A Regional Economic Policy for Colombia

Juan David Baron

Gerson Javier Pérez V.

Peter Rowland

Banco de la República*

Abstract

This paper proposes a framework for a regional economic policy in Colombia. The regional characteristics and disparities of the country are studied, and regional disparities are shown to be both significant and persistent over time. This calls for a policy initiative to promote the development of the poorer regions of the country. The study here draws lessons from other cases of regional economic policy, and proposes a framework based on the regional policy initiative that is currently being implemented in Brazil.

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1 Introduction

Although finding answers to some specific questions regarding regional economies may be interesting *per se*, there are important reasons for studying the regional economic situation in Colombia. Traditionally, regional economic disparities are undesirable, especially when they are persistent over time. With an adequate knowledge about the regional economies, it could be possible to design efficient policies to reduce such disparities.

Colombia currently does not have a regional economic policy directed at reducing regional disparities. Even if moderate by Latin American standards, regional disparities in the country are both significant and persistent, and this might call for the development of such a policy.

The study presented in this paper is part of a project aimed at developing a set of policy recommendations that could define the foundation for a future regional economic policy in Colombia. The first phase of this project was to study the regional-policy initiatives implemented in other countries, and evaluate their effectiveness. The European Union, Spain, Italy and Brazil were identified as cases bearing particular importance for Colombia.

The European Union has a well-developed and relatively transparent regional policy to support the poorer regions of its member states. These policy initiatives have been extensively researched and documented. The enlargement of the Union, which is taking place this year, has, furthermore, resulted in a thorough reform of current policies and has also induced an interesting debate and considerable research in this area. Spain and Italy are both Latin countries with a long history of active regional policy. Both countries have implemented a large set of initiatives with mixed results. Finally, Brazil is the only Latin American country with a well-developed regional policy. It is also a middle-income country and has, thereby, many similarities with Colombia. The study of these four cases was documented in Pérez and Rowland (2004).

The second phase of the project concentrated on Colombia, and aims to draw some lessons for the development of a regional-policy initiative for the country. This part of the study is presented in this paper.

The remainder of the paper is organised as follows: Section 2 discusses regional economic policy in general and what policy instruments are available. The section also includes a literature review and a review of the cases of Spain, Italy and Brazil. Section 3 continues with a study of the regional characteristics and disparities of Colombia. In section 4, lessons for Colombia are drawn from the earlier analysis and some policy recommendations are made. Section 5 finally concludes the paper.

2 Regional Economic Policy

Regional policy exists because of the persistence of regional disparities in a range of variables, which have a large impact on the economic welfare of a nation's inhabitants. However, the existence of regional disparities in economic welfare is in itself *not* a sufficient condition to justify the development of a regional policy in a country. In fact, regional policy should be regarded as an important component of a broader economic policy that covers national policy objectives. It should be mentioned that regional disparities may cause severe problems, since they might indeed prevent the achievement of national policy objectives, such as providing adequate job opportunities or distributing income and wealth more equitably. In addition, such disparities may have political and social consequences. Section 2.1 presents a set of instruments available for the design of a regional policy. In section 2.2, the relevant literature of the area is surveyed, and section 2.3 looks at the regional policy initiatives of Spain, Italy and Brazil, which are three cases of particular importance for Colombia.

2.1 An Overview of Regional Policy Instruments

This section presents some regional policy instruments that are available for decision makers.[1] Those instruments can be classified as *macro-policy* and *micro-policy* instruments. From a regional point of view, policy instruments are designed either to influence the allocation of productive resources or to change the level of income and expenditure in specific regions. In that sense, macro-instruments are concerned with changing aggregate regional income and expenditure, while micro-instruments of regional policy are concerned with the design of incentives to allocate capital and labour between regions and industries.

In practice, *macro-policies* are designed to have different impacts in different regions. The effect of that impact depends on the objective the macro policy is pursuing. That is, deliber-

ately introducing a regional dimension into the macroeconomic management of the national economy so that changes in output and employment can be induced in specific regions. For example, a depreciation of the exchange rate or an expansion of the economy through fiscal or monetary policies will have different effects in the output and employment of different regions. Regional economies, furthermore, tend to respond differently to national shocks.

The major objective of *micro-policies* is to cause labour and capital to allocate in areas (or regions), which they would normally not choose. There are various ways in which micro-policy instruments can be used to induce a reallocation of labour and capital, as illustrated by figure 2.1 and 2.2.

Policies to reallocate labour cover all kinds of instruments oriented at inducing labour to move into those economic activities where its marginal product is highest.[2] As can be seen in figure 2.1, there are two major ways that can be used to reallocate labour. First, there are the *in situ* mobility policies to reallocate labour. This kind of policies aims at increasing the occupational and industrial movement of labour in existing regions. Occupational training and retraining of workers, and education policies are two examples of *in situ* mobility policies of labour. Second, there are *transfer* policies. This type of policies is directed toward inducing a shift in the supply of labour between regions.

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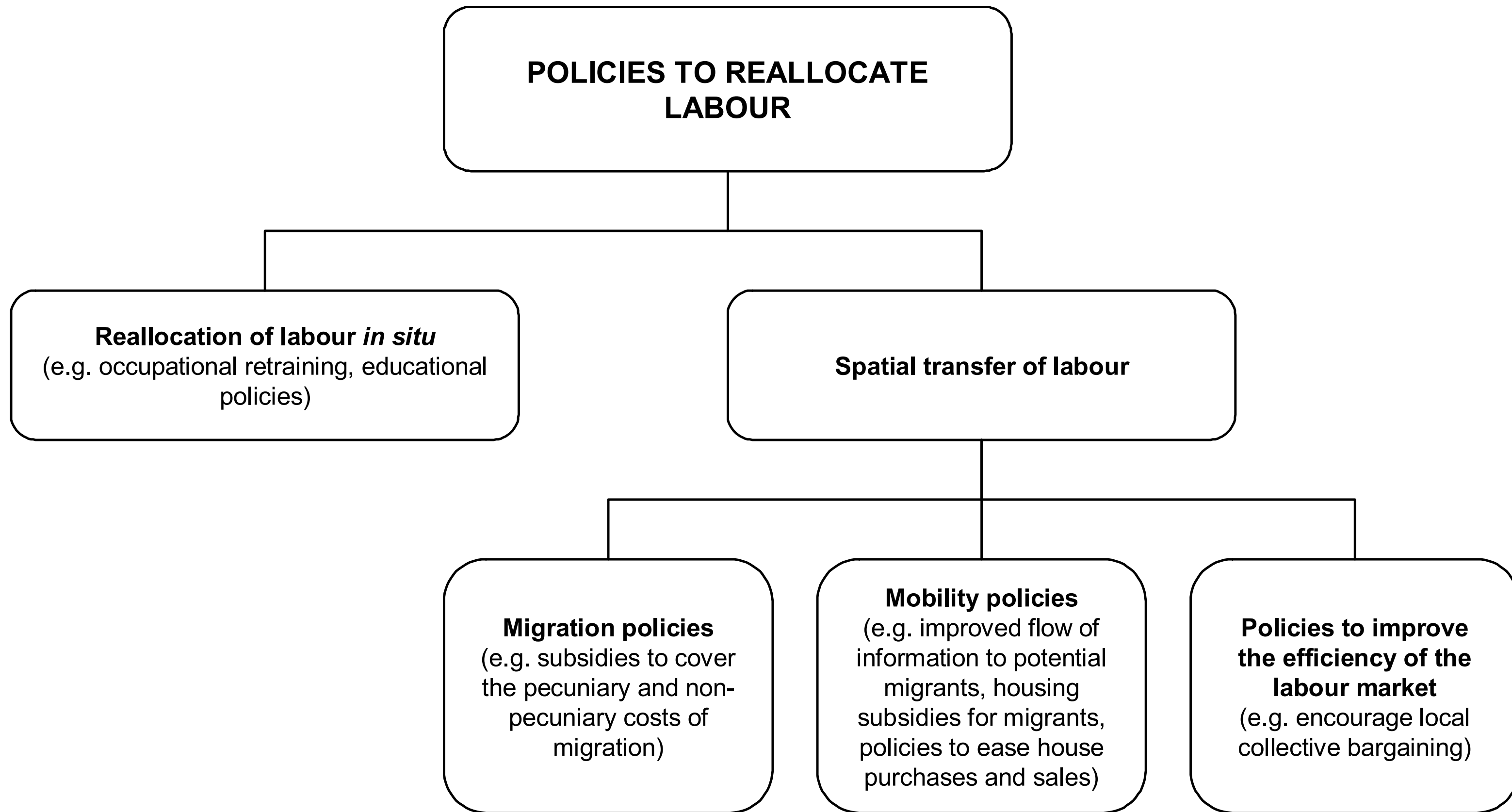
[1] This section is based on Armstrong and Taylor (2000).

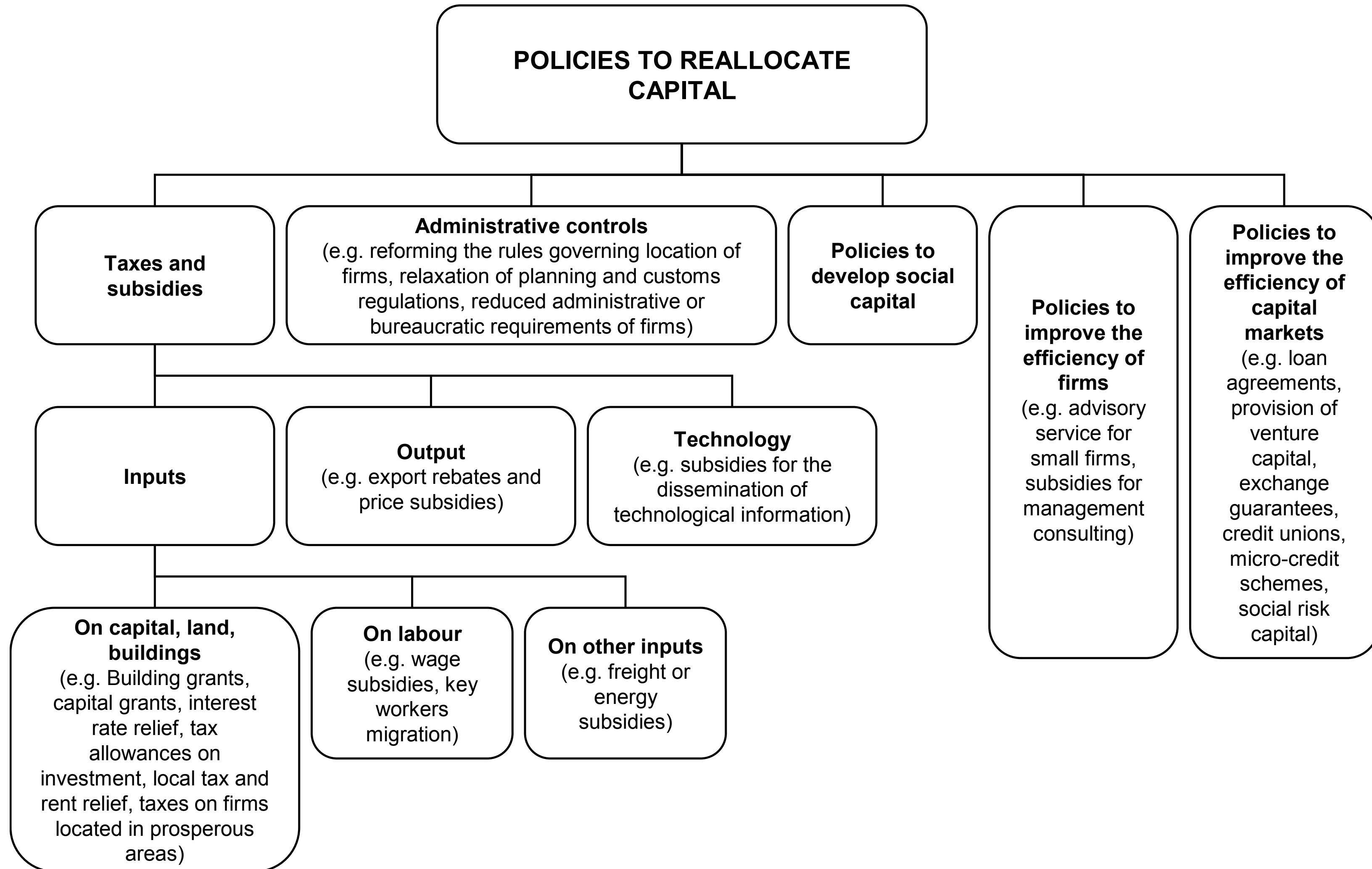
[2] There are examples of policies aimed at reallocating labour into areas where marginal productivity is not optimal. This is normally undertaken to satisfy political pressure groups. Such misuse of regional policy instruments is a significant risk, which will be discussed in chapter 4.

Figure 2.1: Policies to reallocate labour



Source: Armstrong and Taylor (2000).

Figure 2.2: Policies to reallocate capital



Source: Armstrong and Taylor (2000).

It is important to take into account that labour does not respond quickly to regional differentials in wage rates or unemployment rates. In fact, labour mobility is far from perfect (between regions or between occupations). Regional policy emphasis has in many cases been placed on policies designed to move capital into lagged areas instead of policies designed to increase the mobility of the labour between regions. This is because reducing the impediments to migration is much more difficult than directing capital flows to specific regions. Moreover, there is the fear that encouraging migration could worsen the economic situation of lagged regions, because people who tend to migrate first are the most qualified.

There are three different groups of impediments to labour mobility between regions: First, wage differentials between regions (occupations as well as industries) often do not respond to corresponding differentials in the marginal labour productivity. Second, even if such differentials do occur, labour may not fully perceive them. Third, even if differentials occur and are perceived, there are costs associated with migration.

A reason for the failure of earnings differentials to reflect the differential marginal productivity of labour is the existence of imperfect labour markets. When occupational wages are established nationally, earnings differentials between regions do not respond to the efficiency of the marginal worker. That is, for example, the case in Colombia with the *minimum salary,* which is the same in the whole country, even if labour productivity varies significantly between the regions. Because markets are given the wrong economic signals, labour migration will not occur.

Government policies can encourage plant-level bargaining rather than national-level bargaining so that wages become responsive to local labour market conditions. This could help to alleviate the gap between earnings differentials and marginal productivity of labour differentials.

The second group of impediments to labour migration appears when the potential migrants do not perceive the opportunities available for them in other regions. That is because information, which is crucial for the appropriate functioning of the labour markets, is incomplete. Potential migrants' decisions are, therefore, based on incomplete information. Individuals who want to migrate need not only job information for themselves but also information about the well-being of their families such as, for example, schools, housing, and living costs in the new region, together with social life and cultural differences. Lack of this kind of information may prevent a potential migrant from moving.

In Britain, for example, this kind of impediments has usually been tackled by an extensive network of government job centres. These centres make more fluent the flow of information. Nevertheless, a good flow of formal information might not be enough.

The third group of impediments to migration is the costs associated with the physical movement from one region to another as well as the cost of changing occupations. First, there are the pecuniary costs of moving or retraining. Another problem is the liquidity constraint of the individual; this usually plays a major role in preventing the migration of workers. The liquidity constraint impedes the workers from moving to another location or getting the necessary training even though it may well pay off in the long run. Second, there are the non-pecuniary costs that have been shown to have even a greater importance. People will not be willing to leave the region where they have family, friends, and personal ties for another region where they do not.[3] This group of costs also includes those related to the amenities of the regions. Amenities are special characteristics of a region such as the culture, the weather, and the landscape.

[3] In middle-income countries, such as Colombia, which lacks a social safety net, this constraint becomes very important. Low-skilled workers and their families generally depend on family and friends to help them if they should become sick or unemployed.

Governments have attacked the problems of financial impediments to labour mobility in many ways. A government could encourage and finance training, retraining, and migration schemes in the private sector. It could also intervene directly by offering retraining programmes or providing grants to trainees. In general, these policies are designed to stimulate migration by reducing the cost of moving.

Costs that have proved more difficult to deal with are the non-pecuniary ones. Programmes designated to subsidise only the pecuniary costs of migration are generally not effective unless combined with the right kind of attractions in destination regions. A good example of how non-pecuniary costs can be alleviated is the British new town policy, which in the past provided a *package* of job, home, and urban facilities. However, some argue that this type of costs should not be subsidised.

Regional policies, aimed at encouraging the mobility of the labour force between regions or occupations, try to match the demand and supply for labour by operating in the supply side of the market. This kind of policies take as given the skill structure, the geographical pattern, and the industrial distribution of labour demand. On the other hand, the complementary policy is to improve the degree of matching between the demand and supply for labour by redirecting the demand for labour to regions with excess supply, which are often underdeveloped regions. Inward investment is a potential policy in such regions, but there are also additional instruments of regional policy that induce the growth of investment in indigenous economic activities within regions.

As figure 2.2 shows, policies to reallocate capital toward disadvantaged regions take five forms: First, there are fiscal incentives such as taxes and subsidies to encourage or discourage capital to flow towards specific regions. Second, there are the administrative controls such as regulations on the location of firms, partial or complete elimination of planning and custom regulations, or reductions of administrative and bureaucratic requirements on firms. Third, there are policies to develop social capital. These normally take the form of community development initiatives. Fourth, there are policies to improve the efficiency of firms. These kind of

policies aim at helping firms to improve their production and management processes, through consultancy and advisory services in poorer regions. Fifth, there are policies designated to improve the efficiency of the capital market. The idea behind these types of policies is to provide easy access to financial resources in lagging regions.

Of all these instruments, three have been of particular importance in regional economic policy: labour and capital subsidies, administrative controls, and community development initiatives. The most extensively used have, nevertheless, been capital subsidies.

Capital subsidies can be established (in the case of a lagged region) on firm inputs, firm outputs, or on technology research and dissemination. Moreover, subsidies to inputs are of three classes: (i) on capital, land, or buildings, such as building grants, capital grants or local tax and rent relief; (ii) on labour, such as wage subsidies and expertise labourers migration grants; and (iii) on other inputs such as transport cost subsidies or energy subsidies. The idea with all three is to improve the competitiveness of firms in underdeveloped areas where high unemployment is present. Another type of subsidy on inputs is on technology such as for research and development of new products, and for the dissemination of technological information. Alternatively, output could be subsidised as well. This enables firms to sell products at lower prices.

2.2 Survey of Relevant Literature

As discussed in the previous section, a regional policy should have as its main objective to support lagging regions. To design an efficient regional policy, it is, nevertheless, important to establish the overall impact of the policy on the prosperous regions as well, because it is impossible to assess the effect of a regional policy on the national economy unless we know its impact on both underdeveloped areas and prosperous areas.[4] There is a wide-ranging literature dealing with the regional policy topic. Some of the papers approach the issue from a micro

[4] See Tyler (1980).

point of view, and others from a macro-level. A large number of specific country studies exist. Different models and methodologies have been used, but all of them with the common objective of analysing and assessing the impact of regional policy, not only on provinces and regions of a country, but also on countries forming economic unions.

In a recent and important paper, Shankar and Shah (2001) examine the regional policy performance across different countries. Their objective was to empirically test the hypothesis that a *decentralised fiscal constitution leads to increased regional inequalities in developing economies*. Using multi-country data,[5] they carried out some exercises in order to measure inequality. First they calculated a number of static measures, such as, for example, maximum to minimum ratio, coefficient of variation, relative mean deviation, Gini index and Theil index; then they used a dynamic measure to develop a time profile of static measures of inequality and their time path. In this way, they were able to approximate two key regional concepts, *strong* and *weak* convergence. The former implies that equality in factor productivity and income levels is always achieved, while the latter implies that some allocation of productive factors take place. First, their results showed that regional development policies have failed in many countries, both in federal and in unitary ones. Also, federal countries were those suffering the most from regional inequalities. This, they concluded, is because large inequalities has a larger political impact on a unitary government than on a federal government.

In their study, Shankar and Shah also showed which countries experienced regional income divergence, no significant change in regional income disparities, and those with regional income convergence. At the regional policy level, the authors concluded that countries experiencing divergence were those with strong interventionist regional policies. Countries experiencing convergence were those who carefully adopted regional development policies, taking into account their impact both at a national and a regional level. Economic unions also belong

[5] The authors used data on industrial and non-industrial countries, taken into two groups: federal and unitary ones. Industrial federal countries studied included Canada, United States, Germany, Former West Germany and Spain, and the unitary ones included France, Italy and United Kingdom. The federal non-industrial countries studied included Brazil, India, Mexico, Pakistan and Russia, and, finally, non-industrial unitary countries included Chile,

to the success stories, since the negative impact of any regional policy generally is thoroughly analysed in such a union before the policy is implemented.

In the same way, several other studies have been analysing the effectiveness and performance of policies aimed at reducing regional disparities. Such studies include, for example, Faini and Schialtarelli (1987), Moore and Rhodes (1976), and Berentsen (1978) and Tyler (1980), which all analysed country-specific regional policies from a macro point of view, while studies like Ashcroft and Taylor (1977) analysed regional policy implications through the movement of the manufacturing industry. In the case of regional policy specific modelling, Treyz, Friedlaender and Stevens (1980) developed a regional policy simulation model for the labour sector. Since this set of studies is of particular interest for the discussion in the following sections, they are presented in more detail here.

Faini and Schiantarelli (1987) study the performance of regional policy in Scotland. They had two main objectives, which were to show how regional issues could be included into an investment model, and to explain aggregate manufacturing investment in the country for the period 1961 to 1979. They use a model of the firm[6] and a single equation (OLS and FIML) methodology. The results indicate that local effective factor prices are very important in the determination of regional allocation of investments, and particularly that labour costs in developed areas have a very important effect on investment in backward regions. They also found that both incentives to stimulate capital and subsidies to reduce labour costs are highly significant in influencing the investment allocation.

China, Indonesia, Nepal, Philippines, Poland, Romania, Sri Lanka, South Africa, Thailand, Uganda, Uzbekistan, and Vietnam.

[6] Assumptions of the model are: a putty-clay technology and a linear homogeneous ex-ante production function; the firm is a monopolistic competitor producing homogeneous goods that are substitutes for one another in two different plants located in different regions; two duopolistic competitors, each one located in a different region; regional independence in investment decisions; and rational expectations about optimal output consistent with steady state.

A number of studies have analysed the behaviour over time of regional development in the United Kingdom. One of those papers is by Moore and Rhodes (1976), who analysed the effectiveness of regional policy during the post-war period. Their main objective was to estimate the impact of several instruments of regional policy, taking into account the movement of firms into developing areas, as well as to assess the labour market behaviour and the economic implications resulting from these moves.[7] Regional policy instruments taken into account were the Industrial Development Certificate (IDC), regional differentiated investment incentives, the regional employment premium, together with the overall pressure of demand. Through these variables, the authors tried to measure the impact on the number of moves to British development areas.[8] Their conclusion was that all these policy instruments had a strong effect in generating moves of manufacturing firms to development areas. So, in summary, the regional policy was highly successful in generating new factories in development areas during the period studied.

Tyler (1980) is another study of the United Kingdom. He analysed the West Midlands during the fifties, sixties, and first half of the seventies. The objective of the study was to determine whether the worsening economic problems of the region were the result of regional policy, of changes in the national economy, or of other factors. The author specifically wanted to prove the hypothesis that "regional policy, by redistributing demand from prosperous regions to development areas, enables the economy to be run at a higher level of demand but with the same pressure of demand in the prosperous regions".[9] He estimated single equation regression models, where the dependent variable was the number of outward moves from the West Midlands, to be explained by the male unemployment rate, investment into the region, Industrial Development Certificate control in West Midlands, and regional employment premium.[10] The results indicated that the regional policy was not the cause for manufacturing jobs to be lost in the region. Instead, the main cause was the rapid growth of national manufacturing employment in

[7] Moves were defined as the opening in a new location of a new manufacturing establishment.
[8] The study used single equation OLS methodology, for a period from 1945 to 1974.
[9] Tyler (1980).
[10] The last three variables were lagged.

combination with the less favourable industrial structure from the late sixties onwards of the West Midlands.

Ashcroft and Taylor (1977) analysed the U.K. manufacturing industry as an object of great interest in evaluating regional policy. They were looking for the causes of the movement of manufacturing industry to development areas between 1961 and 1971. They used two models, one generation-distribution model and one investment-demand model, together with multiple regression analysis. The variable to be explained was, as in Tyler (1980), the moves into the development areas. This was explained by regional policy variables, such as labour and capital subsidies and location controls, and other variables, including male unemployment rate,[11] spare capacity index, index of industrial production, and the index of investment expenditures. The results obtained indicated that regional policy was not the only factor affecting the movement of industry to the development areas, and neither was it the most important one. The authors showed that the contribution from the regional policy to industrial moves were never more than around 40 percent.

The regional earnings structure is another area that has attracted significant attention in the empirical literature. One such study on the United Kingdom is Hart and Mackay (1977), who proposed and tested the *earnings spread hypothesis*.[12] The paper studies the transmission mechanism through which earnings increases from the so-called *leading* market are transferred to the *lagging* market. The estimated equation has the rate of earnings changes as the dependent variable, and nationally determined price changes and the level of unemployment[13] as independent variables.[14] The authors found that a single equation approach showed little evidence of stability of the money wage earnings structure across regions, as the result of changes in regional money wages were offset by the national retail price index. Simultaneous equation

[11] This variable was used as a measure of the demand pressure.
[12] They defined this hypothesis in the following way: "earnings changes in the leading market are a function of the excess demand for labour in that market, and earnings changes in the leading market are passed on, in the whole or in part, to the lagging markets". Hart and Mackay (1977), p. 267.
[13] In this case, this variable is used as a measure of the excess demand for labour.
[14] The econometric methodology used to estimate the model was a single equation OLS, as well as a multiple equation 2SLS.

estimates showed that in the pre-war period there was a two-way spread between London and the other markets, while in the post-war period emerging regional wage leaders appeared to transmit earnings increases back to London as well as to other local markets. In this sense, earnings increases can be transferred from one region to others even if labour mobility is limited.

Austria has been another country attracting significant interest, because of its long history of regional policy. As in many European countries, Austria saw its economic indicators worsening during the post-war period. Many of its regions faced falling real incomes, high rates of unemployment and persistent out migration. Regional problems were particularly severe in the eastern parts. Austria's regional policy consisted of several strategies in order to reduce inequalities in regional incomes and living standards, and to reduce out-migration from rural areas. Nevertheless, the federal government has only limited authority in regional policy, and there is a high degree of dispersion of regional planning responsibilities, which makes the implementation of regional policies in the country more complicated. Later, federal and regional governments adopted *decentralised concentration* as a regional planning policy, which has been criticised because its lack of theoretical foundation. Berentsen (1978) did an evaluation of the Austrian regional development policies in order to establish if regional policies had had any effects in reducing regional inequalities between 1957 and 1971, and if it had reduced out-migration from rural areas during that period. The national government had defined six *problem regions in need of assistance*, including the *dead borders*,[15] as well as some other rural and poor industrialised regions. Results of the study indicated that regional policies had an important positive impact in lessening regional inequalities and the out-migration from rural areas.

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[15] This type of regions have been characterised by agricultural areas, near to the Czech, Hungarian and Yugoslav frontiers.

The European Union is another prominent case in the area of regional policy.[16] In addition to the regional-policy initiatives of its individual member states, the Union has a well-developed and sophisticated regional policy to support the development and structural adjustment of the lagging regions of its member states. An extensive literature exists on the European Union, its regional disparities, its regional policies, and the regional consequences of its enlargement.[17]

Funck and Pizzati (2003) edited a wide range of papers covering the most recently discussed topics of regional growth and regional policy in the European Union. Subjects such as convergence, economic geography, the enlargement and economic development are discussed and analysed, and a number of country cases are included. The conclusions of the book are mixed, but there is something close to a consensus among the book's authors that regional policy functions as a substitute for labour mobility, but that it does so at a cost to efficiency. It may reduce regional disparities but at a cost to national growth, since it leads firms to make investments where they would not otherwise have made them. The book is, consequently, critical about the effectiveness of regional policy. Subsidies are, nevertheless, best used to improve education and infrastructure, such as transport, communications, power and water, rather than being spent on business location incentives.

There have also been several works on convergence in the European Union.[18] Boldrin and Canova (2001) analysed European regional policies and regional convergence. They used data, specifically per-capita income, for 185 European regions of the 15 member states for the period 1980 to 1996. Their results indicated that neither absolute convergence nor divergence was taking place during the period. They, nevertheless, conclude that regional policy has acted

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[16] The European Union currently consists of 15 member states: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom. On 1 May 2004, the Union is being expanded by another ten countries: the Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic, and Slovenia.

[17] For example, Armstrong and Taylor (2000), and Bachtler and Yuill (2001). See also Pérez and Rowland (2004).

[18] See, for instance, Boldrin and Canova (2001), Baumont, Ertur and le Gallo (2001), and Barro and Sala-i-Martin (1991).

as an important redistributive instrument, which is motivated by the nature of political equilibrium upon which the European Union is built.

Finally, Treyz, Friedlaender and Stevens (1980) made an important contribution by building a model that has proven useful for forecasting and policy evaluation. This model includes features such as factor substitution, location effects[19] and the quantification of the relative magnitudes of the factor-substitution effect and location effect. In the general equilibrium analysis they established simultaneous models of the regional economy using the *Massachusetts Economic Policy Analysis (MEPA)* framework.[20] In this sense they showed that it is possible to develop and to implement a model, which meets the requirements of general equilibrium, and also incorporates regional economic and location theories.

2.3 The Cases of Spain, Italy and Brazil

Spain, Italy and Brazil are three cases that bear particular importance for Colombia. They are all Latin countries with a long history of regional policy. In addition, Brazil in the only Latin American country with a well-developed regional policy. These cases have all been studied and documented in Pérez and Rowland (2004). We are, therefore, in this section only summarising and evaluating the main features of these policy initiatives.

In Spain, a regional policy was initially developed in the 1960s. A more ambitious regional policy was, however, not implemented until the 1980s, with the creation of the *Comunidades Autónomas*,[21] which were autonomous regional governments. A significant part of the political decision power was decentralised from Madrid to the new regional governments, and these took an active part in the formation of the new regional policy. The main instrument of this

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[19] They defined location effects as the change in any input price in a region relative to that in other output regions will tend to change production costs in the region in question.
[20] See Treyz, Friedlaender and Stevens (1980) for a definition and discussion.
[21] Autonomous Regions.

policy was the *Fondo Compensación Interterritorial*,[22] with the core objective of reducing regional disparities.[23] As a member of the European Union,[24] Spain has been able to enjoy additional regional benefits. As discussed in the previous section, the Union has a well developed regional policy, and the transfers from the European Union to the Spanish regions have in many cases been larger than those from the Spanish Government.[25]

If a regional policy is successful it should generate a clear and sustained convergence among the poorer and the richer regions of a country. A number of studies have been made to evaluate the impact of the Spanish regional policy.[26] The over-all results are inconclusive, and no clear convergence has been shown to take place. In that sense, the regional policy initiatives have not differentially affected the poorer regions in a significant way.

Italy is another country with a long history of regional policy.[27] What is special for Italy is its clear north-south divide, where the North has been very prosperous, while the South, the so called *Mezzogiorno*, has been lagging behind. In the 1950s, when regional policy was first introduced in the country, the South suffered from a critical economic and social situation, low educational levels, low industrial development, high agricultural dependence, and an income per capita of about half that of the northern region. In line with many other European countries, a fund was created to help the south to develop, the *Cassa per il Mezzogiorno* (the Mezzogiorno Fund). It was mainly used for infrastructure and agricultural expenditures, but it also contributed to industrial development projects. Another initiative was the creation of state owned industrial firms, which had to locate 40 percent of their investment and 60 percent of their new plants in the Mezzogiorno, with the objective of being a catalyst for growth. In the early 1990s, Italian regional policies were restructured as the Maastrich Treaty of the European

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[22] Inter-Territorial Compensation Fund.
[23] As a governmental fund, this was created to carry out public investment plans, and takes the form of a regional redistributive grant. See Garcia-Milà and McGuire (1993).
[24] Spain joined the European Union, then called the European Community, in 1986.
[25] See Garcia-Milà and McGuire (2001) for an extensive descriptive study of the Spanish regional policy and its impact.
[26] See, for example, Garcia-Milà and McGuire (2001), and Lamo (2000).
[27] For studies on Italian regional policy, see, for example, Acconcia and del Monte (1999), Paci and Pagliaru (1998), and Paci and Saba (1997).

Union was implemented. Many public companies were privatised, and in 1992, the Mezzogiorno Fund was abolished, and a new framework for regional policy was developed. This implied that not only the Mezzogiorno region was to receive regional development grants, but that all poor areas of the country should be targeted. In the Mezzogiorno, the consequence was a significant reduction in public spending, which resulted in a lower economic growth rate.

If the impact of regional policy is evaluated, the results generally indicate that a limited convergence process took place between the early 1950s and the mid-1970s. However, thereafter, regional inequality has been increasing, especially between the Mezzogiorno and Italy's North. This was particularly the case during the second half of the 1970s, as the Mezzogiorno was severely affected by the recession generated by the first oil shock. From the 1950s and up until now, the Mezzogiorno regions have continued to lag far behind the North. Development has, nevertheless, not been homogenous. While Abruzzo has been the success story in the Mezzogiorno, regions like Sicily seem to be doomed laggards.[28]

Brazil is another interesting case in regional-policy analysis. In line with many other countries, the Brazilian government has used a number of regional policy instruments aimed at promoting growth in the poorer regions of the country. Such policy initiatives include infrastructure investments, incentives for private investments, investment initiatives of the state enterprises, and granting of tax exemptions. In the late 1930s, Brazil implemented a development policy based on import substitution. One of the results of this policy was that the South and the Southeast of the country, and then particularly Sao Paulo, increased its share of the industrial provision at the expense particularly of the North and Northeast, which came to lag far behind. A regional policy was implemented in the 1970s to counterbalance this development. Some special agencies were created to promote the economic growth of the lagging regions: SUDAM in the North, SUDENE in the Northeast, and SUFRAMA in Manaus.

[28] See Helg, Peri and Viesti (2000) for an interesting analysis of this subject.

The results of Brazil's regional policy efforts have been, at best, mixed.[29] The Northeast has not showed a clear improvement. The North and the Mid-West have shown some important improvements in the product growth, but this might be due to the fact that these are frontier states rather than due to a successful regional policy.[30]

Brazil has recently restructured its regional policy, and a number of policy initiatives are currently being implemented in order to reduce regional inequalities. The most important of these is the *Programa dos Eixos Nacionais de Desenvolvimento*, which is a long-term regional development programme that divides the country into nine development areas, *eixos*.[31] The objective of this new classification is to divide the country into areas with similar geographical and social-economic conditions in order to exploit economies of scale and comparative advantages. In this way, regional growth will be promoted through developing current strengths and present advantages.

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[29] See, for example, Gomes (2002), and Markusen (1996).

[30] Frontier states are those with large unexplored land areas. High economic growth rates in such states are often due to exploration of new land areas rather than to a successful regional policy initiative.

[31] *Eixos Nacionais de Integração e Desemvolvimento* are formally defined as territorial spaces delimited to planning targets according to socio-economic and environmental dynamics.

3 Regional Disparities in Colombia

Due to its mountainous geography, Colombia is more culturally and geographically diverse than many Latin American countries. Large parts of the country are very isolated, and infrastructure construction is in many cases posting a great challenge. In this section, we will study the economic disparities between the different regions of the country. Section 3.1 introduces the geographical characteristics of the country and discusses the regional impact of the historical development of the country as well as of the violence it has suffered in some particular periods. Section 3.2 discusses the economic differences between the different regions, and in section 3.3, Colombia's regional disparities are placed in an international context.

3.1 An Introduction to Colombia and Its Regions

As it can be seen in figure 3.1 and table 3.1, Colombia is divided in 32 departments and a capital district, Bogotá.[32] Bogotá is also the nation's capital city and has 6.5 million inhabitants, which is 15.2 percent of the total population of the country.[33] The second and third most important cities are Medellín (Antioquia) and Cali (Valle del Cauca)[34] with some 2.0 and 2.2 million inhabitants, respectively.[35] It should be noted that Bogotá, Medellín, and Cali are all inland cities.

[32] In the rest of this paper we will include Bogotá in Cundinamarca, even if it is administratively a separate entity (a capital district).
[33] Population information is for 2001.
[34] Valle del Cauca is often also referred to only as Valle.
[35] Medellin is, in reality, significantly larger than Cali. The Medellin metropolitan area has some 2.9 million inhabitants, while the Cali metropolitan area has some 2.4 million inhabitants. The respective department is named in parentheses after the city.

Figure 3.1: The Colombian departments

Source: Instituto Geográfico Agustín Codazzi (IGAC).

Table 3.1: Basic characteristics of the Colombian departments

Department	Population (inhabitants)	Area (km2)	Capital city	Altitude of the capital city (meters)	Average temperature of the capital city (degrees Celsius)
Antioquia	5,454,871	63,612	Medellín	1,486	20
Atlántico	2,174,929	3,388	Barranquilla	30	28
Bolívar	2,043,508	25,978	Cartagena de Indias	2	28
Boyacá	1,375,222	23,189	Tunja	2,782	13
Caldas	1,120,691	7,888	Manizales	2,216	16
Caquetá	427,823	88,965	Florencia	450	26
Cauca	1,277,129	29,308	Popayán	1,738	19
Cesar	979,443	22,905	Valledupar	169	28
Córdoba	1,337,610	25,020	Montería	18	28
Cundinamarca	2,184,664	22,623	Bogotá	2,600	14
Chocó	408,560	46,530	Quibdó	43	28
Huila	939,136	19,890	Neiva	442	27
La Guajira	491,511	20,848	Riohacha	3	28
Magdalena	1,308,493	23,188	Santa Marta	6	27
Meta	714,659	85,635	Villavicencio	467	25
Nariño	1,661,323	33,268	Pasto	2,527	14
Norte Santander	1,375,374	21,658	Cúcuta	320	27
Quindío	572,565	1,845	Armenia	1,483	20
Risaralda	960,585	4,140	Pereira	1,415	21
Bogotá D.C.	6,573,291	1,587	Bogotá	2,600	14
Santander	1,989,666	30,537	Bucaramanga	959	24
Sucre	809,647	10,917	Sincelejo	213	26
Tolima	1,300,944	23,562	Ibagué	1,285	22
Valle del Cauca	4,246,896	22,140	Cali	995	23
Nuevos Departamentos	1,306,852	483,127			
Amazonas	72,445	109,665	Leticia	96	29
Arauca	248,440	23,818	Arauca	125	28
Casanare	293,391	44,640	Yopal	350	26
Guanía	38,370	72,238	Puerto Inirida	100	29
Guaviare	120,361	42,327	San José del Guaviare	240	28
Putumayo	341,513	24,885	Mocoa	595	25
San Andrés y Providencia	75,445	44	San Andrés	4	29
Vaupés	30,591	65,268	Mitú	180	27
Vichada	86,296	100,242	Puerto Carreño	90	28
Colombia	43,035,392	1,141,748	Bogotá	2,600	14

Note: Population figures as of 2001.

Source: Instituto Geográfico Agustín Codazzi (IGAC), and DANE.

Barranquilla (Atlántico), Cartagena de Indias[36] (Bolívar), and Santa Marta (Magdalena) are the largest coastal cities in Colombia with a total population between them of 2.6 million inhabitants. All these cities are located on the Caribbean Coast and they are more developed than the coastal cities of the Pacific Coast, of which Buenaventura (Valle del Cauca) is the largest, with some 276,000 inhabitants.[37] Buenaventura, nevertheless, has Colombia's largest port.

It should be mentioned that the most developed part of Colombia is its inland area, especially departments such as Cundinamarca (Bogotá included), Antioquia, Valle del Cauca, and Santander. These departments have well-developed commercial and industrial bases, especially in their capital cities. Antioquia, Valle del Cauca, and Santander also have an important agricultural industry.

On the contrary, peripherical departments such as Sucre, Cesar, and Magdalena, on the Caribbean Coast, Chocó, Cauca, and Nariño, on the Pacific Coast, and almost all the Nuevos Departamentos[38] are the underdeveloped areas in Colombia. Except for some of the Nuevos Departmentos, these departments base their economies on agriculture and cattle farming. In some Nuevos Departmentos, such as Arauca and Casanare, the exploitation of minerals is also an important part of the economy. Other departments with significant mineral resources are La Guajira, Cesar, and Meta.

The climatic and geographical characteristics of Colombia are other important factors in explaining the regional disparities of the country. Although located in the tropical zone of the world, Colombia has diversified climates because of the three mountain ranges that cross the country from south to north. As can be seen in table 3.1, the altitude of the capital cities of the different departments varies from 2 up to 2,800 meters above sea level, while average annual temperatures vary from as low as 13 up to 28 degrees Celsius. The three largest cities are, furthermore, located at considerable altitudes, which gives them a much colder climate than the

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[36] Cartagena de Indias is normally referred to only as Cartagena.
[37] DANE projection for 2004.

hot tropical climate typical of the coasts. The average temperature of Bogotá is, for example, as low as 14 degrees Celsius due to its high altitude of 2,600 meters above sea level.

It is, furthermore, difficult to analyse the regional disparities in Colombia without a good knowledge of the country's historical background. Colombia's historical development can, in fact, to a large extent explain many of the regional differences that exist in the country today.

The history of Colombia can be divided into four distinct periods: Pre-colonial era, conquest, colonial era, and modern era. Before and during the conquest, the population was generally clustered in the highlands in order to avoid high temperatures and all associated diseases. The highlands were also more favourable for agricultural activities. Even today, two thirds of the population live in the highlands, even if these constitute less than half of the land area of the country.

During the colonial era, the Caribbean coast came to be the most important place for international trade. Cartagena was at the time the main port. Barranquilla and Santa Marta also developed into important ports, and the three accounted for the great majority of the international trade flows in and out of the country.

In the history of Colombia, the Magdalena River deserves a special mention as one of the most important transportation links. The three mountain ranges that cross the country made land communication very complicated and expensive. For this reason the Magdalena River developed into the most important transportation link inside the country. A number of settlements developed along the river and transportation links were established both upstream and downstream. Even so, the difficulties of transportation and the country's complicated geography kept the inhabitants isolated from each other. Safford and Palacios (2002) tell us that:

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[38] Nuevos Departamentos (New Departments) include Amazonas, Arauca, Casanare, Guainía, Guaviare, Putumayo, San Andrés y Providencia, Vaupés, and Vichada.

> Travellers from the colonial era through most of the nineteenth century have left a vivid record of the horrors of ascending or descending the mule path connecting Honda, the principal upriver port of the Magdalena River, with the Sabana de Bogotá, the highland plain on which the capital city was established.[39]

In accordance with Safford and Palacios (2002), Colombia can from an historic point of view be divided into three distinct geographical regions: the East, the West, and the Caribbean Coast. These regions developed widely different economical, social and political features. Interregional trade was very limited because of the geographical characteristics of the country and the associated high costs of overland transportation. These three regions were, furthermore, split into many sub-regions, resulting in a highly fragmented population and only a few stable cities like, for example, Bogotá, Popayán and Cartagena.

Another important factor when analysing the regional development of Colombia is the violence that has plagued the country. It would be difficult to correctly establish what type of regional policy to implement without a thorough study of violence and its relationship with other social political and economic aspects. Poverty, drug trafficking, guerrillas and displaced people all have strong relationships with violence. The violence has, furthermore, been concentrated to certain regions of the country.

The most violent parts of the country have historically been in rural areas, where property rights are weak and where the concentration of lucrative commercial goods is high.[40] This situation dates back to the first half of the nineteenth century and the colonialisation of the country, when violence generated migration flows of displaced people looking for less dangerous regions. Up until this date, people in violent rural areas have tended to migrate either to the cities or to less violent frontier regions. However, the frontier regions have tended to quickly turn violent, since its inhabitants to a larger extent are exposed to illegal activities.

[39] Safford and Palacios (2002).
[40] See Legrand (1994).

There are clear relationships between violence, displaced people, guerrillas and drug trafficking. It is, however, less clear when and how these relationships were created. For example, Legrand (1994) indicated that in Guaviare the guerrillas came before drug trafficking, but in Caguán, the story was the opposite. This process has been converging until a point where the guerrilla movement is deeply involved in drug trafficking, and this is, indeed, its main source of financing today.

To study the regional characteristics of Colombia and to develop a regional policy, a good understanding of the institutions and groups involved and their individual and joint interactions with regional development is essential. Such institutions and groups include the national and regional governments, the guerrilla movements, drug traffickers, displaced people, as well as other institutions and sectors of the economy.

3.2 Regional Characteristics of the Colombian Economy

According to DANE,[41] the Colombian GDP was some COP 187.9 trillion in 2001, corresponding to USD 81.7 billion.[42] Of this amount, 53.2 percent was produced by three departments: Antioquia (14.6 percent), Cundinamarca including Bogotá (27.1 percent), and Valle del Cauca (11.4 percent). On the contrary, the ten departments that contributed less to the domestic product participated only with 12.5 percent of the total production. This suggests that there are considerable differences in economic activity and because of that, there are differences in regional welfare.

Anyone who studies per-capita regional GDP would find some considerable regional disparities, which are important to mention. The presence of such disparities is clearly illustrated by the map in figure 3.2. In addition, Figure 3.3 shows regional per capita GDP for the three rich-

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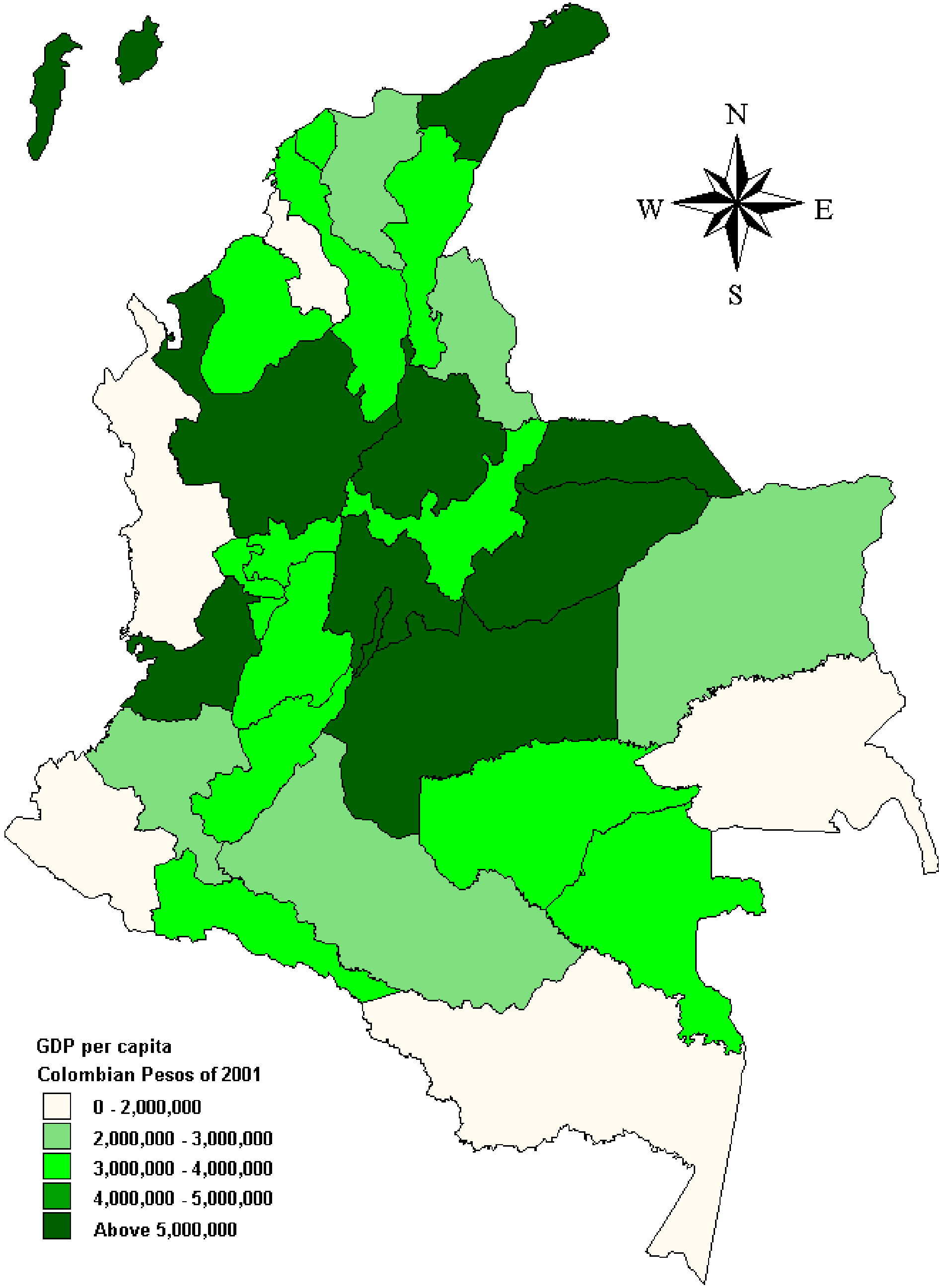
[41] Departamento Administrativo Nacional de Estadística, the Colombian national statistics department.
[42] This paper uses Anglo-Saxon terminology, where one billion equals 1,000,000,000 and one trillion equals 1,000,000,000,000.

est and the three poorest departments in Colombia over the period 1980 to 2001. In this figure is important to emphasise three things. First, the group of the richest (Antioquia, Valle del Cauca, and Cundinamarca including Bogotá) grew significantly faster than the group of the poorest (Chocó, Nariño, and Sucre). In fact, it is apparent from the figure that GDP per capita of each department of the group of the poorest remained relatively stable over the whole period, while the GDP per capita of the richest departments has been growing almost every year since 1980. Second, the gap between the per-capita GDP of the richest and that of the poorest increased from COP 2.61 million in 1980 to COP 3.43 million in 2001, in constant terms. This is a consequence of the growth of the richest and the stagnation of the poorest. In relative terms, while in 1980 the GDP per capita of the poorest was on average 40 percent of the GDP per capita of the richest, in 2001 this figure had fallen to 35 percent. The disparities have, consequently, worsened considerably over the last 21 years. Third, it should be mentioned that all the departments exhibited a contraction of their GDP per capita in 1999. This reduction was particularly important in Cundinamarca (Bogotá included), which in 1999 experienced a contraction of 11.9 percent. The contraction in other rich departments was lower but certainly not insignificant; Antioquia contracted by some 3.9 percent in 1999 and Valle del Cauca by 5.2 percent. In the poorest regions, the contraction was 5.5, 5.6, and 2.8 percent in Chocó, Sucre, and Nariño, respectively.

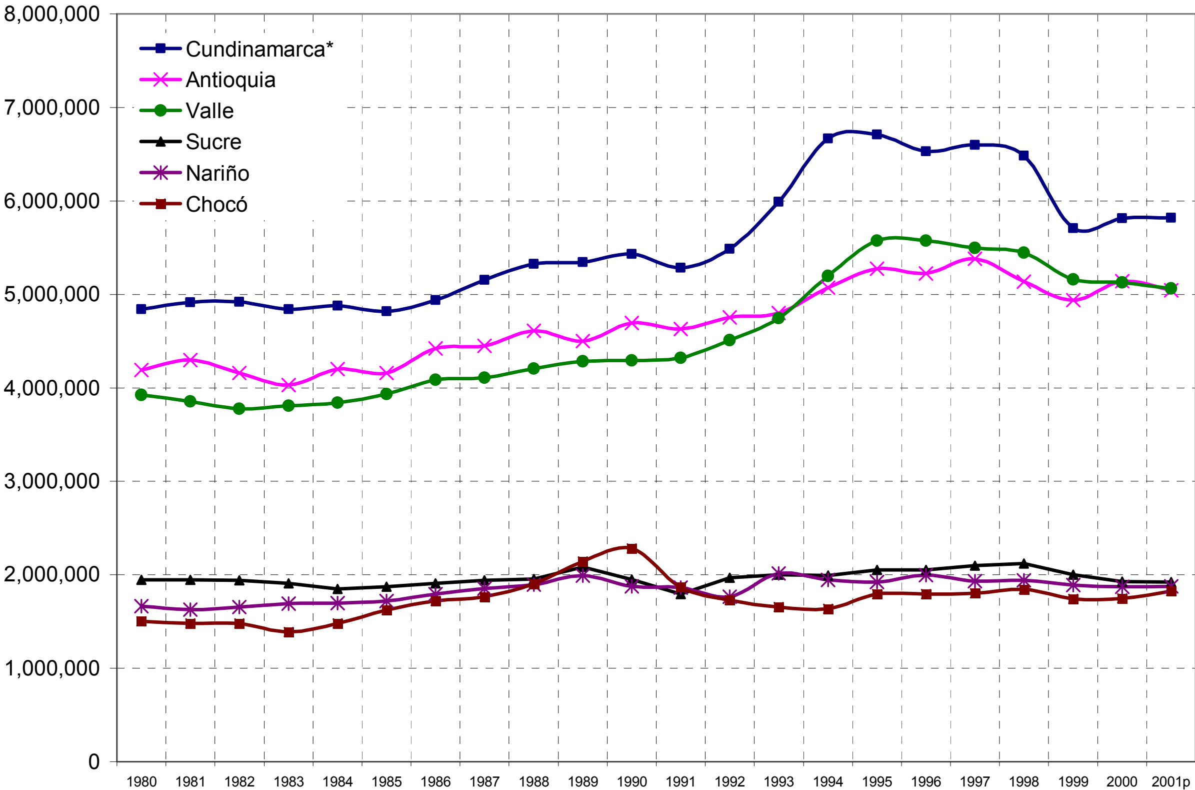
Figure 3.2: Regional GDP per capita, 2001



Note: In 2001, the average USD/COP exchange rate was 2,299.

Source: Instituto Geográfico Agustín Codazzi (IGAC), and DANE.

Figure 3.3: Regional per-capita GDP for the three richest and the three poorest regions of Colombia (constant 2001 pesos)



[*] Cundinamarca includes Bogota.

Note: In 2001, the average USD/COP exchange rate was 2,299.

Source: Instituto Geográfico Agustín Codazzi (IGAC), and DANE.

Table 3.2: Comparative measures and economic growth for the Colombian departments

Department	GDP/capita 2001 (pesos)	GDP/capita 1980 (Colombia = 100)	GDP/capita 2001 (Colombia = 100)	Average annual GDP growth rate* 1980-2001 (%)
Antioquia	2,057,399	122	117	1.28
Atlántico	1,540,130	132	88	-0.51
Bolívar	1,398,715	91	80	0.85
Boyacá	1,382,306	100	79	0.13
Caldas	1,473,030	75	84	1.91
Caquetá	1,107,173	92	63	0.26
Cauca	975,536	51	56	1.67
Cesar	1,340,772	90	77	0.64
Córdoba	1,274,721	61	73	2.37
Cundinamarca**	2,318,054	138	132	1.50
Chocó	760,287	45	43	0.93
Huila	1,456,860	88	83	1.09
La Guajira	1,956,695	48	112	3.93
Magdalena	936,466	53	53	2.05
Meta	2,058,516	126	118	1.61
Nariño	777,263	49	44	0.78
Norte Santander	1,061,504	72	61	0.27
Quindío	1,308,568	119	75	0.02
Risaralda	1,371,044	81	78	1.25
Santander	2,345,318	105	134	2.04
Sucre	788,001	57	45	0.28
Tolima	1,627,078	83	93	2.22
Valle	2,056,709	114	117	2.00
Nuevos Departamentos	2,342,774	85	134	4.50
Colombia	1,751,903	100	100	1.60

* Rates were obtained by ordinary least squares regressions of GDP per capita against an independent variable, which is a linear trend. The functional form is $y_t = y_0\ (1 + r)^2$, which is linear in logs.

** Cundinamarca includes Bogotá.

Source: DANE, and own estimations.

Table 3.2 complements the information in figure 3.3. This table presents GDP per capita for the years 1980 and 2001 as index numbers, where the national GDP per capita is equal to 100. It should be noticed that in 1980 only seven departments had GDP-per-capita levels above the national average. The other 14 departments exhibited lower GDP per capita than the national average. Especially worrying are the cases of the poorest regions mentioned earlier: Chocó, Sucre, and Nariño. These departments have also lost ground in relative terms as can be seen when comparing the 2001 and 1980 figures.

Some other departments, such as La Guajira and some of the Nuevos Departamentos, have improved their conditions because of oil and mineral findings in their territories. In 1980, the GDP per capita of La Guajira was 48 percent of the national average, while 21 years later it was 112 percent. In the case of the Nuevos Departamentos, the GDP per capita increased from 85 percent to 134 percent, of the Colombian average. It should be noticed that La Guajira and Nuevos Departamentos have low population density, so an oil or mineral finding can have a very large impact on GDP per capita.

A further point that should be emphasised is that oil and mineral production tend to distort GDP per capita as a regional welfare measure. A region or department that obtains the main part of its GDP from oil and mineral production does not benefit from this in the same way as a department that obtains its GDP from industrial or agricultural production. In the former case, oil and mineral are the property of the national government which also captures a significant part of the benefit, while in the case of industrial and agricultural production, this tend to have a much larger impact on the welfare of the regional inhabitants.

Table 3.2 also shows the annual growth rate of the regional GDP per capita. As can be seen in the table, the three departments denominated the richest on average grew faster than the three poorest between 1980 and 2001. This suggests that the disparities have *not* been reduced during the last 21 years. Indeed, the disparities seem to be increasing. From the data in the table it is also apparent that Atlántico, one of the richest departments in GDP-per-capita terms in

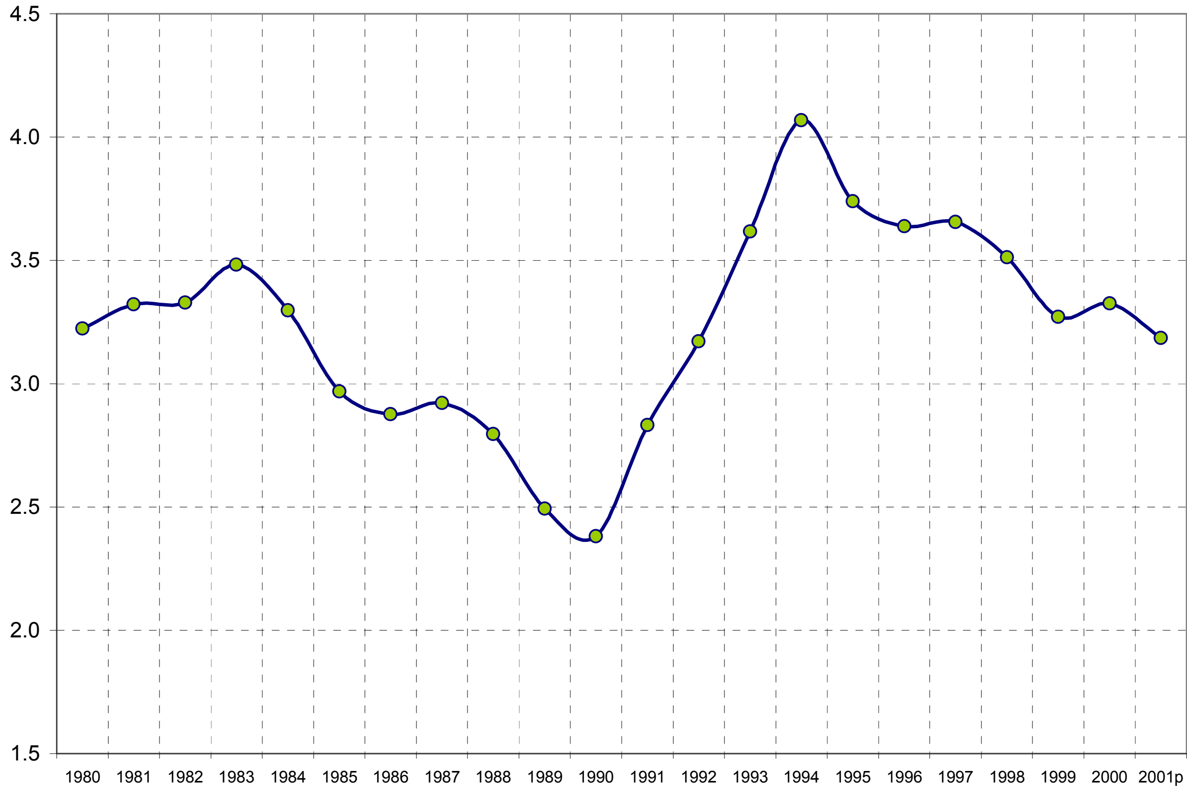
1980, had a negative rate of growth for the whole period. This left the department below the national average at the end of the period.

The growth rate of Colombian GDP per capita was estimated at 1.60 percent for the whole period. Departments that exceed the national growth rate were Meta (2.05 percent), Santander (2.04 percent), Tolima (2.22 percent), Valle del Cauca (2.00 percent), and Nuevos Departamentos (4.50 percent).

So far, we have mentioned that the disparities in Colombia seem to have increased between 1980 and 2001. In order to test this hypothesis, two measures of disparities are calculated and presented.

The first measure of disparity is the maximum-minimum Ratio. To calculate this, two departments were chosen: Cundinamarca (Bogotá included), which had the highest GDP per capita in 1980 and Chocó, which had the lowest per-capita GDP in the same year. The result of this calculation is presented in figure 3.4. A high value of this measure suggests that the disparities are increasing while a low value suggests a decrease. If one looks at the value of the ratio in 1980 and the corresponding value for 2001, it can be argued that the general trend of this measure is constant. Nevertheless, the ratio fell during almost all of the decade of the 1980s, and then it rapidly increased in the first part of the decade of the 1990s. After 1995, the maximum-minimum ratio decreased, and in 2001 it stood at about the same level as in 1980.

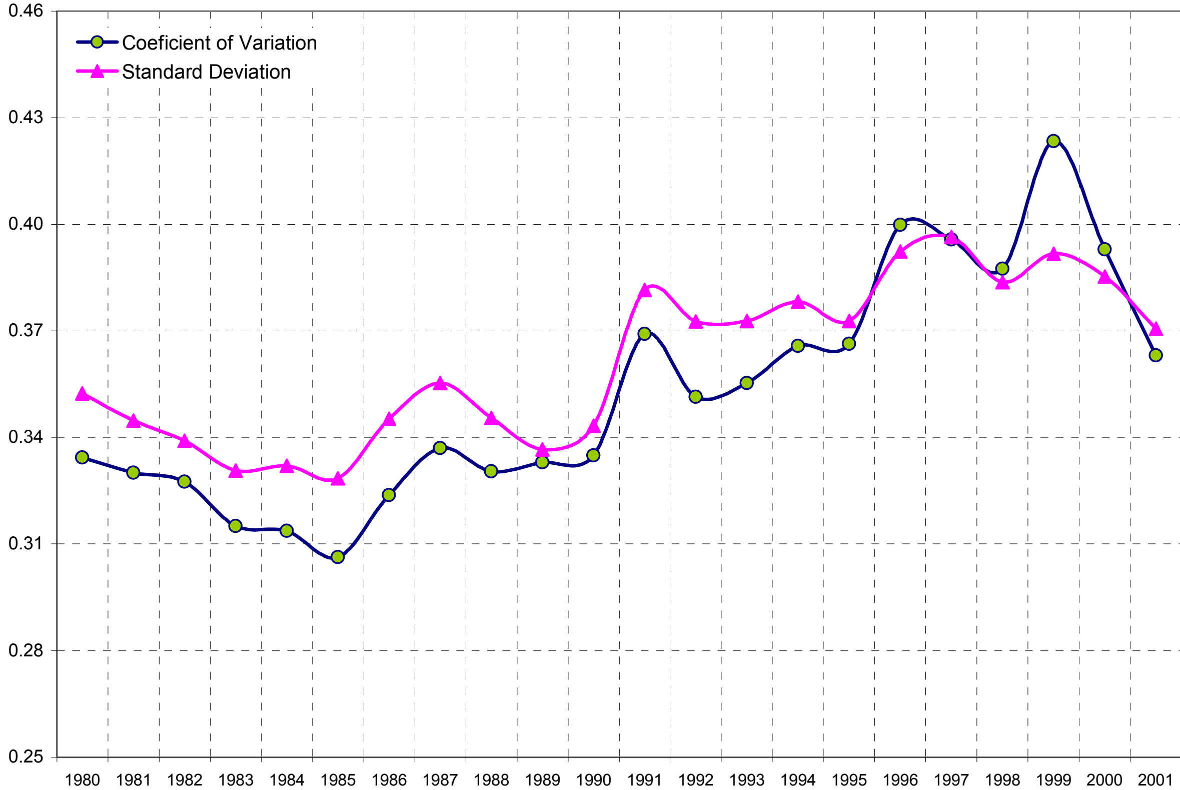
Figure 3.4: Maximum-Minimum ratio



Source: DANE, and estimations by the authors.

The second measure that shows the evolution of regional disparities is the coefficient of variation. This measure is, together with the logarithm of the GDP per capita, the most commonly used measure of sigma convergence. There is sigma convergence when these measures decrease over time. The coefficient of variation is defined as the ratio between the standard deviation of the regions' GDP and the average national GDP.

Figure 3.5: Measures of sigma convergence

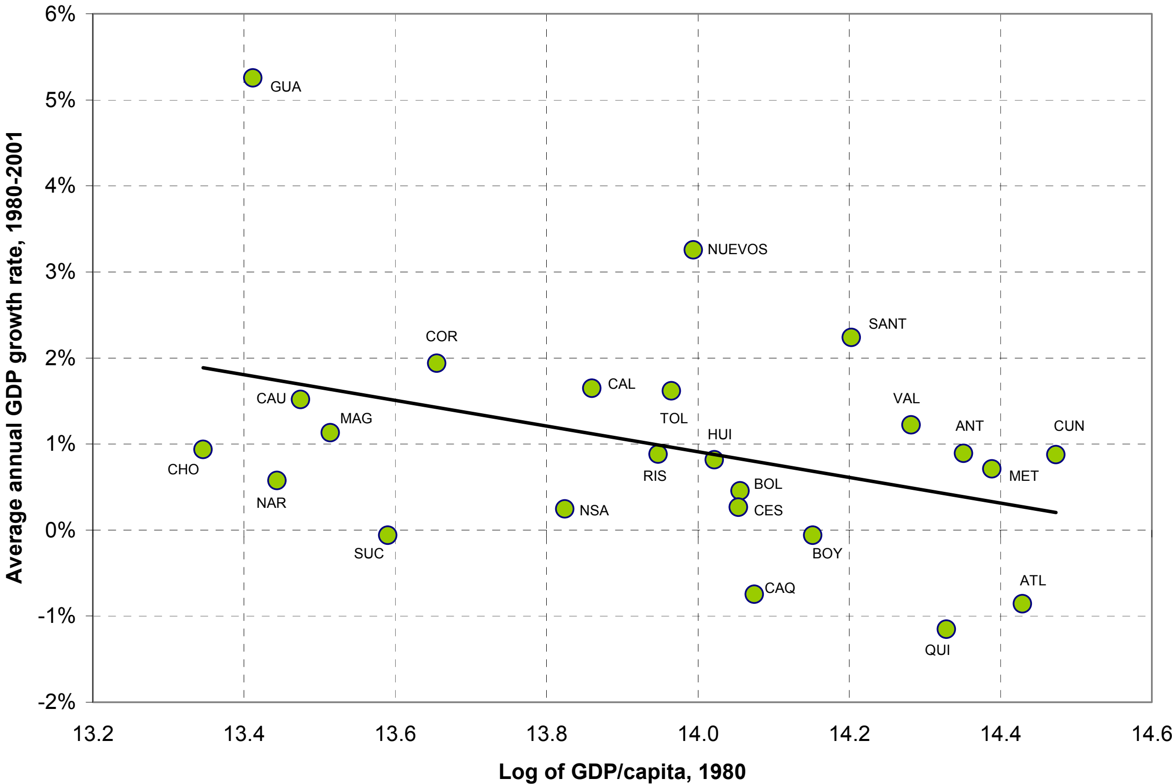


Source: DANE, and estimations by the authors.

As can be seen in figure 3.5, both measures showed an upward trend from 1985 to 1999, when they started to fall. The behaviour of the indicators shown in the figure, suggests that no sigma convergence has been present. In other words, the disparities have not decreased in the last 21 years. They rather seem to have increased.

Nevertheless, at the end of the period a reduction of disparities occurred. Comparing the first value, for 1980, with the last value, for 2001, of the coefficient of variation, we can conclude that the disparities increased by some 8.6 percent, from 0.33 to 0.36.

Figure 3.6: Measures of beta convergence, 1980 – 2001



Note: Cundinamarca includes Bogotá.

Source: DANE, and estimations by the authors.

An additional measure of regional disparities is the concept of beta convergence. According to Barro and Sala-i-Martin (1991, 1992, 1995) there is beta convergence if there is a negative correlation between the annual growth rate of the GDP per capita and its initial level. In this sense, if there were beta convergence, regions with a lower initial level of per-capita income would be growing at higher rates than those regions with higher initial levels. This makes the disparities fall. Otherwise, disparities would not decrease, and they could even increase. Figure 3.6 shows the relationship between these two variables for the Colombian departments.

Figure 3.6 shows a negative correlation between the initial level of income, year 1980, and the annual growth rate of GDP per capita between 1980 and 2001. The simple coefficient of correlations between these two variables is -0.39.[43] This suggests a weak negative relationship between these two variables. Moreover, if La Guajira and Nuevos Departamentos were excluded from the sample, the correlation would be reduced to -0.29.

Synthesizing the results obtained so far, we can say that Colombia has persistent regional economic disparities. These disparities did not decrease over the last two decades. Moreover, there is evidence indicating that the disparities are, in fact, increasing. GDP per capita of the three poorest regions is currently on average only 35 percent of that of the richest ones. Evidence also suggests that there is neither beta nor sigma convergence. An interesting question is, however, how large these disparities are in a international context.

[43] The following regression is used to estimate beta coefficient:

$$T^{-1}\ln\left(\frac{y_{iT}}{y_{i0}}\right)=\alpha-T^{-1}\left(1-e^{-\beta T}\right)\ln\left(y_{i0}\right)+u_{iT}$$

where the left side of the equation is the annual growth rate between 1980 and 2001, which is regressed on the initial income per capita. If beta is significant, there is beta convergence. In our case, beta is equal to 1.76 percent but it is not significant. This means that there is no beta convergence in the period 1980 to 2001, or in other words, that regions with lower initial levels of GDP per capita in 1980 did not growth faster than those regions with higher GDP per capita. This evidence does *not* support the hypothesis of a reduction in the disparities between regions during the time period studied.

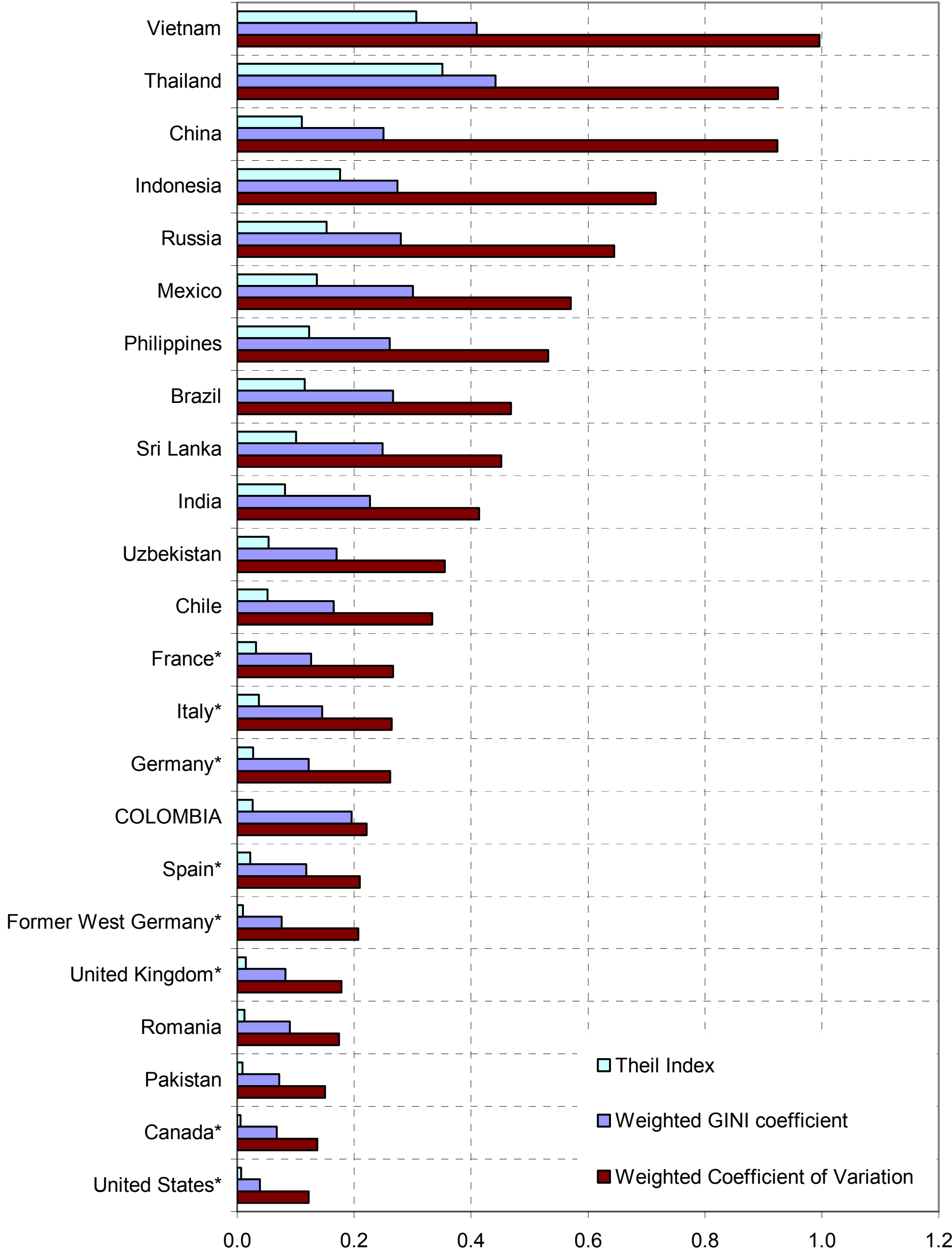
3.3 Colombia in an International Perspective

Shankar and Shah (2001) calculated regional economic disparity measures for several countries. Their results are presented in figure 3.7.[44] The figure shows three measures of regional disparity in 23 countries for the year 1997. Some of these are industrial countries, but the majority are developing countries. The countries are sorted by the weighted coefficient of variation in descending order. Countries with the highest disparities were Vietnam, Thailand, China, and Indonesia. As Shankar and Shah pointed out, these countries are all unitary states, and they are all developing countries.

Except for Pakistan, Romania, and Colombia, all developing countries exhibited higher disparities than the most unequal of the developed countries, France. Colombia, on the other hand, showed a lower disparity than France, Italy and Germany, and had, indeed, the lowest regional disparity of all the Latin American countries in the sample. Finally, it should be noted that although Colombian disparities seem modest from an international perspective, they have been increasing over the last two decades. Also important to note is that many countries with smaller disparities than Colombia have developed policy mechanisms to reduce such disparities.

[44] We have added the figures for Colombia since it was not a part of their original sample.

Figure 3.7: Comparisons of regional disparity measures in different countries



* Developed countries.

Source: DANE, and estimations by the authors.

4 Regional Economic Policy: A Framework for Colombia

As we discussed in the previous section, regional disparities in Colombia are both significant and persistent, which might call for the implementation of a regional policy initiative, to promote the economic development of the lagging regions. We start by drawing some lessons from the other cases of regional policy initiatives that have been discussed in the previous sections as well as in Pérez and Rowland (2004), which is done in section 4.1. In section 4.2, a first attempt to develop a framework for a Colombian regional policy is made. Colombia has a relatively sophisticated distribution policy in place, and section 4.3 discusses the potential regional impact of this policy initiative and how it should be aligned with a regional policy. In section 4.4, the potential impact of corruption on a regional policy initiative is discussed.

4.1 Lessons from Other Cases of Regional Policy Initiatives

If a regional policy is successful, it should generate a clear and sustained convergence among the poorer and the richer regions of a country. This was not the case in any of the four economies studied in Pérez and Rowland (2004), i.e. the European Union, Spain, Italy and Brazil. To develop a successful regional policy is, consequently, neither easy nor straightforward.

A number of lessons can, nevertheless, be drawn from studying earlier and present cases of regional policy initiatives. One such conclusion is that strong interventionist regional policies often produces regional divergence, while policies that generate convergence normally are carefully adopted initiatives, taking into account their impact both at a national and at a regional level. Another major conclusion is that regional policy grants are better spent on improving education and infrastructure rather than being spent on industrial location incentives.

In Colombia, studies have shown that educational achievements vary considerably between the different departments.[45] In particular, it has been shown that inhabitants of the richer departments are significantly better educated than the inhabitants of poor departments, which impairs growth in the latter. This is both because children in the richer departments tend to go to school longer, and because the quality of education in these departments is higher. International studies have, indeed, shown that educational quality, and not just quantity, is an important factor in explaining differences in economic growth rates between different countries.[46] National standardisation of educational attainments has also been shown to be an important source of regional convergence.[47]

Investments in infrastructure, such as transport, communications, electricity and water, is another area which has proven successful in generating regional convergence. Unreliable telecommunications in many of Colombia's poorer departments is, for example, an impediment for businesses wanting to locate in such regions. Infrastructure investments might, nevertheless, have an unwanted effect, at least in the short run. Brazil, for example, implemented a number of highway infrastructure investment initiatives in order to support regional integration. These initiatives have been criticised because, despite their usefulness for national integration, the highways made it possible for companies around, for instance, Sao Paolo to reach distant markets.[48] However, despite these possible negative short-term effects, investments in infrastructure generate regional integration and are, therefore, in the long term, an important source of regional convergence. In addition, results of some studies have suggested that the impact of public investment on productivity plays a more important role in poorer regions than in richer ones.[49]

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[45] See, for example, Báez and Duncan (1999).
[46] See, for instance, Behrman and Birdsall (1983), Neri (2001), and Sianesi and van Reenen (2002).
[47] See, for example, de la Fuente (2001).
[48] Diniz and Razavi (1993) show some evidence of isolated factories in regional markets closing because they were not able to compete with national firms operating from Sao Paolo.
[49] See, for example, Acconcia and del Monte (1999).

Another objective of a regional policy should be to encourage sectoral mobility of workers. This is particularly the case for Colombia, which has low internal migration rates despite significant disparities in regional welfare. Redistribution of employment across regions has, indeed, been shown to be one of the most important sources of convergence between regions.[50]

A regional policy instrument that has been widely used is business location incentives, either in the form of business location grants or in the form of regional tax breaks. Such initiatives have in many cases been shown to reduce regional disparities, but this has been at a cost to national growth, since it leads firms to make investments where they would not otherwise have made them. There is also a significant risk that this leads regions, departments or states to compete about industry investments through tax breaks, which might indeed lead the richest regions to attract business investments that would otherwise have been located elsewhere. We would, therefore, argue that these types of regional policy instruments should be avoided.

4.2 A Framework for a Regional Policy in Colombia

We believe that a Colombian regional policy framework could be based on the initiative that is currently being implemented in Brazil.[51] This, which is referred to as *Programa dos Eixos Nacionais de Desenvolvimento*, is a long-term regional development programme covering the period 2003 to 2018 and with a budget of some USD 77 billion.

It should, nevertheless, be emphasised that the scale of the Colombian programme, certainly in absolute but also in real terms, is likely to be significantly smaller than its Brazilian counterpart. This would be the first such initiative developed in Colombia, while Brazil has a long history of regional policy. Regional disparities in Brazil are, furthermore, much larger than in Colombia. We are, furthermore, here not making any attempt to argue for a certain size of a Colombian programme. This is a subject that needs additional research. What we argue is that

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[50] See, for example, de la Fuente (2001), and Paci and Saba (1997).

a regional policy is important, even if such a policy could be relatively modest in its ambitions, since it would put the regional problems and disparities on the political agenda.

The objectives of a Colombian regional policy could be:[52]

- Promote systemic competition,
- Mobilise the endogenous development potential of the regions,
- Encourage economic and social cohesion,
- Promote sustainable development,
- Encourage continental integration,
- Promote education in poorer regions

Such a programme would divide the country into a number of development areas with similar geographical and socio-economic conditions.[53] The Brazilian programme divides the country into nine such development areas. In the case of Colombia, further research is needed to decide the optimal number of areas, but we would at this early stage estimate these to number somewhere between four and six. In Brazil, the areas are, furthermore, very different in size, which would most likely be the case in Colombia as well. The smallest such development area in Brazil has only 0.5 million inhabitants, while the largest has some 60 million inhabitants.

A great advantage of this division of the country is that it is directly focused on the regional differences. This division also makes the programme much easier to follow up and to evaluate then, let us say, a division of the country into the current 32 departments. It also makes it easier to compare the achievements of different departments within the same development area. It should, nevertheless, be emphasised that a division like this, even if very efficient in focusing the minds of the policy makers on the regional issue, also is relatively crude. It suits Colombia and Brazil, which are developing countries with a significant part of the population suffering

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[51] See Pérez and Rowland (2004) for a discussion.
[52] The first five points are the same as for the Brazilian programme.
[53] In Brazil, these development areas have formally been defined as territorial spaces delimited to planning targets according to socio-economic and environmental dynamics.

from poverty. It would, however, not be suitable for a developed country with a sophisticated and ambitious regional policy, like many of the European countries.

The main objective of the programme is to promote the growth of the individual development areas by exploiting their current comparative and competitive advantages. This is done through developing the present strengths and advantages of each individual area.

The programme should also have as a major objective to promote education in the poorer regions. As discussed earlier, these are in many cases lagging behind in educational achievement. This is particularly important in the case of primary and secondary education, since children in those ages in most cases are tied to their family. When it comes to university education, the mobility of students should instead be promoted. Educational achievements and goals should, moreover, be unified and standardised across the country, aiming at increasing the quality of schools and education in poor areas to the same level as that of the richer areas. This might, in fact, be the most important objective of a regional policy, since an area with poor educational achievements will suffer from lacking human capital for many years to come.

4.3 Regional Impact of Current Policies for Distribution of Wealth

Colombia currently has a number of policy initiatives in place for redistribution of wealth. Such initiatives include a redistributive tax system, and a division of the urban population into socio-economic strata, where the lower strata receive subsidised utilities and healthcare. This distribution policy does, however, work better in some regions than in others. Some of the objectives of a regional policy might, in fact, be achieved simply by making these distributional policy initiatives work in all the regions of the country. However, distributional and regional policies are distinctly different, and should be kept separated. Since distributional policy initiatives might have a large regional impact, we will, nevertheless, in this briefly present the main features of the Colombian distributional policy and discuss its regional impact.

The system of stratification divides the population in the urban areas of the country into the following six strata:

1. Lower-lower stratum,
2. Lower stratum,
3. Middle-lower stratum,
4. Middle stratum,
5. Upper-middle stratum,
6. Upper stratum.

The division into strata is based on the standard of the residence of an inhabitant. In particular, the size, the construction materials and finish, as well as the geo-economic level of the neighbourhood are taken into consideration when determining the stratum. The objective of the system is to mirror the wealth of the inhabitants and, therefore, also their ability to pay.

The public services, such as gas, electricity, water and telephone, are for the lower strata subsidised by the upper strata. Stratum 1, 2 and 3 receive a discount of 50 percent, 40 percent and 15 percent respectively on their bills, which is financed by charging the higher strata more for the services they consume.

Through the SISBEN[54] programme, the lower strata also receive discounts on healthcare. Stratum 1 does not pay for healthcare, while stratum 2 and 3 pay 10 percent and 20 percent of the cost respectively. People of the higher strata, who should have insurance cover, pay the full cost. The objective of this system is to provide the basic healthcare need to the poorest and most vulnerable part of the population.

[54] SISBEN stands for *Sistema de Selección de Beneficiarios*, the Selection System of Beneficiaries.

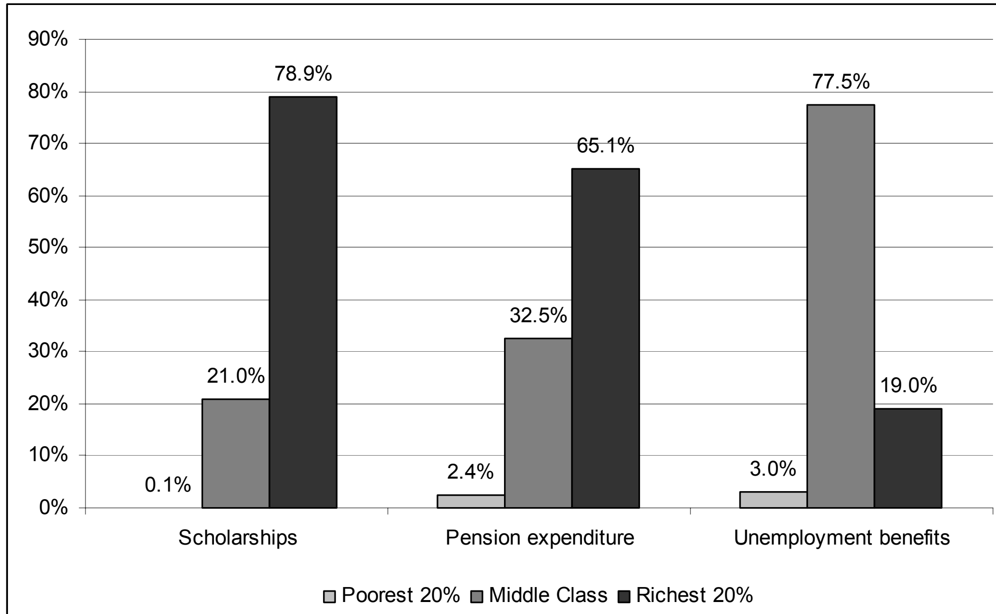
Many other costs, such as, for example, tuition fees in public schools and universities, are also subsidised through the strata system, where the lower strata pay considerably less than the higher strata.

The design of the system of stratification is, indeed, both sophisticated and clever. One problem is, nevertheless, that the system is under-funded, particularly in the poorer parts of the country. The system has also in many cases been abused, where, for example, it might be possible to receive a SISBEN identity card of a lower stratum through bribes. In many towns and cities, the local government has stopped issuing lower-strata SISBEN identity cards, because the system is stretched to its financial limits or simply because these cards are instead given to corrupt politicians and their accomplices. This effectively leaves a significant part of the poor population without access to healthcare.

If this programme would be properly funded and work as intended, it would most certainly have a significant regional impact, where, for example, social services and healthcare on an aggregate level would be subsidised in poor areas by the inhabitants of the richer areas. Research is needed to determine the exact regional impact of this programme as well as what actions are needed to get it to work as initially intended.

There is in general a need for research into the net redistribution of wealth between different socio-economic groups, as well as the regional impact of this re-distribution. Cardoso (2000), for example, presents such a study on Brazil. Table 4.1 illustrates some perverse realities in Brazil, where, for example, 65.1 percent of Government pension expenditure goes to the richest 20 percent of the population. The results of this study, in fact, suggests that there is a net re-distribution of wealth within Brazil to the richest 20 percent from the rest of the population,

Table 4.1: Distribution of the Brazilian Government's social expenditure, 1999



Source: Cardoso (2000).

particularly since many of the rich do not pay the taxes they are supposed to pay, either because of evasion or because of exemption. The situation might very well be the same in Colombia, and this might have a significant regional impact.

Even if the distributional policies have a considerable regional impact, they are not regional policies *per se*. The objective of a distributional policy is to redistribute wealth between citizens. This might be an outcome of a regional policy as well, but it is not the objective of such a policy. The main objective of a regional policy is, as discussed earlier, to promote the growth of the lagging regions. Even if regional and distributional policies should be aligned in the sense that the effects of one on the other have to be identified and analysed, they are distinctly different, and should be kept separate.

4.4 The Issue of Corruption

As for most types of economic policies, corruption might seriously impede the effectiveness of a regional policy initiative, even if this is brilliantly designed.[55] The largest cost of corruption is not the direct theft of public funds by corrupt policy makers, but the so called directly unproductive profit-seeking activities such politicians tend to indulge in.[56] These are projects that have little usefulness for the society, but are implemented anyway, simply because they offer an excellent opportunity to steal large sums of public funds. Such activities might, for example, include unnecessary construction projects or unnecessary procurements. This implies that the cost of corruption to the society is of a much higher magnitude than the funds stolen by corrupt officials.

Corruption levels, furthermore has a regional distribution, where some regional (departmental as well as municipal) governments are more corrupt than others. In general, poor regions tend to be worse governed than rich regions. Corruption might offer one explanation to this.[57] However, poor regions might also lack the necessary resources, both in financial and in human terms. This is an area that certainly needs to be researched. There is otherwise a significant risk that regional development funds are embezzled in the regions that most need them.

[55] See Bardhan (1997) for a discussion on corruption.
[56] See, for example, Bhagwati (1982).
[57] The causality might as well run in the opposite direction, i.e. that high levels of corruption in poor regions is caused by bad governance.

5 Conclusions

The study presented in this paper is the second part of a project to develop recommendations for a framework of a regional policy for Colombia. The first part of this project was presented in Pérez and Rowland (2004), which studied and evaluated four cases of regional policy initiatives, the European Union, Spain, Italy and Brazil.

In this present paper we have analysed the regional disparities in Colombia. We have shown that these are both significant and persistent over time. GDP per capita in Chocó, the poorest of Colombia's departments, is only 32.6 percent of per-capita GDP in Cundinamarca with Bogotá included. This figure has, furthermore, not changed significantly over the past two decades. This calls for the implementation of a regional policy initiative to promote the development of the poorer regions of the country.

In this paper we are proposing a regional policy framework for Colombia, based on a policy initiative that is currently being implemented in Brazil. This policy divides the country into a number of development areas (nine in the Brazilian case) with similar geographical and socioeconomic conditions. The main objective of the programme is to promote the growth of these individual areas by exploiting their current comparative and competitive advantages. Another key objective of the Colombian regional policy would be to promote education in the poorer regions, which both quantitatively and qualitatively lag Colombia's richer regions in the area.

Colombia, furthermore, has a sophisticated distributional policy initiative in place. However, the regional impacts of this policy are not known, and further research is needed in this area. On an aggregate level this programme should induce a net transfer of funds from the richer regions to the poorer ones. The objective of a regional policy is, nevertheless, distinctly different from that of a distributional policy, and the two should, therefore, be kept separate.

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