

POLICY ASSESSMENT FOR UNEMPLOYMENT ABATEMENT IN COLOMBIA

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ABSTRACT

The economic, social and political crisis that is affecting Colombia during the last 10 years has decelerated production with consequences on increasing unemployment levels. As investment and private and public expenditure have decreased enormously, the Gross Domestic Product has grown negative and unemployment has reached the 20% barrier.

The circumstances affecting Colombia are a confluence of large levels of violence and guerilla warfare activities, not found in any other country around the world. Under these conditions, the standard economic models seem inappropriate for assessing employment policies. A plausible alternative is to study the behavior of the relevant variables to the problem of unemployment in Colombia and their interrelationships by means of System Dynamics, and grounded on economic theories for development.

The work hypotheses are based on the consideration that the economic reactivation could decrease the high rates of unemployment and violence, generating a more attractive environment that encourages both national and foreign investment, making possible to reduce the cost of defense and national security to increase the social investment.

Key words: Unemployment, system dynamics, public policy, education, defense, violence, gross domestic product.

INTRODUCTION

The problem of unemployment in Colombia has worsen since 1994 and is one of the main threats for the economic, social and political stability of the country, due to an increasing supply of labor force that largely surpasses the demand.

In this research, we evaluate the combinations of economic and social policies that may help reactivate production and decrease violence and unemployment. Our intention is to conduct policy assessment exercises for the reduction of unemployment. For this, we simulate possible scenarios, particularly identifying the main macroeconomic and social variables that have an effect over employment.

The selection of System Dynamics has been justified by the fact that this simulation methodology allows the assessment of policies for feedback situations and provides answers to the kind of questions of the type: What if?

The research started with the identification of variables and the formulation of a model intending to represent the system. The results reached with the model were verified with the historical information of the last 10 years, where it can be appraised that the unemployment levels have increased in general terms from year 1995 to 2002 - increases in these levels go from 7,6% in 1994 to 19% in 2002 (Figure 1 - Behavior of unemployment in Colombia).

The so called trend scenario displays an agreed behavior with the projections elaborated by the “Departamento Administrativo Nacional de Estadística, DANE”, and the “Departamento Nacional de Planeación, DNP”. A sensitivity analysis has been conducted to determine the critical parameters; some scenarios have been proposed with the purpose of having a prospective vision of the problem and we concluded by evaluating some of policies and strategies proposed by the present Colombian government.

To assess policies for the reduction of unemployment we undertake simulations based on possible scenarios that consider some relevant macroeconomic variables that affect employment.

1. UNEMPLOYMENT IN COLOMBIA

1.1. Evolution of unemployment in Colombia

During the last years, Colombia has experienced economic recession and deterioration of its social development indicators. The country has registered the worst fall in GDP and the largest unemployment index for the last 60 years, devastating the progress in social development that the country had previously shown (Figure 1 - Behavior of unemployment in Colombia).

The problem of unemployment in Colombia arises from a crisis in demand of goods and services that causes the persistence of high levels of unemployment and that increases the structural or natural unemployment levels. This concept is known in economic literature as hysteresis of unemployment (Uribe, 1999).

Núñez and Bernal, in a study made in 1998, decompose the observed rate of unemployment in Colombia (19.5%) in their natural component (11,5% of which 6,5% depend on structural factors and 5% on the called frictional unemployment) and cyclical (8%), and analyzed the duration of unemployment. Considering that the natural rate of unemployment (that with which the economy stays in balance, or in other words, there does not exist inflationary pressures given policies which encourage the demand of goods and services) is 11.5%.

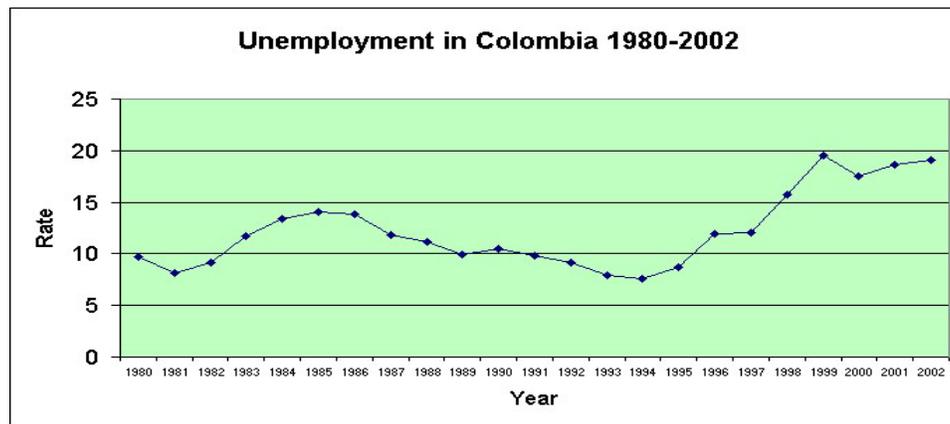


Figure 1 - Behavior of unemployment in Colombia. Source: DANE.

In general it could be stated that the economic activity is affected by the loss of physical capital (resources and infrastructure), human (losses of lives and emigration) and social (disintegration of the institutions) capital that increases the levels of uncertainty and risk, elevating the costs of making transactions. This phenomenon entails the reassignment of resources, of the private and public sectors, towards activities of smaller productivity as security provision. This has direct repercussions on the performance of macroeconomic variables and, by this way, on the economic growth. The social exclusion affects the main socioeconomic variables that press the behavior of the individuals of a society and which triggers up the violence indexes (Reyes and Gómez, 1999).

This panorama indicates how the problem of violence in Colombia is one of the main causes of the deceleration of the economy and the fall on investment and, consequently, of the contraction of productive activity, inducing lasting changes in the decisions of companies and homes. Loss of human and physical capital that is destroyed or moved outside the country causes that the economy turns aside of its way the accumulation of capital and creation of wealth.

The persistent growth of unemployment in Colombia exhibited in the 90s complies with an increase in labor participation, with a combination of a process of associated industrial reconstruction and technological change, with the economic opening in a context of reevaluation, and with the effects of the economic cycles.

Other elements that explain the large levels of unemployment that is being observed in Colombia, include the increase of labor participation driven by the demographic conditions of the country and the phenomenon of the additional worker described below.

The population between 15 and 59 years has been growing and with it the pressure of labor supply on the work market. The economy has not had capacity to absorb these increases, worsening unemployment, with the consequent deterioration of public finances and the

social security systems, among others. The phenomenon of the additional worker is reflected in the increase of the participation of women and youngsters that have entered the work market to recover the lost income caused by unemployment and low salaries, specifically during the periods of economic recession.

The consequences on the work market of an economic liberalization with revaluation, elevated domestic interest rates, massive entrance of foreign capital and growth of the public debt, are devastating. These elements contributed to the deterioration of certain sectors of the national industry and the consequent expulsion of labor force with the misalignments between supply and demand of employment by the technological change.

The economic recession in the country occupies an important place within the causes of unemployment. The increasing tendency of unemployment registered since 1994 agrees with the beginning of the deceleration of the economy and the later recession registered between 1995 and 1998, and it remains in spite of the slight economic recovery registered in the year 2000.

1.2. Main causes of unemployment in Colombia

The structure and the figures of unemployment in Colombia account as the main causes of the problem and are more associated to situations of structural type than to those of conjunctural nature. Such causes can be related to the supply or the demand of labor force.

Among the causes associated with the supply, the following ones stand out:

- New sector of the population seeking for work
- The lack of an efficient information system that matches the supply and the demand in the work market.
- The deficiencies of the educational system, which is completely divorced from the productive system.

With respect to the factors associated to the demand, it is possible to indicate that the low elasticity of the employment in relation to the GDP and the changes in the productive structure, in addition to the high indexes of violence, constitute the main explanatory items.

At present, Colombia confronts one of the most profound economic and social crisis on records since 1930. This crisis has caused a weakening in education, employment, health and in general, those activities oriented to improve the well-being of the population, aggravated directly or indirectly by high levels of violence.

In this way, a circle of violence in multiple manifestations has consolidated, from the armed conflict and the organized delinquency with the drug trafficking to a daily violence, expressed with greater force in the cities, contributes to deteriorate the citizen coexistence.

Large levels of violence have been manifested in Colombia during the last decades, becoming one of the main problems of the country. The worldwide statistics of violence show that for year 1993, 10% of violent acts were committed in Colombia (according to the World Health Organization, WHO, 1994). The rate of homicides between 1987 and 1994 increased from 36 to 127 out of 100000 inhabitants. In this period, the homicides added 70% of all the violent deaths happened in the country (National Legal Medicine Institute, Bogotá, 1995).

1.3. Policies of employment in Colombia

At present time, there are cyclical as well as structural factors of insufficiency of supply of employment. Yet, certain population groups have been systematically excluded from access to productive employment or they are affected by recurrent periods of unemployment. Intending to control these phenomena (beginning with the government of president Pastrana, 1998 - 2002), among others, the following governmental policies have been proposed:

- Create an appropriate macroeconomic environment that can attract investment and growth seeking to encourage the supply of employment
- Establish explicit objectives of generation of productive employment, adjusting the financial and exchange markets to a dynamics of elevated growth, in the context of a sustainable fiscal policy.
- Institute a framework for equitable and efficient labor relations.
- Make progress with respect to labor and social security reforms.

2. DYNAMIC MODEL FOR THE ASSESSMENT OF POLICIES OF EMPLOYMENT IN COLOMBIA

For the assessment of policies of employment in Colombia, we propose a System Dynamics model based on four main variables: GDP, Employment, Violence and Population. The existing relation between these four variables allows describing and determining the behavior of employment, with the purpose of contributing to the analysis of employment policy in Colombia.

The developed model represents the behavior of the main variables and its interrelations as to the problem of employment - unemployment in Colombia. The following feedback cycles can be observed (Figure 2 - Causal loop diagram for Employment).

- GDP - Private sector - Employment - Economic Activity – GDP

Investment in the private sector as a percentage of the GDP goes to manufacturing, services, agriculture, or others. The statistics of Colombian economy provides information on the jobs generated by each monetary unit invested in the private sector. When increasing employment, the economic activity is reactivated because there is more circulating money; further, the growth of the economic activity modifies the composition of the GDP, and in this way, the cycle is reinforced.

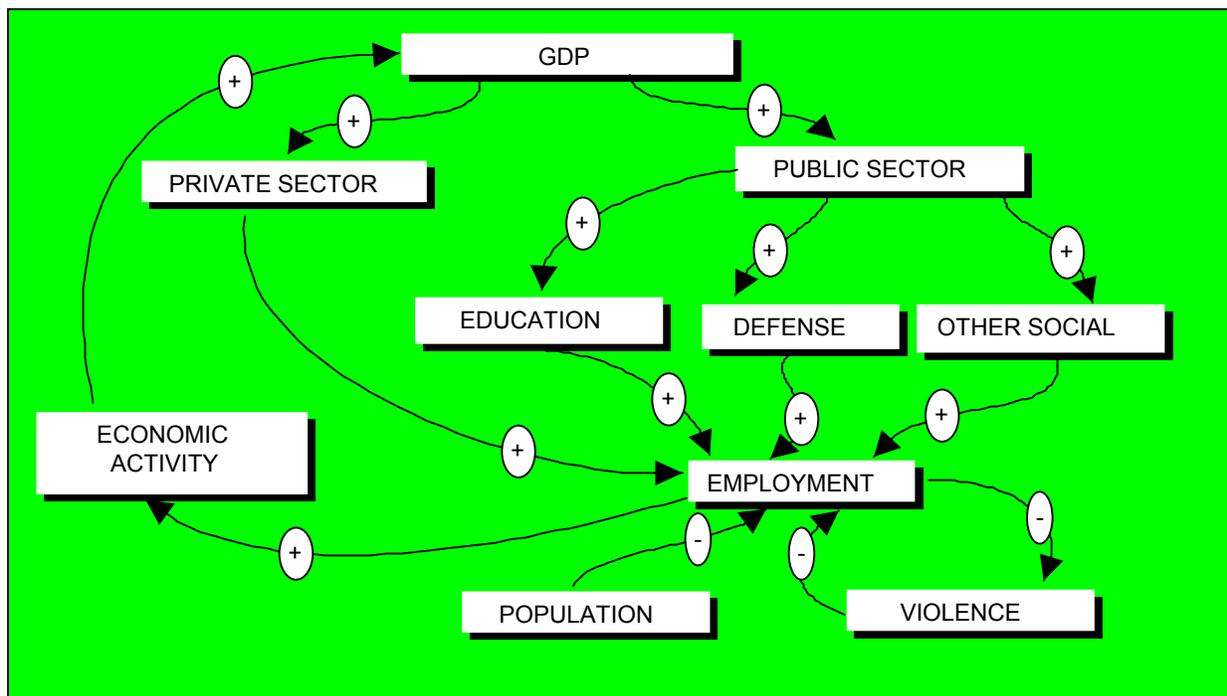


Figure 2 –Causal loop diagram for Employment

- GDP – Public sectors (Education, Defense, Other social) - Employment - Economic Activity – GDP

This loop is similar to the previous one; nevertheless, the public sector is of extreme importance for the economic, cultural and social development of the country, and consequently the education, defense and other-social sectors are analyzed separately. For each subsector, information related to the amount of monetary units required to generate a job is obtained; from these data, the amount of jobs generated in the public sector is obtained. The jobs generated reactivate the economic activity, and therefore the GDP can be increased.

- Employment – Violence – Employment.

It is assumed that the increase in the amount of jobs should reduce the violence index, and when diminishing the violence index an environment of creation of jobs should be generated. Nevertheless, the increase in the amount of jobs generated is not proportional to the diminution of the index of violence, because there are some limits where, independently of the number of jobs, an increase in the index of violence is possible. This loop is implemented by means of multiplier factors.

The SD model is presented in Figure 3 - Stock and Flows Diagram for employment.

2.1. Dynamics of the GDP

The Gross Domestic Product, GDP, is defined as the total production of goods and services, usually of a country, during a year, at market prices. In the public component of the GDP, the variables education, defense, and other social expenses (other social) are considered, where policies and strategies for employment generation are analyzed. The variable other social includes aspects like housing, infrastructure and social security. This model serves as support to assess different policies of employment generation at national level.

GDP is increased by the economic activity, according to the following equations:

$$GDP = dt * Economic\ activity$$

$$Economic\ activity = Return_Investment + Foreign_Investment + GDP * (Increase_other)$$

The return_investment is the result of the economic activity produced by all the jobs. Foreign_investment is treated by means of a multiplier factor: (Mult_foreign_investment), which is based on the violence index. The equation of Foreign_Investment is:

$$Foreign_Investment = Mult_foreign_investment * Average_foreign_investment$$

where Average_foreign_investment is the expected foreign investment in the country, according to statistics given by some of the governmental dependencies that work with economic statistics.

2.2. Dynamics of the social investment

In Colombia, the programs of social investment have appeared in the plans of government of the last administrations as high-priority policies to fight unemployment because its benefit is centered more in the population affected by this problem like the young people, the women that are head of family and people of limited resources or low educative level.

A suitable allocation of social expense based on a correct focalization of the population can increase the number of occupied people in the medium and long term. Also the investment in education is a significant source of employment from medium to long term, because people with a suitable level of qualification will have greater skill and great possibilities of obtaining employment or generating their own business in a stable and productive way.

2.3. Dynamics of the investment in defense and national security

Increases in violence, common delinquency and terrorism are affecting the productive apparatus and the possibilities of economic development of the country. The cost of defense (military cost) and national security (Police and Intelligence) has grown significantly since the 80's, and that is justified because Colombia is one of the few countries in the world where phenomena like drug trafficking, guerrilla, self-defense groups, terrorism, common delinquency, forced displacement and kidnapping coexist.

The growth of violence can decrease the impact of the investment in defense and security. Therefore, although there could be an increase in the investment in defense and security, it is still possible that violence keeps increasing.

Dynamics displayed in the model indicates that, on the one hand, the expense in defense and security increases employment, whereas on the other hand, the increase of violence diminishes it because it cuts the social investment and drives away the foreign and national investment.

In the model, the variable defense includes the military expense and the national security. Each one of these components represents about 2% of the GDP for the year 2000, that is to say, the defense and national security represent approximately 27% of the national budget of this year.

2.4. Dynamics of the private sector

The private component of the GDP is modeled in a global way to represent the generation of new employments in this sector, so the phenomenon of violence can be diminished and consequently moves the economic activity.

2.5. Dynamics of employment

Employment dynamics is caused by the economically active population and violence as well as by the public and private investment. Population plays an important role within the model, because its growth causes an increase in the economically active population, and consequently in the number of unemployed people.

The number of jobs is increased with the net value of new jobs.

The equation of the number of jobs is the following:

$$Employees = +dt * Employees_New$$

Employees_New are obtained according to the following expression:

$$Employees_New = (Employment_defense) + (DELAYMTR(Employment_education, 2)) + (Private_employment * Violence_on_employment) + (Employment_Other_Social * Violence_on_employment)$$

It is observed that the variable Employees_New depends on the jobs generated in defense, education, and social sectors, in addition to those generated in the private sector. The jobs generated in education sector appear with a delay, due to the time it should be expected before a person go into the labor market. Given the high index of violence, the jobs generated in the Defense sector practically occur immediately. Jobs generated in the private and social sectors are affected by the multiplier factor Violence_on_employment, because these are the sectors more struck by violence; at times of high violence, jobs in the private and the social sector diminish, as well as those that could generate the foreign investment.

2.6. Dynamics of violence

Violence, as population, is a multiplier of the increase of unemployment, because its increase causes a diminution in the productive and social investment turning aside resources of the national budget for defense. Violence and unemployment have a double way reaction since an increase in the rate of unemployment stimulates the growth of violence and vice versa.

The equation used to represent the violence is the following:

$$Violence = dt * Variation_violence, \text{ where:}$$

$$Variation_violence = Unemployment_violence * Violence$$

and the variable Unemployment_violence is a multiplier factor described in a table, in which, to a greater rate of unemployment, an increase in the violence takes place. The table is a nonlinear function that can change its shape, in agreement with the proposed policies and scenarios.

3. RETROSPECTIVE SIMULATION AND MODEL VALIDATION

For model validation, historical information related to each of its variables was used. This information served as a base for the calculation of the behavior tendencies. Simulation allowed validating the historical behavior of the phenomenon under study being started with the information of 1992. Results were consistent with statistical series related to the increase of GDP, unemployment, population and foreign investment, published by the

DANE, the DNP and other organizations of national order, for period 1992 - 2001 (Figure 4 - Retrospective Simulation).

As hypothesis of work it can be observed that, the exaggerated increase of unemployment in the last years has been caused by the low economic growth that can be explained among others by the violence conditions of the country.

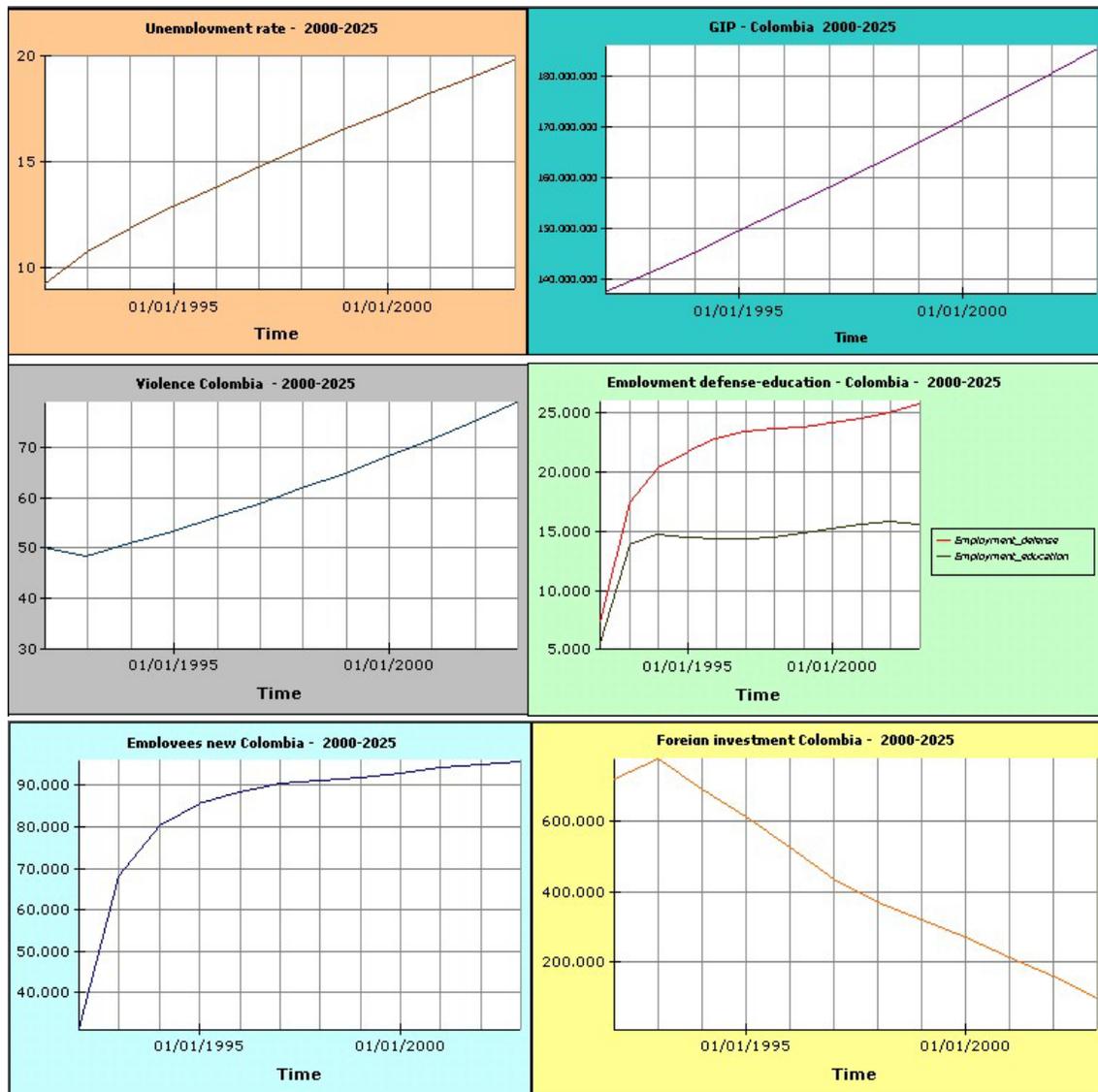


Figure 4 - Retrospective simulation

4. DESCRIPTION OF SCENARIOS

*“The future is not inherited, but it is not a sentence either”
“The future is dreamed and it is constructed”
“It is the common will of the people what establishes the destiny of nations”*

(Project Planning by Scenarios Destiny: Colombia)

In the dawn of the third millennium, it is possible to create a vision of the wished country founded on certain basic consensuses, that is to say, to construct in the diversity based on the reciprocal confidence.

The model for assessment of employment generation policies in Colombia was used to simulate scenarios that have allowed to analyze the future behavior of the phenomenon studied under different suppositions. The next simulations contain data on employment generated by the allocation of the private and public sectors budget. This last one discriminated in three items: defense, education and other social expenses, where it is possible to appreciate the impact of the resources used in each variable, number of unemployed people, rate of unemployment, index of violence and new generated employment. (Table 1. Description of scenarios).

4.1. Trend scenario

This scenario takes into account information from statistical sources of governmental organizations like the DANE and the DNP corresponding to the period between 1992 and 2001 and, in addition, is supported in assumptions related to the behavior of the violence. The initial data of the simulation can be visualized in table 1 - description of scenarios.

The simulation of the trend behavior made with base in projections of the historical behavior shows that unemployment in Colombia will get worse in the next 23 years, reaching rates of the order of approximately 33%. This behavior could be experienced by the slow growth of the GDP, the increase of the violence and the demographic transition.

Increase in participation rate of the population in the economic activity and the weight that violence exerts on the investment causes a simultaneous increase of the number of unemployed and employees during the period simulated in the model, being greater the increase in the unemployed ones.

It is observed, in addition, a reduction in the variable foreign investment that does not generate enough resources to obtain a considerable number of employed people. On the other hand, the variable Foreign Investment (Figure 3 – Stock and Flows Diagram for employment), considered as a generator of employment in the country, diminishes during the simulation period showing the increase in the unemployment problem (Figure 5 - Trend scenario).

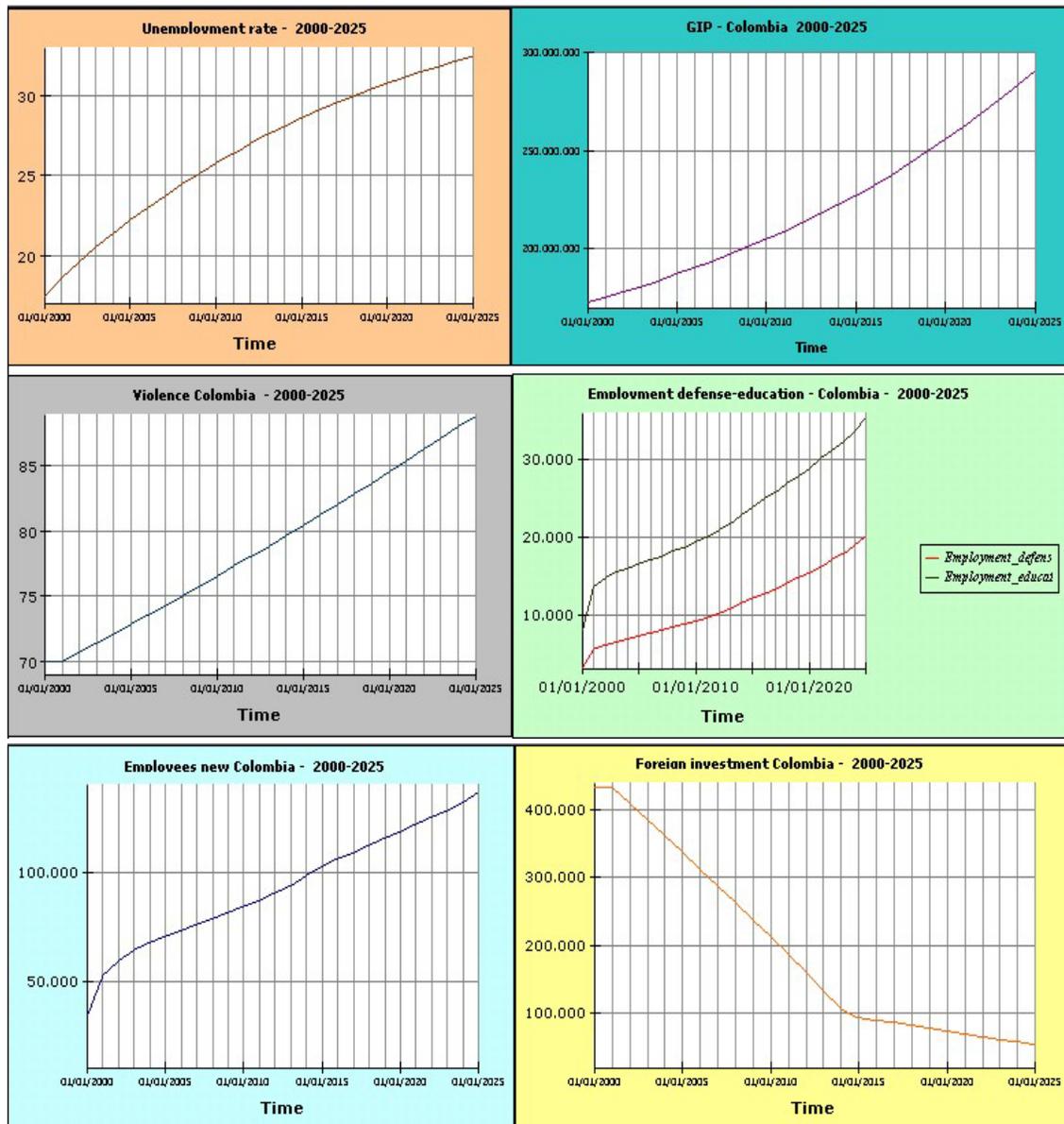


Figure 5 - Trend scenario

4.2. Pessimistic scenario

In this scenario, initial value of the parameter employment by million invested in defense has been changed to 0.04, considering approximately that the cost of a person incorporated to the troopers with all their logistic and social benefits is \$25'000.000; employment by million in the private sector is set up to 0.028, that is to say, a cost of \$35'000.000 per person. The parameter other expenses of the GDP is considered at inferior rates of the

trend in 0.3%, which reflects a significant diminution of the economic growth and a high raise in unemployment. Additionally, the number of educated people who finds employment is estimated in 10%. The phenomenon of violence shows a considerable growth, quickly increasing, generating a high degree of uncertainty in the investors of the private sector, and even more in the foreign investors.

In general terms, in this scenario the high sensitivity in the behavior of the model can be observed. The growth of the GDP is very slow, the violence indices reach untenable limits and the rate of unemployment touches margins of 40%, situation that easily is sustained within the framework of an absolutely pessimistic context (Figure 6 - Scenario pessimistic).

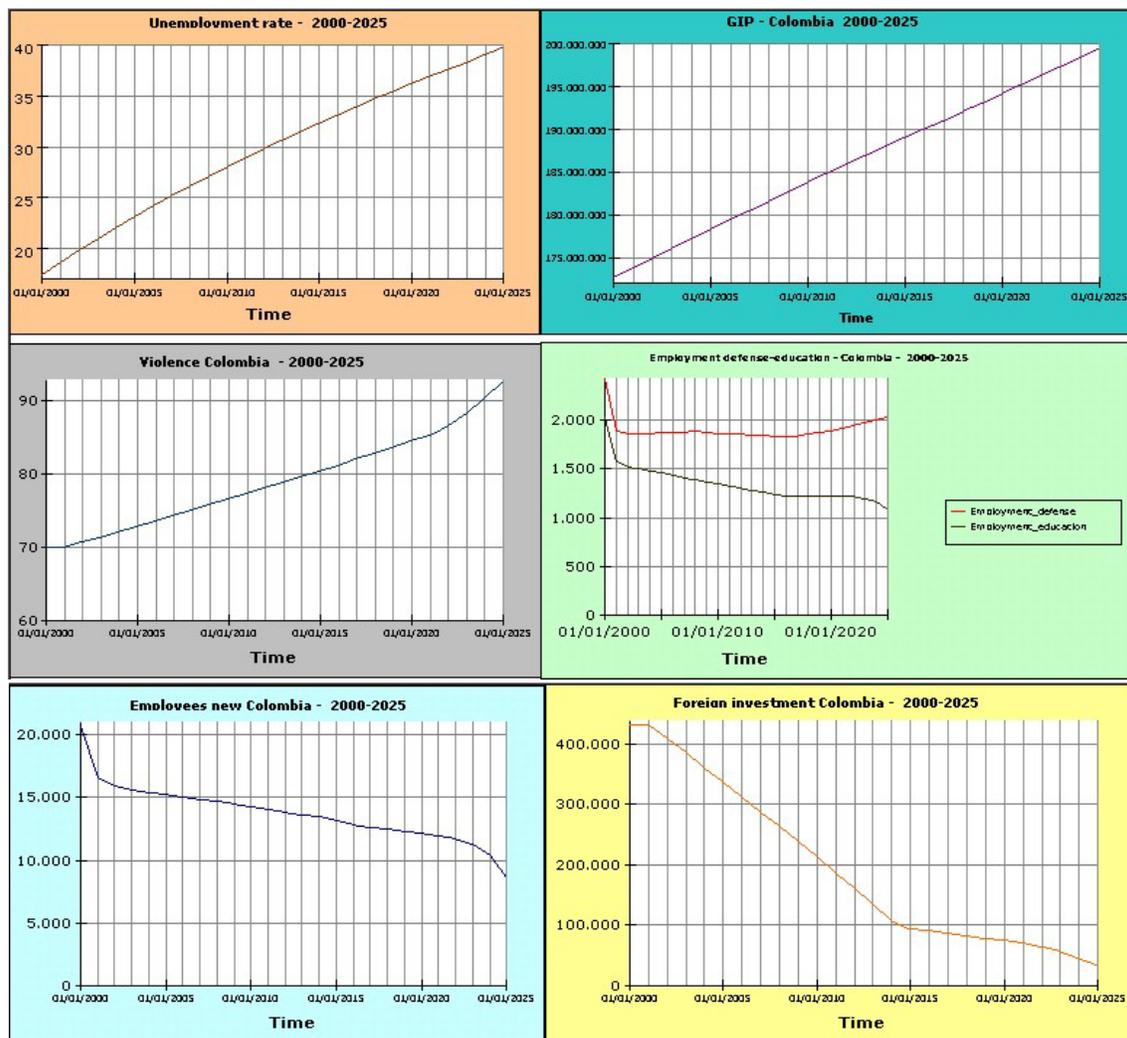


Figure 6 - Pessimistic scenario

4.3. Optimistic scenario

In its description, the following assumption have been made: The percentage of educated people who can be employed is 60%; the cost of an employment generated in defense goes from \$18'000.000 to \$12'000.000 and others of the GDP are increased from 1% to 2%.

In this scenario the behavior of the system within a reasonable rank is simulated. With these modifications it is obtained a decrease of the rate of unemployment from 21.5% in 2011 to 6% in a 2025 and a sustained growth of the GDP. It is worth to emphasize the behavior of the violence that falls considerably, as of year 2020.

An investment policy based on the direction of resources this way would allow to generate employment, to diminish the violence and to increase the foreign investment, in the medium term. In this scenario, the decrease of violence reduces the necessity of resources in defense making possible greater participation of the budget for social investment. (Figure 7 - Optimistic scenario).

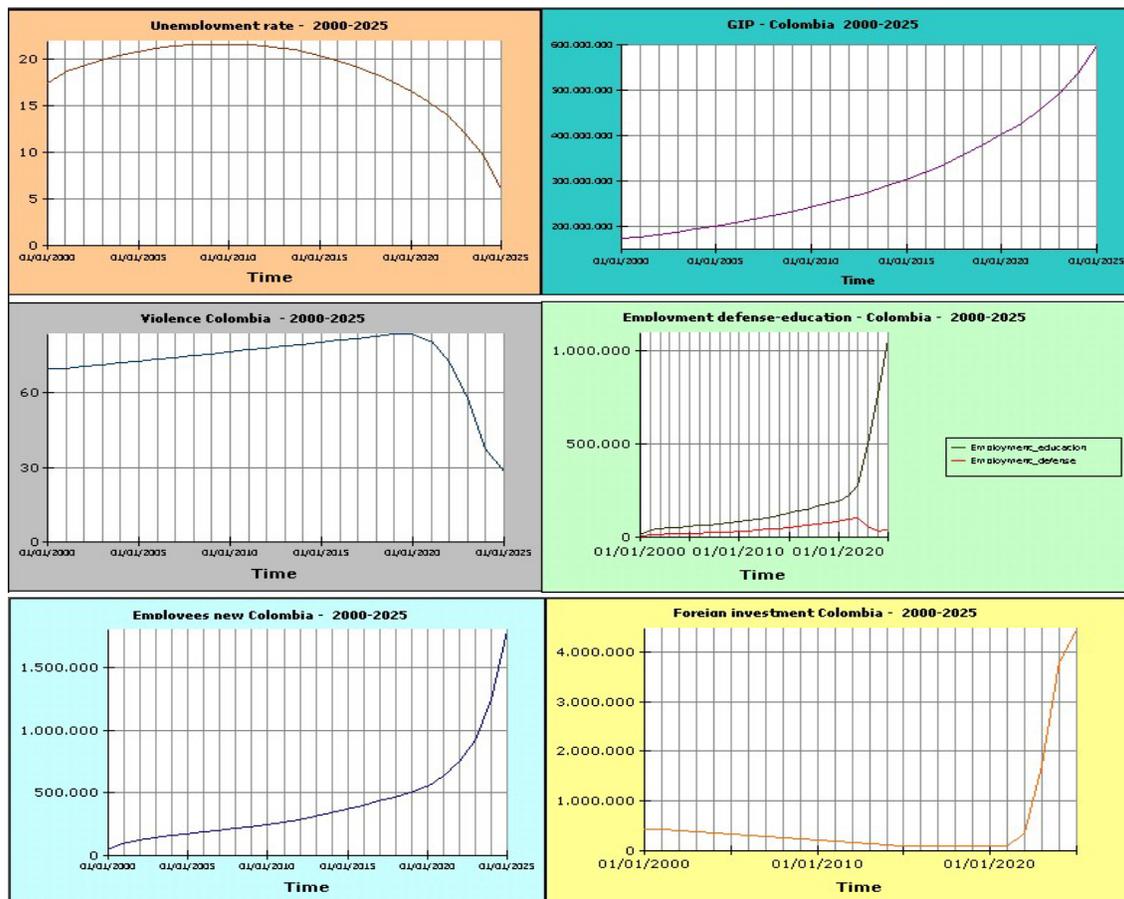


Figure 7 - Optimistic scenario

In this scenario it is observed that with the increase of the natural rate of growth of the GDP the diminution of the rates of unemployment would not be obtained in the short term. In this case there is a dependency on programs oriented to diminish the violence and to a minor participation of the economically active population, for example, avoiding the student desertion. This last one would be obtained increasing the familiar income and guaranteeing the access and permanence in the educative system.

4.4. Optimistic - feasible scenario

In this scenario it is assumed the implementation of defined policies of investment and effectiveness in the employment generation so they cause a representative impact in the diminution of unemployment in the public and private sectors. The feasible scenario assumes several reasonable policies, all in agreement with the political and economic situation of Colombia. Initially there is an ascending rate of social investment, indicating an increase in this investment from 15% to 25% during period 2002-2025. In addition, it starts with an additional budget of 5% directed to the generation of employment in the private sector, keeping the number of employees generated by a million invested and growth of the GDP superior to 2%.

This scenario shows as an output a rate of unemployment between 21% and 22% during years 2003 - 2018, beginning to diminish only as of this last year, until reaching 9,8% in 2025. The implemented policy initially allows to control the accelerated increase of unemployment (Figure 8 – optimistic – feasible scenario).

5. CONCLUSIONS

Every day the prospective analysis of the variables that affect the economic decision making receives greater importance. Based on the macroeconomic policy, strategies, development plans, fortification of economic sectors and social measures to provide political, economic and social stability are determined.

System Dynamics has been considered an excellent tool to study the behavior of the economic and social phenomena, presenting useful results for the implementation of different alternatives (political) oriented to the attainment of the wished results.

Particularly, for the colombian case, it is demonstrated the importance of identifying prototypes and generalizations that allow to respond on a prospective way to a problem of structural connotations that during last years has come accentuating as it is the case of unemployment, analyzed in this research.

From results obtained in each scenario, authors conclude that variables GDP, unemployment rate, population growth, investment (foreign, in education, in defense), generation of employment and violence, among others, are very sensitive to each other and

therefore any variation by insignificant it seems, affects in a substantial way the behavior of the others.

A line of deepening of this research would have to be concentrated in evaluating the impact of the macroeconomic policies of the present government to determine if its implementation would reduce the rate of unemployment toward the levels of total employment that guarantee a maintained growth of the national economy.

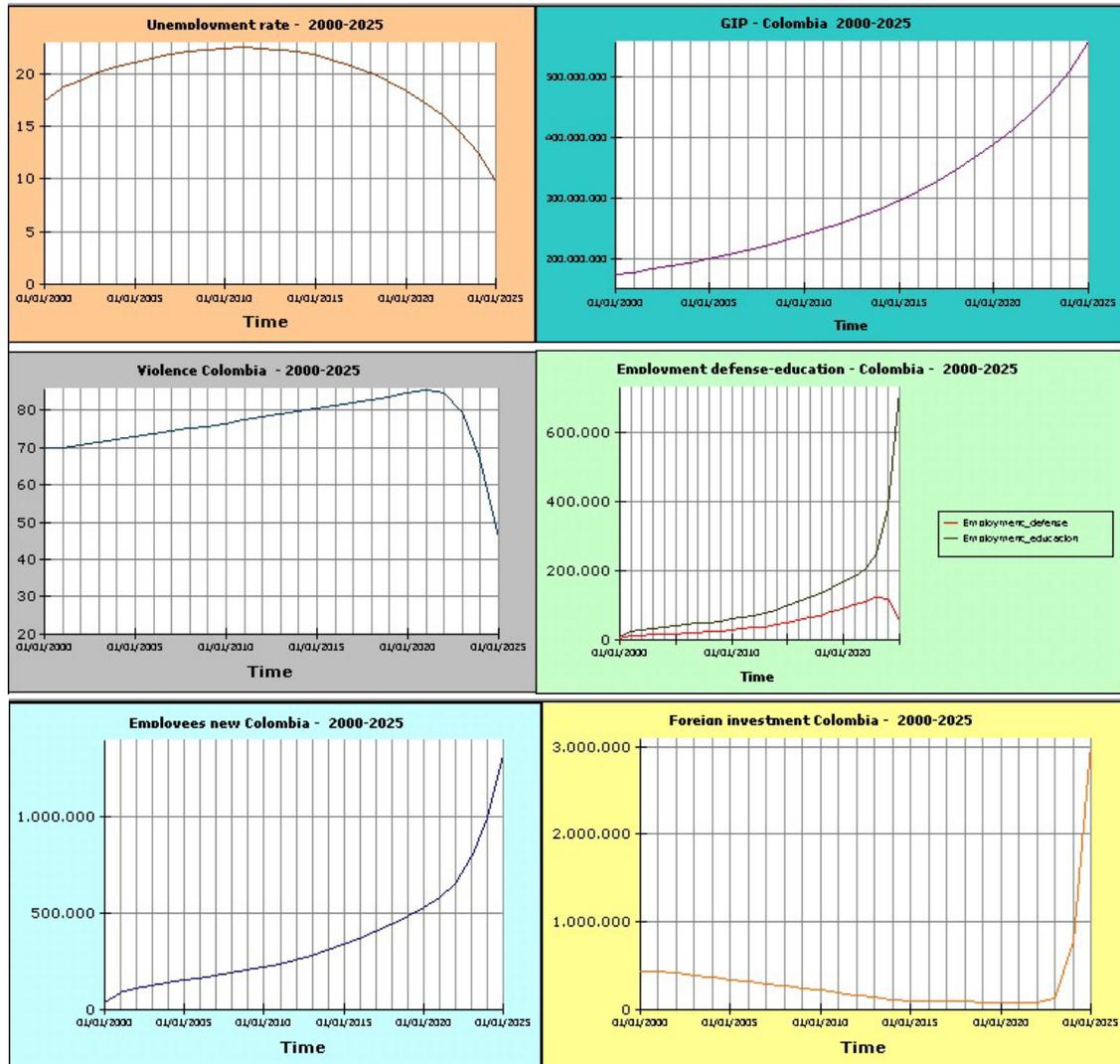


Figure 8 - Optimistic – feasible scenario

TABLE 1. Description of scenarios

DESCRIPTION OF SCENARIOS						
MODIFICATION VARIABLE	OBSERVATIONS	RETROSPECTIVE	TREND	PESSIMIST	OPTIMIST	OPTIMISTA / FACTIBLE
POPULATION GROWTH	Average of growth of the last periods	1,90%	1,70%	1,70%	1,70%	1,70%
DEFENSE	It represents 4% of the GDP Base increase the GDP	33% Social investment	27% Social investment	27% Social investment	27% Social investment	27% Social investment
EDUCATION	It represents the 5,38% of the GDP Base increase the GDP	37% Social investment	36% Social investment	36% Social investment	36% Social investment	36% Social investment
EMPLOYMENT BY MILLION INVERTED IN DEFENSE	To integrate a soldier to the troops cost in 2000 approximately \$18.000.000	1/10 = 0.1 Employment generation by million investment	1/18 = 0.055 Employment generation by million investment	1/25 = 0.04 (\$25.000.000 generated by an employment)	1/12 = 0.083 (\$12.000.000 generated by an employment)	1/18 = 0.055 Employment generation by million investment
EMPLOYMENT BY MILLION INVERTED IN EDUCATION	Average cost of educating to a person for the 2000 is of \$4.000.000	1/2.5 = 0.4 Educated people by million investment	1/4 = 0.25 Educated people by million investment	1/4 = 0.25 Educated people by million investment	1/3 = 0.33 Educated people by million investment	1/4 = 0.25 Educated people by million investment
EMPLOYMENT BY MILLION INVERTED IN THE PRIVATE SECTOR	It is assumed that 50% of private investment are used to generate use, the other part destines for infrastructure and (this second aspect can destroy job	1/10 = 0.1 Employment generation by million investment	1/25 = 0.04 Employment generation by million investment	1/35 = 0.28 (\$35.000.000 generated by an employment)	1/25 = 0.04 Employment generation by million investment	1/25 = 0.04 Employment generation by million investment
EMPLOYMENT BY MILLION INVERTED IN OTHER SOCIAL	\$14.000.000 are the average cost to generate a use in others of social	1/14 = 0.07 Employment generation by million investment	1/14 = 0.07 Employment generation by million investment	1/20 = 0.05 (\$20.000.000 generated by an employment)	1/14 = 0.07 Employment generation by million investment	1/14 = 0.07 Employment generation by million investment
INCREASE OTHERS	Growth average rate in the last periods	2%	1%	0,30%	2%	2%
FOREIGN INVESTMENT	Average year 2000	4.000.000 (millions)	4.800.000 (millions)	4.800.000 (millions)	4.800.000 (millions)	4.800.000 (millions)
PRIVATE INVESTMENT DESTINED TO GENERATE EMPLOYMENT	Base of participation of the increase of the GDP	33%	50%	50%	50%	55%
SOCIAL INVESTMENT	Average rate of the national budget of the GDP - Base increase the GDP	12%	15%	15%	15%	25%
NUMBER OF UNEMPLOYED	Difference between PET and number of employees for the initial period		16.044.040			
NUMBER OF EMPLOYEES	Contracted people	9.947.251 (thousands)	15.697.000 (thousands)	15.697.000 (thousands)	15.697.000 (thousands)	15.697.000 (thousands)
OTHER SOCIAL	It represents the 5,62% of the GDP Base increase the GDP		37% Social Investment	37% Social Investment	37% Social Investment	37% Social Investment
EDUCATED PEOPLE WHO FIND EMPLOYMENT	Effectiveness of the education to generated employment	20%	40%	10%	60%	40%
ECONOMICALLY ACTIVE POPULATION	Base People on Age To work	45%	60%	60%	60%	60%
POPULATION IN AGE TO WORK	Base total population	67%	75%	75%	75%	75%
TOTAL POPULATION	Year bases 2001	36.369.674 (thousands)	42.321.386 (thousands)	42.321.386 (thousands)	42.321.386 (thousands)	42.321.386 (thousands)
GROSS DOMESTIC PRODUCT - GDP	Reach year 2000 Base increase the GDP	137.428.492 (millions)	172.638.403 (millions)	172.638.403 (millions)	172.638.403 (millions)	172.638.403 (millions)
ANNUAL REMUNERATION	Average and interval of the period with projection in agreement with new tendencies of wage increase in the country	6% 6.2 - 10.2 (millions)	6% 10.2 - 41.3 (millions)	6% 10.2 - 41.3 (millions)	6% 10.2 - 41.3 (millions)	6% 10.2 - 41.3 (millions)
RATE OF UNEMPLOYMENT	Initial base period (year 2000)	9,20%	17,50%	17,50%	17,50%	17,50%
VIOLENCE	Indexes (level 1 to 100) Table - initial Period	50	70	70	70	70

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