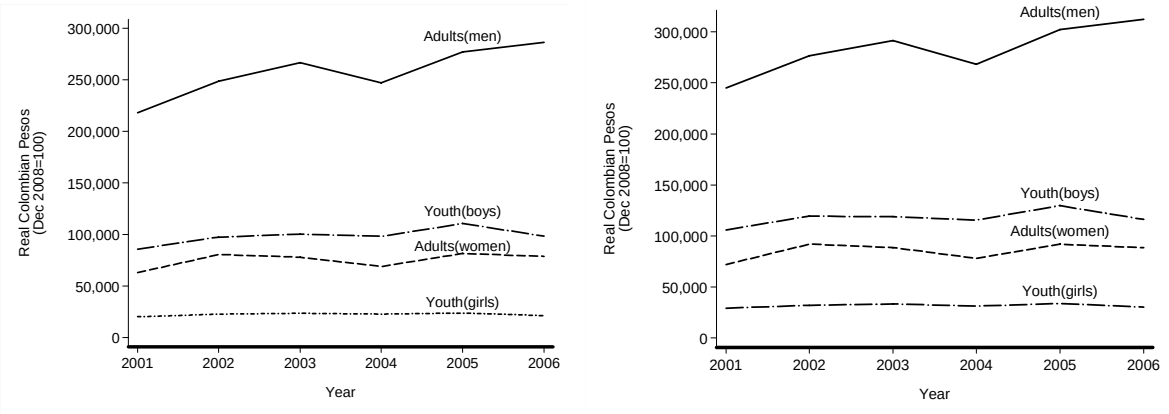
Source: Author's calculations based on data from the DNE.

Appendix C. Time Series of the Main Labour Market Variables

A. Employment Rates across Different Groups of Age



B. Monetary and Total Wages across Different Age Groups



Source: Author's calculations based on the Colombian Households Surveys, 2001-2006.

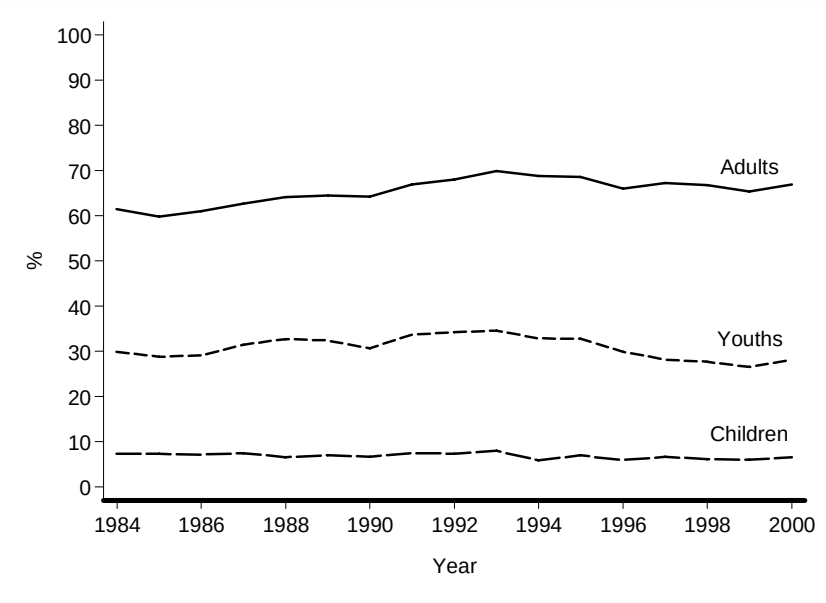
Appendix D. Educational Statistics by Type of Region

Group type	Department	Enrollment (5-17 years old)		Highest complete educational level attainment - 2005									
				None		Preschool		Primary		Secondary		University/ posgraduate	
		% Urban (1)	% Rural (2)	% Urban (3)	% Rural (4)	% Urban (5)	% Rural (6)	% Urban (7)	% Rural (8)	% Urban (9)	% Rural (10)	% Urban (11)	% Rural (12)
Control group	Antioquia	82.8	71.4	7.3	19.9	3.9	2.9	12.6	15.4	21.9	8.9	13.6	1.8
	Bolívar	86.2	77.4	9.7	23.3	5.6	5.6	11.4	13.6	19.8	8.7	13.7	1.4
	Caldas	85.7	72.4	6.7	14.8	3.9	3.0	13.3	17.3	22.4	8.3	13.4	1.3
	Cesar	84.8	67.7	12.4	28.5	5.5	5.1	12.0	12.0	18.8	7.9	10.9	1.4
	Córdoba	88.7	80.8	11.4	25.1	5.4	4.7	12.4	14.5	20.5	9.5	12.3	1.8
	Chocó	75.2	47.7	12.1	26.0	4.7	3.7	8.1	6.4	16.7	4.8	10.5	0.9
	Huila	85.9	67.8	9.2	16.9	4.2	2.7	13.9	18.6	19.5	6.8	10.6	0.8
	La Guajira	86.4	37.5	9.8	52.3	6.9	4.0	9.6	4.3	19.5	4.4	11.9	1.0
	Meta	85.1	73.2	8.7	15.4	4.2	3.2	13.7	17.3	20.3	9.1	11.2	2.5
	Quindío	84.7	77.2	8.3	14.0	3.8	2.8	12.9	16.4	21.0	12.2	11.3	4.6
	Risaralda	84.7	72.6	7.2	16.3	3.9	3.3	14.0	16.4	21.3	8.7	11.9	2.2
	Sucre	89.4	83.7	13.6	25.6	5.3	4.8	12.5	13.7	19.3	9.3	10.1	1.5
	Tolima	85.3	71.4	9.5	20.7	3.7	2.3	14.3	17.4	20.5	7.1	11.9	1.1
	Valle del Cauca	87.4	80.6	6.0	12.0	4.4	3.8	13.0	15.5	23.1	13.9	13.2	3.1
Treatment group	Atlántico	84.4	81.4	7.3	18.0	6.1	6.6	11.5	12.7	23.4	13.9	16.0	3.8
	Magdalena	86.0	74.6	11.5	25.0	6.5	6.3	11.1	12.4	19.9	9.0	10.7	1.4
	Norte de Santander	82.6	67.9	10.4	24.0	3.7	2.7	14.8	16.5	19.0	4.9	10.7	0.9
	Santander	86.1	71.8	7.3	17.1	4.1	3.1	14.8	20.6	21.1	6.8	15.1	1.5
	Boyacá	90.5	77.1	7.0	16.4	5.1	3.8	13.9	20.1	20.1	8.0	15.8	1.7
	Cundinamarca	87.8	81.8	6.7	12.3	4.8	3.6	14.8	20.5	21.7	11.2	11.4	3.5
	Cauca	85.7	69.7	7.0	15.7	4.3	3.1	12.9	15.8	20.9	7.6	13.6	1.2
	Nariño	84.9	64.9	8.1	16.4	4.3	3.1	14.0	16.6	20.1	6.4	12.4	1.0
	Caquetá	85.2	57.7	11.9	15.9	5.1	3.3	13.4	15.6	16.3	5.5	7.1	0.8
Aggregates	Total 23 departments	85.5	71.9	8.1	19.7	4.6	3.6	13.0	16.0	21.3	8.5	12.9	1.7
	Total 32 departments and Bogotá, D.C.	85.6	71.7	7.3	19.6	4.7	3.6	12.7	15.9	21.5	8.4	14.7	1.7

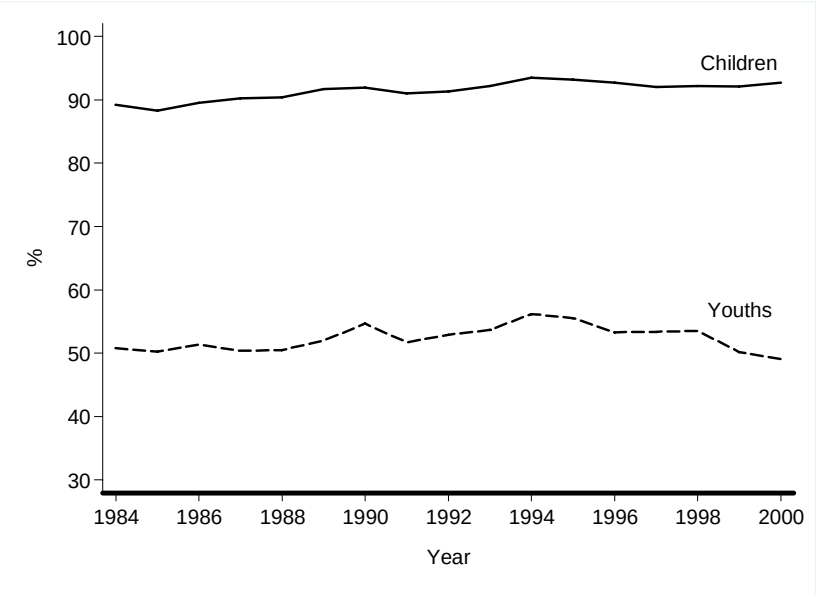
Source: Author's calculations based on General Census 2005.

Appendix E. Pre-policy trends for Labour Market Variables

A. Employment rates across different groups of age



B. School enrollment



Source: Author's calculations based on Colombian Household Surveys, 1984-2000.

Appendix F. Types of Employment's Definitions.

According to the National Department of Statistics (DANE), the following are the definitions for the different types of jobs:

Private sector employees: are those individuals working for a private employer and receiving payment for their jobs.[30]

Government employees: are those individuals working in a governmental institution, or in one with joint private/public equity, regardless of their occupational position.

Day-labour workers: applies only to people living in rural areas, who are in charge of activities directly related with agricultural production and livestock. These workers are subordinated to another person who can previously fix the payment, or make it according to each worker's particular production.

Relatives without payment: are individuals working for at least one hour per week in a business run by a relative who live in the same home, and do not receive remuneration for their jobs.

Self-employees: are those individuals who exploit their own businesses or practice their careers without hiring any employee, but with or without support from their relatives. They can work alone or in partnership with other self-employees.

[30] This classification does not take into account the amount of wages, and therefore workers are allowed to report less than the legal minimum wage.