

ESMAP TECHNICAL PAPER

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Population, Energy and Environment Program (PEA)
Comparative Analysis on the Distribution of Oil Rents

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Energy

Sector

Management

Assistance

Programme

February 2002



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ENERGY SECTOR MANAGEMENT ASSISTANCE PROGRAMME (ESMAP)

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Population, Energy and Environment Program (PEA) Comparative Analysis on the Distribution of Oil Rents

February 2002

Joint UNDP/World Bank Energy Sector Management Assistance
Programme (ESMAP)

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ESMAP Management"

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The conceptual work was carried out by Eleodoro Mayorga-Alba, Principal Oil Economist of the Oil, Gas and Chemicals Unit of The World Bank; in close collaboration with the National Coordinators from Bolivia, Lic. Mónica Castro; Colombia, Dr. Miguel Angel Santiago; Ecuador, Lic. Lizzett Torres; and Peru, Ing. Pedro Touzett. Mr. Daniel Guerra, Economist and Consultant completed the comparative analysis.

A preliminary version was presented in the 3rd Tripartite Regional Meeting in Cartagena, Colombia in May 2001. Subsequently, the National Coordinators provided improvements to the database, as well as to the text of the comparative analysis and its annexes. All those who took part in the analysis agreed that this is only a preliminary study and that there is an urgent need for additional efforts to add to the context and to influence the desired changes.

In his final note, the consultant Mr. D. Guerra expressed his contentment with the effort and dedication displayed by the National Coordinators. Without their invaluable input, this analysis would have not been accomplished. He also indicated that thanks to this analysis, he experienced the satisfaction of not only opening additional possibilities for increasing the knowledge base and the exchange of experiences in this complex subject, but also and foremost, for having worked with a group of people seriously committed to the achievement of important objectives for the oil industry and the benefit of indigenous peoples communities.

Preface

Potentially and in real terms, revenues generated from oil and gas operations represent a substantial part of GDP, national budget and fiscal revenues for the oil producing countries from the Sub-Andean Basin. The availability of these revenues is not only an opportunity, but also a challenge. The issue of administering the distribution of oil rents is the subject of an increasing debate among oil companies, civil society, development agencies and governments.

Key stakeholders agree that regions in which production takes place, and in particular the communities in those regions ought to receive “indemnifications” due to damages and losses and for the use of lands derived from oil production operations, as well as a significant share of the benefits from these operations. These resources are critical for undertaking the path to sustainable development.

This debate sparked the need for an analysis in the context of the tripartite dialogues of the Population, Energy and Environment Program (PEA). This program is a joint initiative by The World Bank, and the Latin American Organization for Energy (OLADE). Its main objective is to improve communications and relations among key stakeholders –governments, industry and indigenous peoples communities– to create the conditions for the development of a hydrocarbon industry in the sub-Andean basin compatible with the objectives of sustainable development. The PEA was started in 1998 and comprises various activities such as:

- National dialogues –in each country, key stakeholders have agreed to meet and analyze the issues most essential to them,
- Development of an Information Network –open to all interested parties, including a website (<http://www.olade.org.ec/redap>),
- Improvement of Existing Regulations: through the preparation, in consensus, of reference documents to harmonize regulatory frameworks.
- A Training Program–through workshops that emphasize consultation and participation making use of the best communication techniques available.

The PEA can be defined as a process in which issues of great concern are analyzed in the interest of governments, represented by National Coordinators (NC), indigenous peoples, represented by the Coordinating Organization or the Indigenous Peoples Federations of the Amazon Region (COICA); and the industry, in great extent represented by the National Oil Chambers and the Association of Oil and Natural Gas Companies in Latin American and the Caribbean (ARPEL).

This study is the first approach of this group to the analysis of the oil rent distribution in the region. To carry it out, funds were obtained from the Energy Sector Management Assistance Programme (ESMAP), a joint UNDP/World Bank programme whose main objective is to focus on the role of energy in economic development with the objective of contributing to poverty alleviation and economic progress, improving living conditions, and preserving the

environment while promoting the development of acceptable practices in the industry in environment and socio-cultural areas, and promoting efforts aiming to improve the socioeconomic situation of the indigenous peoples.

The issue of managing and distributing the oil revenues is far the easiest to encounter. A three-fold analysis needs to be carried out, covering: (1) the collection of rents (i.e. the royalties and taxes from oil and gas production); (2) the distribution of these rents; and (3) the disbursement of them for their final utilization.

Collection of rents relates with the taxation of the revenues derived from oil and gas operations. Governments are genuinely interested in this subject due to its significance in relation to the behavior of the industry and because of the need for fiscal revenues. Investors expect that taxes are set at a level that should enable them to gain profitable returns, whereas civil society is greatly interested in seeing the development of a tax mechanism which distributes revenues in an equitable manner between governments and investors, and among social groups. A mechanism that will also protect public interest in areas such as environment, living standards and cultural heritage of indigenous peoples communities.

The taxation mechanism should include an appropriate and stable distribution of revenues among different governmental levels. The argument is inclined in favor of allocating a larger share of oil rents to local or regional governments based on the fact that they suffer many of the external costs derived from exploitation. These costs include environmental degradation and the demand from local communities for a better social and physical infrastructure. How taxes and royalties are in the end shared will depend mainly on decentralization policies, and in particular, the nature of the states' alliances of the country involved. In other words, it will depend on how relevant and important these issues are from the state or regional stand point within each country.

Once rents have been collected, attention is now focused on how rents are managed. The main challenges of oil prosperity are closely related to the adequate administration of rents. Gains from oil operations result from unexpected discoveries, associated at times, with quick unexpected increases in crude oil prices. As such gains can exceed the capacity of any economy to absorb the change. Furthermore, the institutional capacity of government agencies to ensure the efficient investment of revenues is of concern. Although, prices also drop and oil fields get depleted.

The fight against mispending of revenues is a key objective. Policies and decision-making related to the turns in oil gains are frequently asymmetrical. Bad decision-making during prosperous years is much more difficult to remedy in the declining years. More so, oil gains cause strong emotion-related responses due to the fact that they are perceived as a "National Heritage." As a result, there is a tendency to use them to achieve political gains that can easily detach from a consistent and legitimate development policy. Finally, it should be emphasized that gains derived from oil operations open potential paths to an easier road to corruption.

Discoveries and fluctuations of oil prices, and the resulting oil revenues are notoriously difficult to predict. This spurs an unstable economic cycle in oil producing countries dominated by the problem of lost of economic competitiveness, most commonly known as the “Dutch Disease,” after the problems experienced in Holland at the beginning of the exploitation of the reserves of the giant gas field of Groningen. The increase of hydrocarbon exports generates the valuation of exchange rates building pressure on costs and prices of national goods. This in turn, decreases the level of competitiveness of national goods and harms diversity and the balance of the domestic economy.

An important aspect of this comparative study on the oil rent distribution in four countries of the sub-Andean basin (Bolivia, Colombia, Ecuador and Peru) is the implementation of various mechanisms aimed at responding to issues related to the collection and administration of rents, including possible responses to the prosperous yet cyclical oil and gas business. Among them is the use of “oil funds” within the structure of national accounts (budget) in the exporting countries.

The main characteristic of these funds is that they are public sector institutions, apart from the national budget, which receive the revenues derived from the exploitation of oil and gas. Just as they may have many ways in which to operate, they also have various objectives. The two most commonly recognized objectives are savings funds and stabilization funds.

The effect of oil funds in the sub-Andean region as in other parts of the world is mixed. Those skeptical to funds emphasize tangibility of money and the lack of administration on behalf of governments. They argue that the existence of funds does not necessarily coerce eccentricity on governments. Governments can increase lending, generally against funds liquidity, and use the oil revenues to increase current accounts expenditures. When there is a lack of governance, there is no incentive to constraint the tendency to mismanage funds. In fact, the existence of funds outside an official governmental budget increases the chances for corruption within the system. Skepticals conclude that there is no substitute for fiscal discipline and good government behavior, and wherever these prevail, oil rents will be better managed within the national budget rather than outside.

One way or another, it is essential to create a well-articulated development plan to ensure the efficient utilization of rents. This plan should be public and it should not only include the details on the administration of funds, but also its purposes (savings or stabilization), management procedures and priorities engaged in the utilization of funds. The decision on how oil rents should be disbursed fall under the domain of expenditures and public finances, and are at the center of governments’ development policies.

This comparative analysis is the first incursion in this complex subject. One of the most significant difficulties encountered was the access to information, in particular, access to complete sets of statistics. Even though the oil rents are public funds, and subject to multiple regulations, differences exist among countries analyzed in the transparency under which transactions tied to oil rent distribution are executed. The administration through autonomous estate-run organizations made data gathering even more difficult. In this regard, the consultant would like to thank the efforts of the National Coordinators (NC) from the countries analyzed,

but at the same time, the consultant would like to promote awareness to the most notable imperfections with respect to the access to information and its potential removal for better future access.

As suggested, it is most desirable to engage in the implementation of the use of priority projects within the national and regional plans. Effective expenditures will depend on factors such as institutional capacity of the beneficiaries for designing, implementing and auditing programs and projects of public expenditures. Transparency, accountability and inclusion will be most instrumental in achieving success.

With respect to the allocation of revenues in oil producing regions, the study finds that there is much more to be done. In spite of the amount of revenues transferred, the analysis carried out seems to show an insufficient regularity in the money flows to design effective long-term regional development plans. Moreover, the question on the subject of institutional and political capacity within the central government, as well as within regional governments to conciliate the increases and declines of oil funds against the needs of the population remains unanswered.

During the period of 1995-2000 some progress was noted in making more equitable allocations to oil producing regions and to those of indigenous peoples communities. In the case of Colombia, a good example of transparency is made. Beyond transparency in sharing royalties by departments and municipalities, at the time of deciding their utilization, it is essential that governments and companies work hand in hand with the indigenous peoples communities to develop meaningful development plans. The consultant recommends efforts to be carried out not only to extend such kind of legislation to other countries, but also to develop the capacity of indigenous peoples organizations so that they can become qualified entities to receive oil rents and enjoy their benefits.

As any other “work in progress,” this analysis is based on an incomplete data base. It will be as such a Technical Paper of ESMAP, subject to revisions and improvements. In particular, it is intended to become substance for discussion in the next tripartite meetings of the PEA Program and that it provides some leverage to governments in their efforts to improve current mechanisms for the management and distribution of oil rents.

1

Introduction

A country that produces hydrocarbons not only needs to assess how to exploit its natural resources to obtain the highest revenues, but also has to decide how the revenues should be distributed to directly benefit its citizens in a socially responsible manner.

To ensure these objectives, the following issues need to be taken into account:

- How rents from the exploitation of hydrocarbons are generated,
- How these rents are distributed, and
- How to implement a suitable framework to administer the utilization of resources and ensure their best final use.

This study contains a comparative analysis on the distribution of oil rent covering Bolivia, Colombia, Ecuador and Peru. It is based on individual country assessments presented in separate annexes.

The analysis was prepared as part of the Population, Energy and Environment Program (PEA), a tripartite initiative gathering representatives of governments, Indigenous Peoples organizations, and oil companies sharing the Amazon Basin which main purpose is the search ways and means to improve mutual understanding and to develop an oil industry compatible with the objectives of sustainable development. The PEA has the support of various institutions, in particular The Latin American Organization for Energy (OLADE), The World Bank, the Coordinating Organization of the Indigenous Peoples Federations of the Amazon (COICA), the Regional Association of Oil and Gas Companies of Latin America and the Caribbean (ARPEL), the Carl Duisberg Gesellschaft Foundation, the University of Calgary, the Canadian International Development Agency (CIDA), the Inter American Development Bank (IDB) and the Andean Corporation for Development (CAF).

The analysis covers the period 1995-2000. All data collected was converted to US\$ dollars in real terms. The main objective was to examine the generation and distribution mechanisms of the rents derived from the exploration and/or exploitation of hydrocarbons giving special emphasis on the evaluation of the share of revenues that could directly benefit the Indigenous Peoples (IP).

2

Methodology and General Features of the Oil Industries in the Countries Involved

After conducting individual assessments on the generation and distribution of rents derived from hydrocarbon exploitation, the document presents a comparative analysis of the results obtained for the four countries participating in the PEA Program that agreed to provide the required information (Bolivia, Colombia, Ecuador y Peru).

To carry out the comparative analysis, the following steps were required:

1. Definition of the accounts that pertain to the generation and distribution of rents using the information obtained from each country,
2. Creation of a reference document for the standardization of concepts, thus establishing common names for the accounts,
3. Preparation of frameworks containing the standard terminology used in common accounts, and
4. Execution of the comparative analysis.

In preparing the analysis, the consultant relied on the collaboration of the National Coordinators (NC), and the representatives from OLADE, and The World Bank¹. These support was of critical importance for reviewing and obtaining the necessary information and for developing consensus on the methodology applied in the analysis.

To launch the study, the consultant visited the four countries involved to interview those directly in charge of the management and distribution of oil rents. Through that dialogue, it was possible to establish the general features and the specific framework of the accounts pertaining to the hydrocarbon industry in each country and to obtain the necessary information to decide the methodology to be applied.

¹ Mónica Castro (Bolivia), Miguel Angel Santiago (Colombia), Lizzett Torres (Ecuador), Pedro Touzett (Perú). Verónica Potes (OLADE), Eleodoro Mayorga Alba (Banco Mundial).

The level of details in this analysis depends on the information that was possible to gather during the agreed timetable for the study (3 months). As it happened, the information provided by the National Coordinators in certain cases was incomplete and contained different levels of detail, thus certain discrepancies are visible in the comparative tables. In spite of these difficulties, the conclusions of the study are valid as a whole.

Figure 2.1: Population, Energy and Environment Program (PEA) Countries Involved

Population, Energy and Environment Program (PEA)

Countries Involved

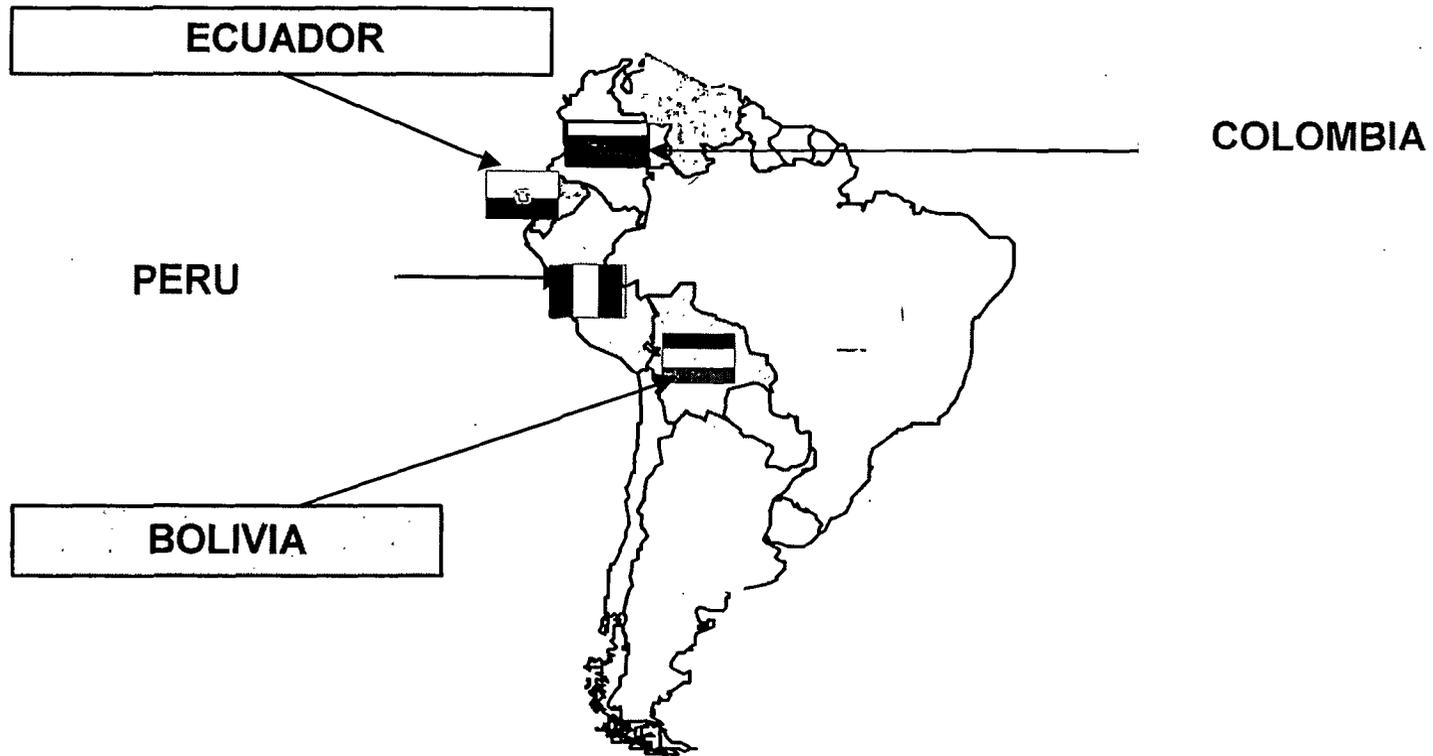


Table 1.1: Oil & Gs Production in the Countries Involved

	1995	1996	1997	1998	1999	2000
CRUDE OIL PRODUCTION (MB/D)						
BOLIVIA	34	28	28	28	28	31,4
COLOMBIA	585	626	652	754	816	688,0
ECUADOR	392	392	380	378	372	259,4
PERU	131	114	111	114	103	99,5
TOTAL	1142	1160	1171	1274	1319	1070,3
NATURAL GAS PRODUCTION (GPCD)						
BOLIVIA	0,31	0,31	0,20	0,52	0,48	0,55
COLOMBIA	0,43	0,45	0,62	0,66	0,50	0,57
ECUADOR	0,01	0,01	0,01	0,01	0,01	0,01
PERU	0,14	0,10	0,10	0,13	0,15	0,16
TOTAL	0,89	0,87	0,93	1,32	1,14	1,29

Source: ECOPETROL and Oil

Country Profiles

- Of all four countries analyzed, Peru is the only net importer of hydrocarbons.
- Colombia and Ecuador export crude oil.
- Bolivia imports liquid fossil fuels and exports natural gas.

Figure 2.2: Crude Oil Production

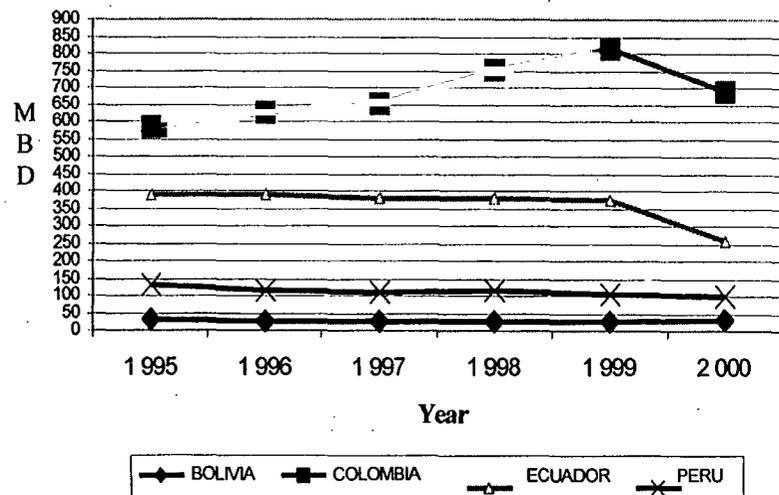
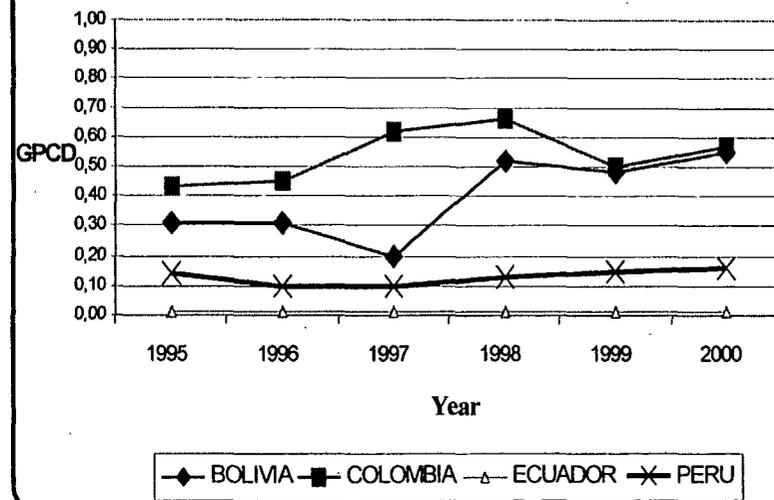


Figure 2.3: Natural Gas Production



3

Generation and Distribution of Oil Rents

In this part of the analysis, a summary table displays the generation and distribution of rents per country, in the same form as they appear in the individual country assessments.

BOLIVIA

Table 3.1: Rent Generation (US\$ Millions) - Bolivia

RENT	1996	%	1997	%	1998	%	1999	%	2000	%
Royalties & Participation	96	99	98	96	120	65	100	61	180	72
Licenses	0		1	1	11	6	8	5	9	3
Income Taxes	1	1	3	3	9	5	12	7	17	7
Capitalization	0		0		45	24	45	27	45	18
Total	97	100	102	100	185	100	165	100	251	100

This table shows how oil rents increased in Bolivia from US\$97 in 1996 to US\$251 millions in the year 2000, an overall growth of 158%. This increase is due to the revenues obtained from the capitalization of YPFB, the rise of oil prices and the beginning of natural gas exports to Brazil. It is expected that in the near future taxes on production and rents from exports will further increase due to the anticipated growth of gas exports to Brazil.

Table 3.2: Rent Distribution (US\$ Millions) – Bolivia

INSTITUTION	1996	%	1997	%	1998	%	1999	%	2000	%
PREFECTURES					35,3	18,9	37,7	22,1	64,4	25,3
▪ To Producer Departments					30,67	16,43	32,27	18,89	55,89	22,26
▪ To Non- Producer Departments					2,79	1,49	2,99	1,75	5,08	2,02
▪ Municipalities					1,80	0,96	2,40	1,40	3,40	1,35
YPFB					1	0,5	0,9	0,5	0,2	0,6
TGN					103,7	55,6	81,7	47,8	139,1	55,4
UNIVERSITIES					0,5	0,2	0,6	0,4	0,8	0,3
PENSION FUNDS					45,0	24,1	45,0	26,3	45,0	17,9
SOCIAL SUPPORT							0,32	0,190		
TOTAL					185	100,0	166	100	251	100

Information for the years 1995 through 1997 was not available in the Vice Ministry of Energy and Hydrocarbons due to the fact that these statistics changed substantially after the capitalization of YPF (Yacimientos Petroliferos Fiscales Bolivianos).

As it is shown the TGN (Tesoro General de la Nación) is the main beneficiary, receiving nearly 55% of the total rents. The second beneficiary are the prefectures of producing departments, with revenues in the last three years surpassing those of pension funds. Pension fund revenues remained almost constant, while the amounts received by the prefectures grew in parallel with the strong increase of oil prices.

COLOMBIA

Table 3.3: Rent Generation (US\$ Millions) - Colombia

RENT	1995	%	1996	%	1997	%	1998	%	1999	%	2000	%
Royalties	492,47	65,89	525,50	63,28	523,30	54,38	457,20	64,80	693,0	77,61	932,60	68,65
ECOPETROL utilities	212,59	28,45	208,67	25,13	193,22	20,08	195,78	27,75	158,90	17,80	406,50	29,92
Income Taxes	42,30	5,66	73,60	8,86	222,00	23,07	24,70	3,50	21,60	2,42		
Social Support			22,62	2,72	23,72	2,47	27,85	3,95	19,38	2,17	19,38	1,43
Total	747,36	100,0	830,39	100,0	962,24	100,0	705,53	100,0	892,88	100,0	1358,48	100,0

Pending: Income Taxes for the year 2000

The table shows rents increasing from US\$747 millions in 1995 to US\$1358 millions in the year 2000 which represents an increase of 82%. This increase is due to the rise of oil prices and the increase of production that has a direct impact on the royalties and ECOPETROL's profits. The Social Support Fund involves significant resources used by ECOPETROL in social related activities.

It is expected that in the near future income taxes will increase due to the anticipated growth of the taxable profits of the private companies operating in the country.

Table 3.4: Rent Distribution (US\$ Millions) – Colombia

INSTITUTIONS	1995	%	1996	%	1997	%	1998	%	1999	%	2000	%
Central Government	254,89	34,11	282,27	33,9	415,22	43,15	220,48	31,25	180,50	20,22	406,50	29,92
Departments	233,92	31,30	228,20	27,48	209,60	21,78	174,50	24,73	255,90	28,66	409,10	30,11
▪ Producers	233,92	31,30	228,20	27,48	209,60	21,78	174,50	24,73	233,20	25,0	383,10	28,20
▪ Non-Producers	0,0	0,0	0,0	0,0	0,0	0,00	0,0	0,0	32,70	3,66	26,00	1,91
Municipalities	100,96	13,51	155,00	18,67	129,0	13,41	109,0	11,45	157,8	17,67	184	13,54
▪ Producers			90,40	10,89	84,50	8,78	65,7	9,31	95,60	10,71	149,7	11,02
▪ Non-Producers			64,6	7,78	44,5	9,62	43,3	6,14	62,2	6,97	34,3	2,52
Corporations			1,60	0,19	1,60	0,17	1,10	0,16	1,40	0,16	1,90	0,14
Pension Funds			12,00	1,45	11,10	1,15	9,20	1,30	11,80	1,32	0,00	0,0
National Fund of Royalties	157,59	21,1	128,8	15,51	172,00	17,87	163,40	23,16	266,10	29,8	337,60	24,85
Social Support			22,62	2,72	23,72	2,47	27,85	3,95	19,64	2,17	19,38	1,43
Total	747,36	100,0	830,39	100,0	962,24	100,0	705,53	100,0	892,88	100,0	1358,48	100,0

The table shows a balanced structure. The larger beneficiaries are departments and municipalities (main recipients of royalties) receiving 45% of the revenues. Within this amount, the most important share goes to the producer departments and municipalities. The second recipient is the Central Government (30%), and the third, not very far, is the National Fund of Royalties (FNR)² 25%. From 2001, when production take place in indigenous lands, a share of the royalties of the producing departments and municipalities will be allocated to projects that benefit these communities.

² The National Fund of Royalties is an entity in charge of capturing royalties not assigned to departments and municipalities. These funds are allocated to promote activities in mining, preservation of the environment and financing of regional projects.

ECUADOR

Table 3.5: Rent Generation (US\$ Millions) - Ecuador

Concept	1995	1996	1997	1998	1999	2000
Royalties and direct sales	640	987	391	162	620	981
Income Taxes	-	-	-	-	-	-
Ecodesarrollo Fund	14	14	14	20	26	27
Total	654	1001	405	182	646	1008

Pending: Information on Income Taxes.

Information on Fund for Ecodesarrollo (ECORAE) was calculated on the basis of norms dictated by Law and production projections. The table shows rents that increase from US\$654 millions in 1995 to US\$1008 millions in the year 2000 which represents an increase of 54%. This increase is mainly due to the rise in oil prices and of production which has a direct impact on royalties and direct sales through the gap from which Petroecuador exports. In order to make these numbers comparable to those of other countries' royalties and direct sales, Petroecuador's costs were deducted.

The missing information on Income Taxes is of a relatively small importance. It is assumed that would not significantly modify the overall results.

Table 3.6: Rent Distribution (US\$ Millions) – Ecuador

INSTITUTIONS	1995	1996	1997	1998	1999	2000
National Treasury	373	631	215	56	559	821
National Defense Council (JDN)	79	73	39	9	36	53
Fund for Oil Stabilization (FAE)	29	23	17	6	5	20
Other Institutions	151	260	109	92	20	87
Provinces of the Amazon Region	4	4	4	6	8	8
Municipalities	8	8	8	12	16	16
Regional Fund	1	1	1	2	3	3
Total	654	1001	405	182	646	1008

The table shows that the National Treasury is the main recipient of royalties with 57% increasing up to 81%. The second largest share goes to Other Institutions (Health Ministry, Department of Labor, Universities, the Central Bank, and other state entities). The third recipient of the oil royalties worth mentioning is the National Defense Council (JDN).

Details of the information received on rent distribution was also not complete that is why the amount of the account Other Institutions, the second in importance, covers several government entities.

PERU

Table 3.7: Rent Generation (US\$ Millions) - Peru

Rent	1995	1996	1997	1998	1999	2000
Royalties and Participation	159,18	196,44	154,89	101,29	165,76	254,78
CAREC*	0,852	1,20	1,56	1,84	1,51	1,31
Social Support		0,36	1,05	0,24	0,36	0,26
Income Tax			3,11	8,29	28,33	
Total	160,03	198,01	160,56	111,68	195,96	256,36

Pending: Income Tax for the year 2000

The table shows how rents increased from US\$160 millions in 1995 to US\$256 millions in the year 2000 which represents an increase of 60%. Oil production in Peru has been stagnant, this increase is mainly due to the rise in oil prices which has a direct impact on royalties and payments.

* CAREC is the Administrative Committee of Funds for Training, a Committee formed to administer the annual financial support received from oil companies to be invested in human capital by specialized training in the area of hydrocarbons. OSINERG is State Organization for the Supervision of Investments in Energy

Table 3.8: Rent Distribution (US\$ Millions) - Peru

INSTITUTIONS	1995	1996	1997	1998	1999	2000
National Treasury	79	96	68	53	113	126
PERUPETRO	3	4	0	2	3	8
Energy and Ministry of Mines (MEM)	0	0	2	1	1	2
OSINERG	0	0	2	1	1	2
Producer Departments						
Regional Government	37	47	42	25	36	57
Municipal Government	28	35	31	19	28	43
Universities	4	4	4	3	4	2
Peruvian Institute of the Amazon	1	2	1	1	1	5
Non-producer Departments						
Regional Government	4	4	4	3	3	5
Municipal Government	3	3	3	2	2	4
Universities	0,3	0,4	0,4	0,3	0,3	0,5
Agreements with Contractors	0	0	0,47	0,04	0,02	0,05
Peruvian Institute of the Amazon	0	0,03	0,11	0,1	0,06	0,12
CAREC	0,85	1,2	1,5	1,8	1,5	1,3
TOTAL	160	195	157	111	192	254

The table shows that the National Treasury is the main recipient of royalties with 50% of the revenues. The second are Regional Governments and Municipalities from producing areas with 43%.

Standardization of Accounts

Each country employs different terminology for referring to the institutions in the central government and in the areas of hydrocarbon activities. Therefore, to standardize the terminology the following table of equivalents is prepared.

Table 3.9: Summary of Rent Distribution

BOLIVIA	COLOMBIA	ECUADOR	PERU
Royalties and Participation	Royalties	Royalties and direct sales	Royalties and participation
Licenses	ECOPETROL Utilities		CAREC
Income Taxes	Income Taxes	Income Taxes	Income Taxes
Capitalization Fund	Social Support	Ecodesarrollo Fund	Social Support

Table 3.10: Summary of Rent Distribution

BOLIVIA	COLOMBIA	ECUADOR	PERU
PREFECTURES	Central Government	National Treasury	Public Treasury
▪ Dep. Producers	Departments	National Defense Council (JDN)	PERUPETRO
▪ Dep. Non-Producers	▪ Dep. Producers	FAE	MEM
▪ Municipalities	▪ Dep. Non-Producers	Providences of the Amazon Region	OSINERG
YPFB	Municipalities	Municipalities	Dep. Producers
TGN	▪ Mun. Producers	Regional Fund	▪ Regional Government
UNIVERSITIES	▪ Mun. Non- producers	Other	▪ Municipal Government
PENSION FUNDS	Corporations		▪ Universities
Environmental Management	Investment Funds		▪ Peruvian Institute of the Amazon (IPA)
	National Fund of Royalties (FNR)		Dep. non-producers
	Social Support		▪ Regional Government
			▪ Municipal Government
			▪ Universities
			▪ IPA
			Agreements with Contractors
			CAREC

Glossary of Terminology

To standardize it was decided to group the different country's accounts as follows:

1. Central Government: TGN (B), Central Government (C), National Treasury (E), Public Treasury (P).
2. Departments: Prefectures (B), Departments (C), Departments (P), Provinces (E).
3. Municipalities: Same in all countries.
4. Investment Fund: Regional Fund (E), Fund for Oil Stabilization – FAE (E), Investment Funds and Corporations © National Fund of Royalties ©.
5. Other Funds: Pension Funds (B),
6. Social Support: Community relations (B); Social support, (C); revenues to communities (P), CAREC-training (P)
7. Universities: Same in all countries.
8. Managing Entities: YPFB (B); Perupetro, MEM, OSINERG (P).
9. Other: Institutions with no defined percentages; FFAA and other institutions (E).
National Defense Council (E).

In this context, it was necessary to define standardization concepts:

- **Regional Rents**
 1. **Producer Departments and Municipalities:** Areas where the hydrocarbons production takes place. Their revenues are directly tied to royalties and Funds.
 2. **Ex-producer Departments and Municipalities:** Areas where hydrocarbons were exploited whose revenues remain directly tied to certain royalties and Funds.
 3. **Non-producing areas:** Mainly areas where pipelines pass by. The revenues in this case are tied to special taxes and incomes obtained from specific levies and passing rights.
 4. **Areas being explored (none of the above categories):** Their revenues are tied to income that can be obtained from the central Government or specific Funds.
- **Income Taxes,** generated by oil companies, mainly, perceived by the Central Government due to the fact that they are national taxes.
- **Funds:** Created from revenues derived from hydrocarbon exploitation, used in part to compensate non-producer areas or institutions and in part to promote sustainable development projects:
 1. **Regional Development Fund:** Revenues for a targeted region, set up by legal mechanisms which establish the amounts including a payment schedule: per barrel and national volumes of production. Thus giving life to the Amazon Development Fund (E).
 2. **Oil Stabilization Fund:** Revenues perceived as a result of a production surplus or a petroleum price increase giving rise to Oil Stabilization Funds (E).
 3. **Investment Fund:** These are revenues generated by a percentage derived from royalties allocated to the investments in development projects. That is how the National Fund of Royalties exists ©.
 4. **Pension Fund:** These are revenues generated by the capitalization of YPFB allocated for supporting the national pension fund. That is how the Capitalization Fund exists (B).

4

Comparative Analysis - Charts and Tables

Table 4.1: Distribution of Rents in Bolivia (US\$ Millions)

Concept	BOLIVIA									
	1995	1996	1997	1998	%	1999	%	2000	%	
1. CENTRAL GOVERNMENT				103,70	55,94	81,66	49,15	139,09	55,42	
2. DEPARTAMENTAL GOVERNMENTS				33,46	18,05	35,26	21,22	60,97	24,29	
Producer Dept.				30,67	16,54	32,27	19,42	55,89	22,27	
Non-Producer Dept.				2,79	1,51	2,99	1,80	5,08	2,02	
3. MUNICIPAL GOVERNMENTS				1,80	0,97	2,40	1,44	3,40	1,35	
Munic. Producers										
Munic. Non-Producers										
4. SUPERVISING ENTITIES				0,97	0,52	0,92	0,55	1,65	0,66	
5. UNIVERSITIES				0,45	0,24	0,60	0,36	0,85	0,34	
6. INVESTMENT FUNDS										
7. OTHER FUNDS				45,00	24,28	45,00	27,08	45,00	17,93	
8. JDN										
9. SOCIAL SUPPORT						0,32	0,19			
10. OTHERS										
TOTAL	97,00	102,00	185,37	100,00	166,16	100,00	250,96	100,00		

Figure 4.1: Rent Distribution in Bolivia

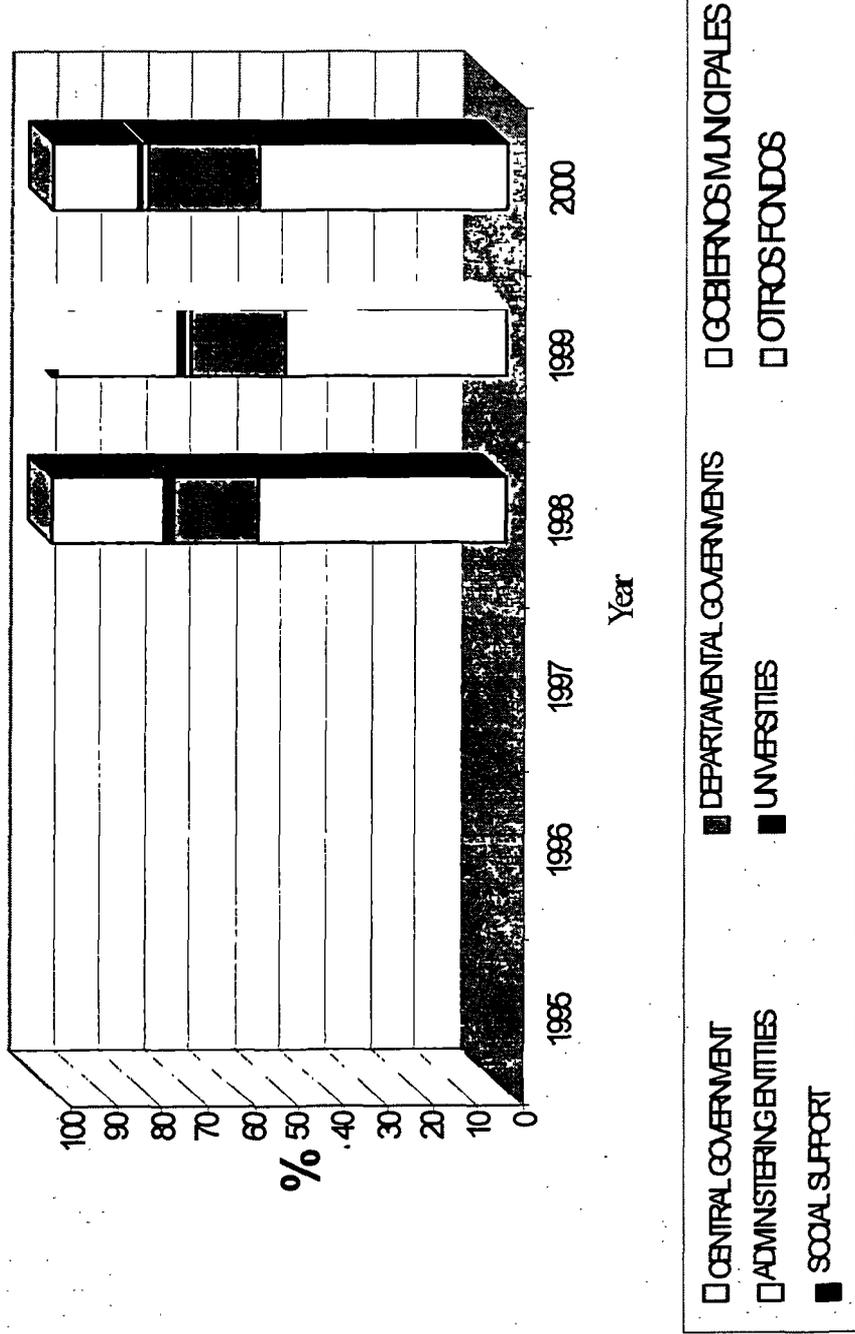


Table 4.2: Distribution of Rents in Colombia (US\$ Millions)

Concept	COLOMBIA											
	1995	%	1996	%	1997	%	1998	%	1999	%	2000	%
1. CENTRAL GOVERNMENT	254,8	34,1	282,2	33,9	415,2	43,1	220,4	31,2	180,5	20,2	406,5	29,9
2. DEPARTAMENTAL GOVERNMENTS	233,9	31,3	228,2	27,4	209,6	21,7	174,5	24,7	255,9	28,6	409,1	30,1
Producer Dept.	0,00	0,00	228,20	27,48	209,60	21,78	174,50	24,73	223,20	25,00	383,10	28,20
Non-Producer Dept.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	32,70	3,66	26,00	1,91
3. MUNICIPAL GOVERNMENTS	100,9	13,5	155,0	18,6	129,0	13,4	109,0	15,4	157,8	17,6	184,0	13,5
Munic. Producers	61,56	8,24	90,40	10,89	84,50	8,78	65,70	9,31	95,60	10,71	149,70	11,02
Non-Producers Munic.	39,40	5,27	64,60	7,78	44,50	4,62	43,30	6,14	62,20	6,97	34,30	2,52
4. SUPERVISING ENTITIES												
5. UNIVERSITIES												
6. INVESTMENT FUNDS	157,5	21,0	142,4	17,1	184,7	19,1	173,7	24,6	279,3	31,2	339,5	24,9
7. OTHER FUNDS												
8. JDN												
9. SOCIAL SUPPORT	0,0	0,0	22,6	2,7	23,7	2,4	27,8	3,9	19,3	2,1	19,3	1,4
10. OTHERS												
TOTAL	747,3	100,0	830,4	100,0	962,2	100,0	705,5	100,0	892,8	100,0	1358,4	100,0

Figure 4.2: Rent Distribution in Colombia

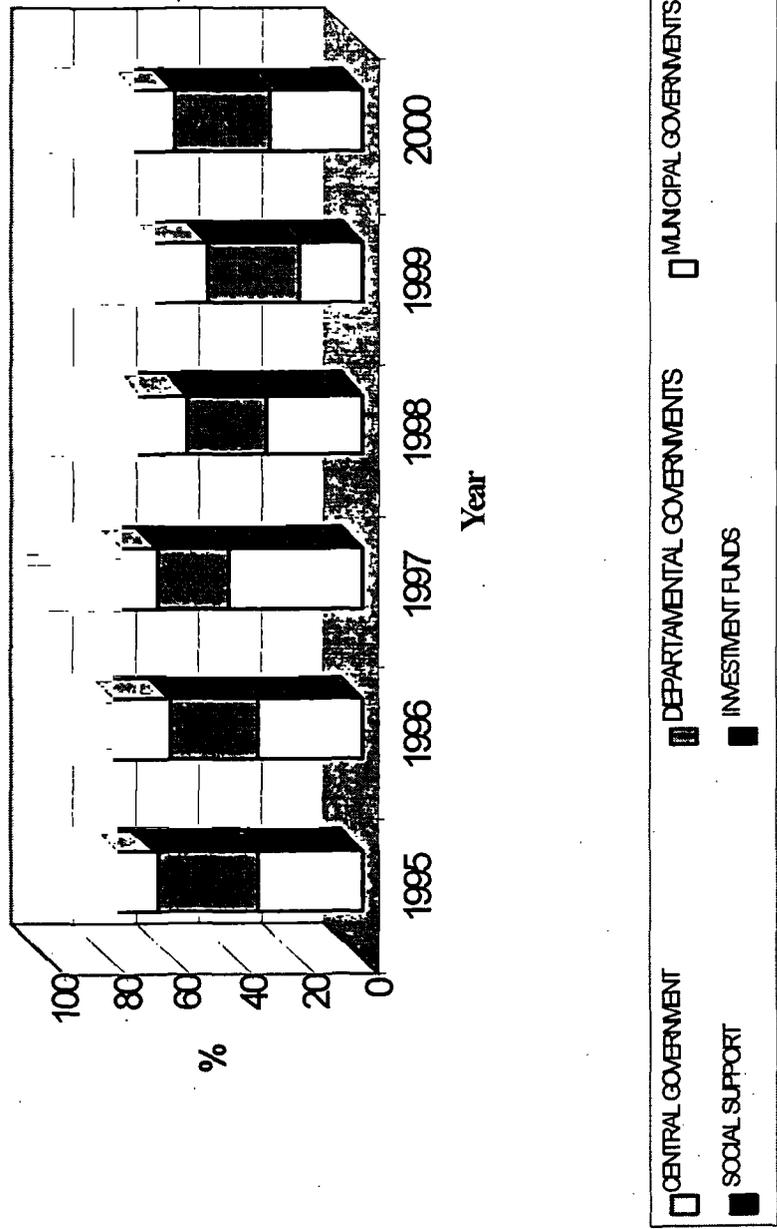


Table 4.3: Distribution of Rents in Ecuador (US\$ Millions)

Concept	EQUADOR											
	1995	%	1996	%	1997	%	1998	%	1999	%	2000	%
1. CENTRAL GOVERNMENT	375,76	57,50	630,79	63,00	214,78	54,52	55,25	30,41	559,03	86,50	820,98	81,35
2. DEPARTAMENTAL GOVERNMENTS	4,16	0,64	4,15	0,41	4,18	1,06	5,89	3,24	7,76	1,20	8,19	0,81
Producers Dept.		0,64	4,15	0,41	4,18	1,06	5,89	3,24	7,76	1,20	8,19	0,81
Non-Producer Dept.		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
3. MUNICIPAL GOVERNMENTS	8,33	1,27	8,29	0,83	8,36	2,12	11,78	6,48	15,51	2,40	16,38	1,62
Munic. Producers		1,27	8,29	0,83	8,36	2,12	11,78	6,48	15,51	2,40	16,38	1,62
Non-Producer Munic.		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4. SUPERVISING ENTITIES												
5. UNIVERSITIES												
6. INVESTMENT FUNDS	30,42	4,66	24,32	2,43	18,79	4,77	7,98	4,39	7,95	1,23	22,98	2,28
7. OTHER FUNDS												
8. JDN	79,42	12,15	73,41	7,33	38,93	9,88	9,03	4,97	36,33	5,62	53,31	5,28
9. SOCIAL SUPPORT		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
10. OTHERS	155,43	23,78	260,29	26,00	108,90	27,64	91,79	50,51	19,69	3,05	87,33	8,65
TOTAL	653,52	100,00	1001,24	100,00	393,94	100,00	181,72	100,00	645,27	100,00	1009,17	100,00

Figure 4.3: Distribution of Rents in Ecuador

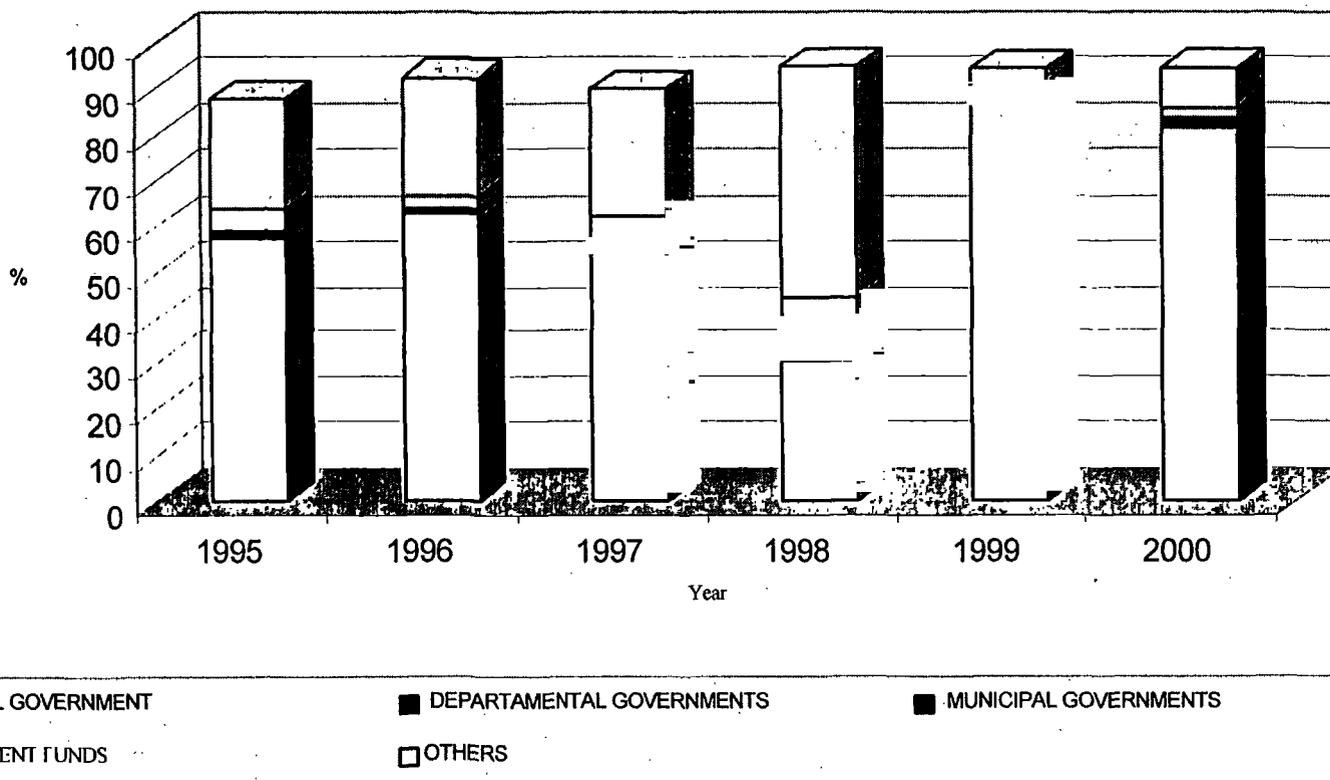
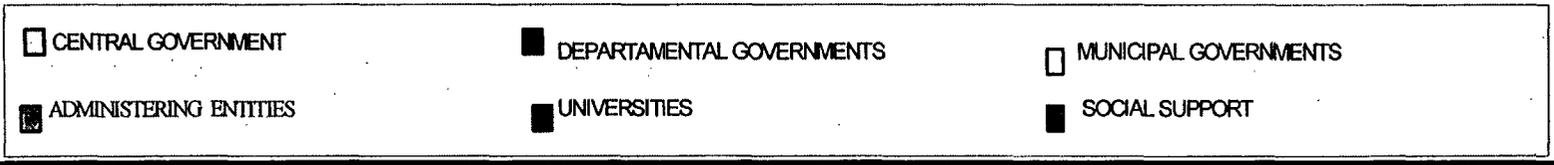
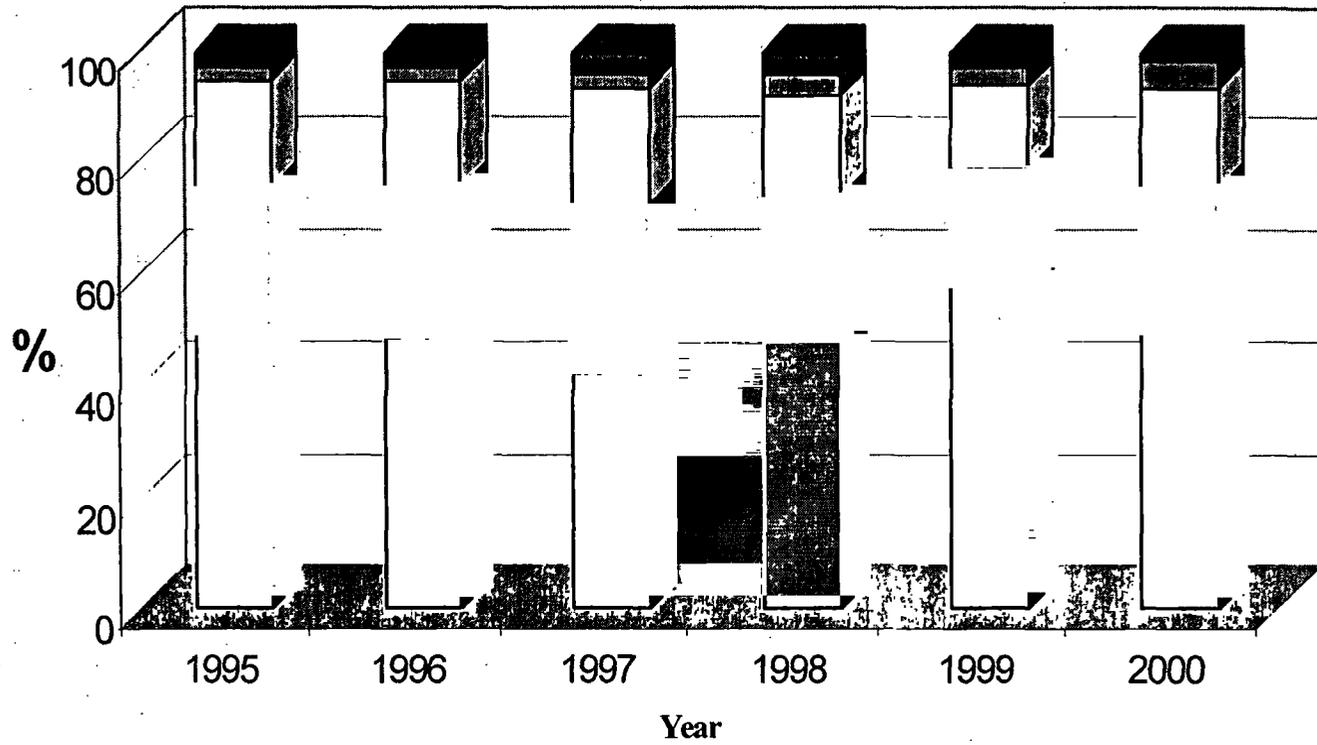


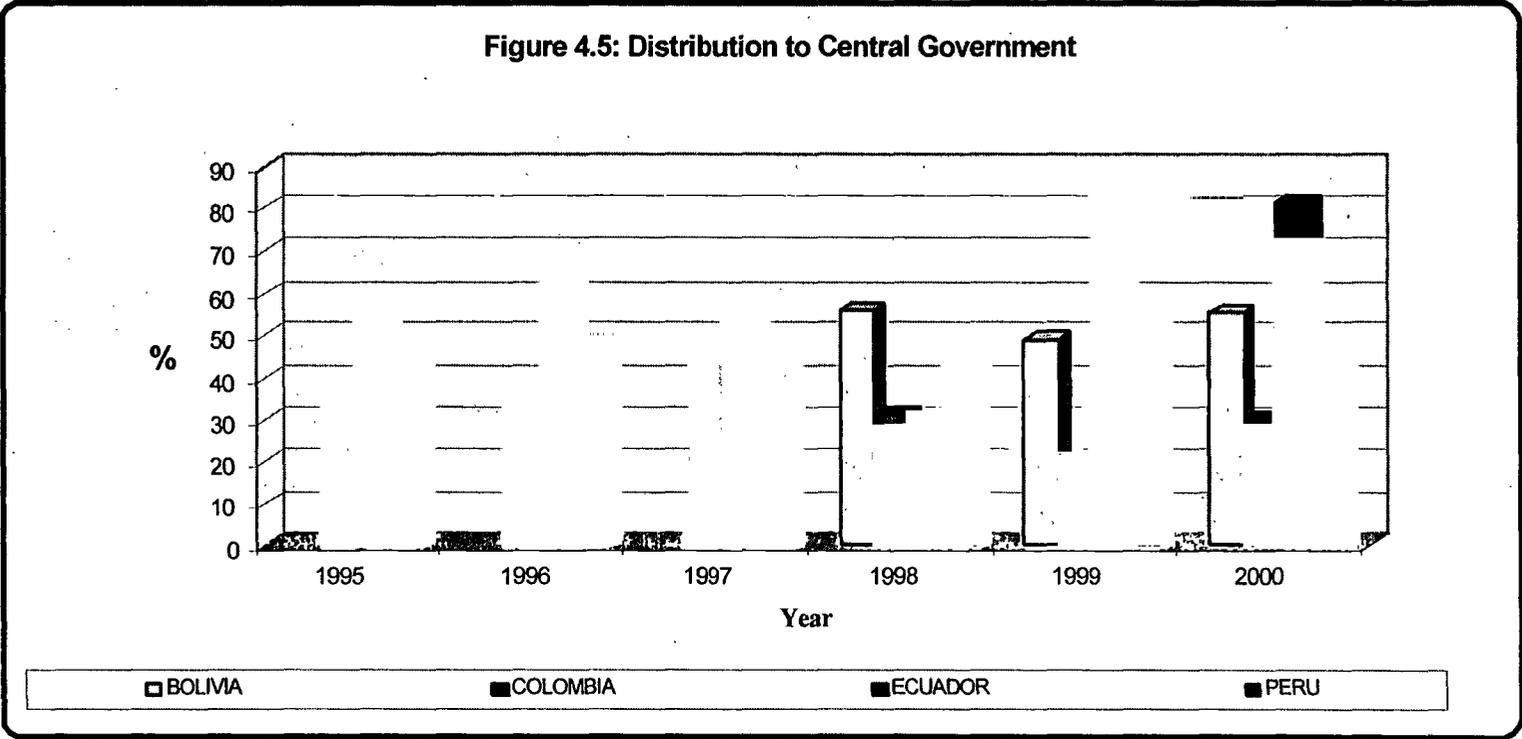
Table 4.4: Distribution of Rents in Peru (US\$ Millions)

Concept	PERU											
	1995	%	1996	%	1997	%	1998	%	1999	%	2000	%
1. CENTRAL GOVERNMENT	78,62	49,13	96,07	48,52	68,08	42,40	53,78	48,16	113,52	57,93	126,48	49,34
2. DEPARTAMENTAL GOVERNMENTS	42,36	26,47	53,03	26,78	47,50	29,59	28,34	25,38	41,14	20,99	67,25	26,23
Producer Dept.	38,76	24,22	48,71	24,60	43,17	26,89	25,56	22,89	37,84	19,31	62,30	24,30
Non-Producer Dept.	3,60	2,25	4,32	2,18	4,33	2,70	2,79	2,49	3,30	1,68	4,95	1,93
3. MUNICIPAL GOVERNMENTS	31,09	19,43	38,65	19,52	34,65	21,58	20,68	18,52	29,99	15,30	46,69	18,21
Munic. Producers	28,19	17,61	35,43	17,89	31,40	19,55	18,59	16,65	27,52	14,04	42,96	16,76
Non-Producer Munic.	2,90	1,81	3,22	1,63	3,26	2,03	2,08	1,87	2,47	1,26	3,73	1,45
4. SUPERVISING ENTITIES	3,26	2,04	3,88	1,96	3,45	2,15	4,21	3,77	5,71	2,92	11,77	4,59
5. UNIVERSITIES	3,85	2,41	4,82	2,43	4,32	2,69	2,58	2,31	3,74	1,91	2,59	1,01
6. INVESTMENT FUNDS												
7. OTHER FUNDS												
8. JDN												
9. SOCIAL SUPPORT	0,85	0,53	1,57	0,79	2,55	1,59	2,08	1,87	1,87	0,95	1,57	0,61
10 OTHERS												
TOTAL	160,03	100,00	198,01	100,00	160,56	100,00	111,67	100,00	195,96	100,00	256,36	100,00

Figure 4.4: Distribution of Rents in Peru

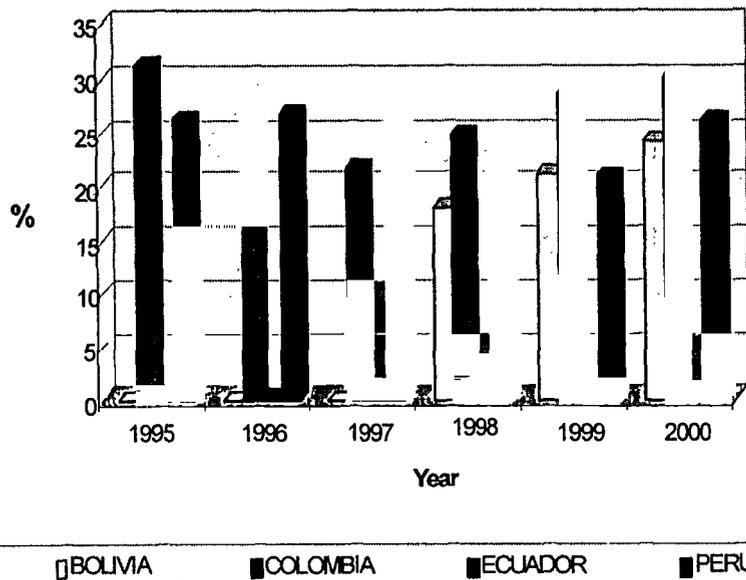


COMPARATIVE ANALYSIS



In general, the share of oil rents received by the Central Government is the largest one in all countries. They reflect a variation ranging from 20.22% (Colombia 1999) to 70.71% (Ecuador 2000). It is important to note that Peru maintains a level of distribution of oil rents to the Central Government of around 50% and Colombia of less than 50%.

Figure 4.6: Distribution to Departments



The graphs show that all countries have a defined distribution of funds to producer departments and non-producer ones. In general, departments have perceived incomes ranging from 0.41% (Ecuador 1996) to 31.30% (Colombia 1996). In average, they received 20 to 30% from the distributed oil rents. The graph in the far right shows how producer departments obtain the highest percentage and while non-producer departments are receiving less than 4% of the oil rents.

Figure 4.7: Distribution to Producing Departments

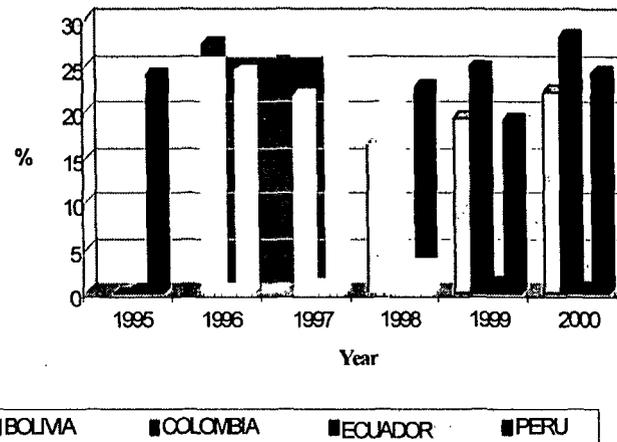


Figure 4.8: Distribution to Non-Producing Departments

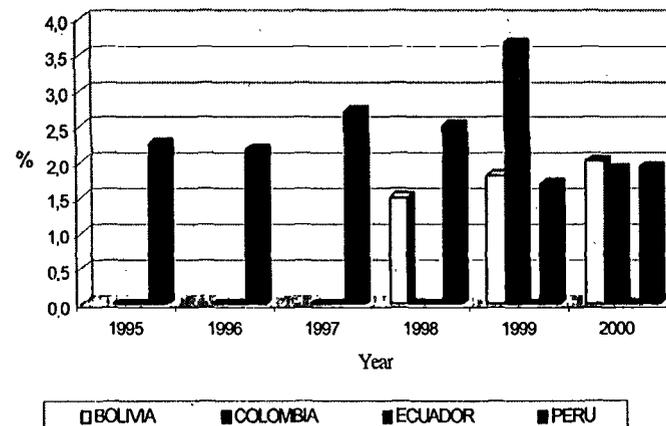


Figure 4.9: Distribution to Municipalities

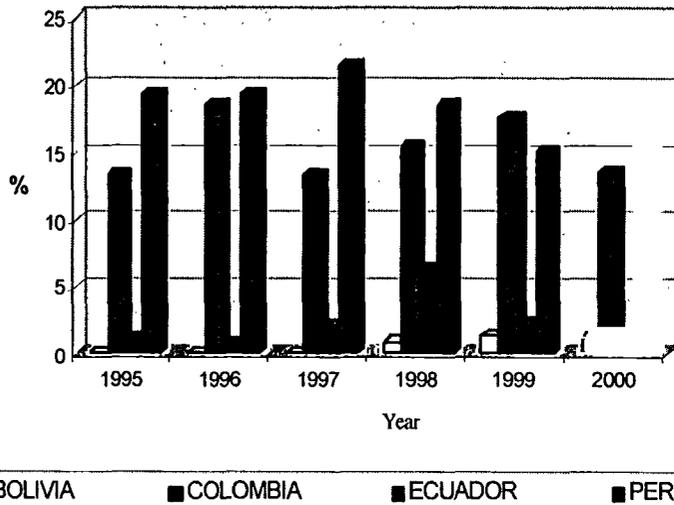


Figure 4.10: Distribution to Producer Municipalities

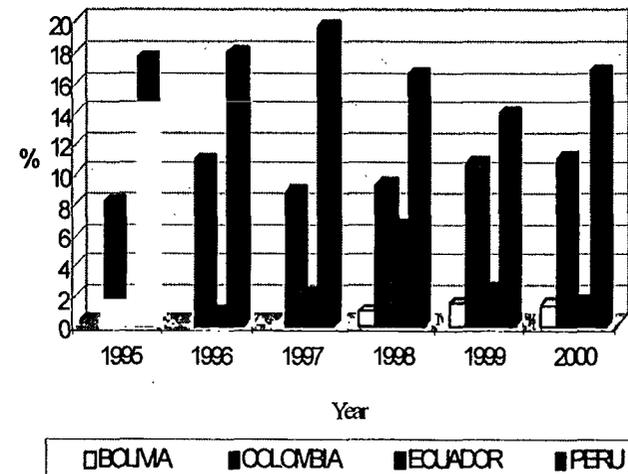
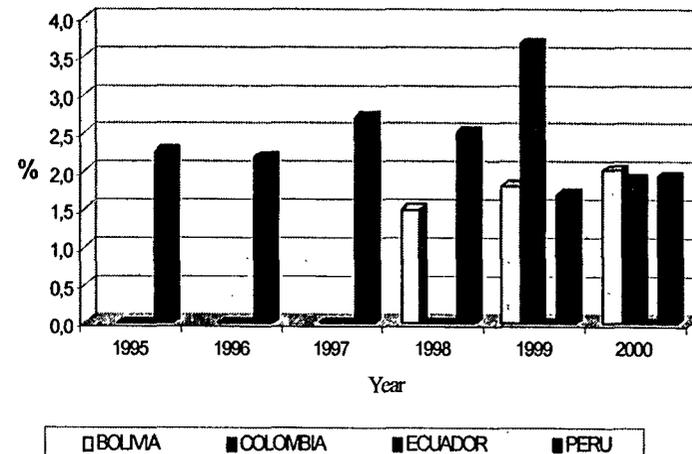
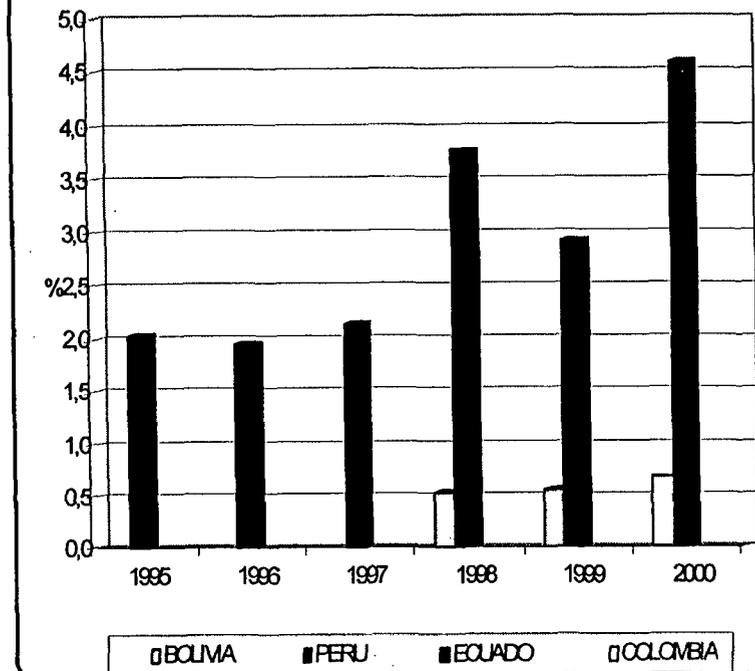


Figure 4.11: Distribution to Non-Producer Departments



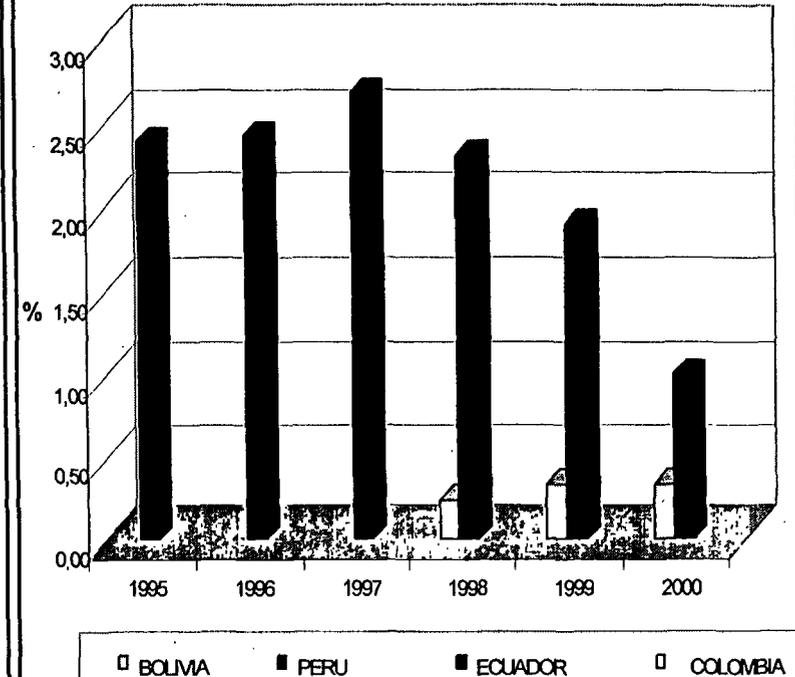
In reference to the municipalities, all four countries have defined distribution percentages. The graph above shows that distribution to municipalities varies from 0.83% (Ecuador 1996) to 21.58% (Peru 1997). In the graphs on the right, we can see that Colombia and Peru have defined distributions to producer municipalities and non-producer ones. It is important to note that Colombia distributes funds proportionally to producers and non-producers municipalities, and that have recently decided to allocate a percentage of these revenues to projects in indigenous communities if the production takes place in their territories. Peru distributes funds in a larger proportion to producer municipalities and less than 2% to non-producer municipalities.

Figure 4.12: Funds to Administering Entities



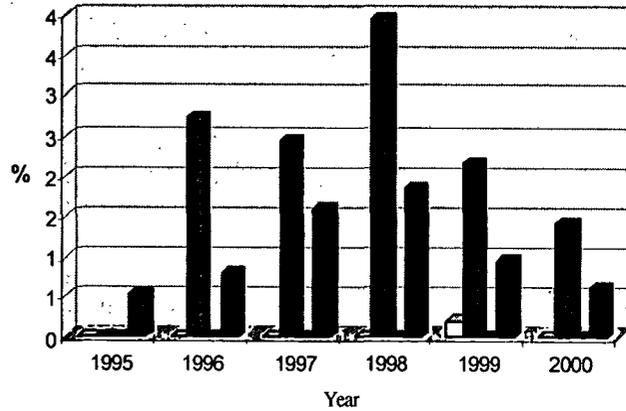
As far as the rent received by sector administering entities, only Bolivia (YPFB) and Peru (MEM, Perupetro and OSINERG) have defined those revenues between 0.52% (Bolivia 1998) to 4.59% (Peru 2000). In the case of Ecuador and Colombia, the administering responsibilities are in the hands of Petroecuador and Ecopetrol which also have rents and own operations.

Figure 4.13: Funds to Universities



Only Bolivia and Peru have defined funds for universities located in the areas of hydrocarbon exploitation. These funds are in the order of 0.24% (Bolivia 1998) to 2.69% (Peru 1997).

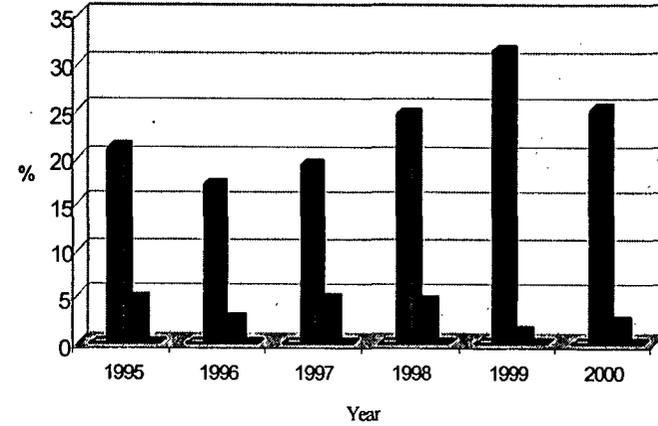
Figure 4.14: Distribution to Social Support



□ BOLIVIA ■ COLOMBIA ■ ECUADOR ■ PERU

Social Support Funds are perceived by Colombia (Social Support), Bolivia (Community relations) and Peru (Income to communities and CAREC). For the period analyzed we have observed variations from 0.19% (Bolivia 1999) to 3.95% (Colombia 1998).

Figure 4.15: Distribution to Investment Funds



□ BOLIVIA ■ COLOMBIA ■ ECUADOR ■ PERU

The only countries with defined Investment funds are Colombia and Ecuador (net exporters of crude oil). Their funds are used mainly for investment in social projects in the areas of production. For the period analyzed we can see variations in investment funds in the order of 1.23% (Ecuador 1999) to 31.28% (Colombia 1999).

5

Conclusions and Recommendations

Conclusions

Rent generation is tied to the volume of hydrocarbons reserves and actual production, and to the ability of countries to attract the necessary investments to develop a rational exploitation.

The structure of oil rent distribution is tied to parameters defined by different governments and national laws over the life of projects. They have been changing over the last five years. In general, the pattern of generation and of distribution of rents does not respond to an evaluation of the development needs of each region or institution.

It is therefore impossible to evaluate in isolation each country's rents distribution structure since it does not follow a consistent pattern overtime. What has been possible to achieve is a comparison of the average structure for the four countries against the one prevailing in each country and from this comparison present some general conclusions

General Conclusions

- A well-balanced structure of the distribution of rents should enable national communities to perceive the benefits derived from hydrocarbon exploitation in their territory. It will also enable the local communities to live in harmony with the oil industry without demanding the industry to play the role that corresponds to the State.
- Compared to income taxes that are subject to variations of profits and investments made by the operators, royalties and/or compensations perceived from the exploitation of hydrocarbons typically linked to the volumes of production are the country's main financial resource, accounting for more than 70% of the state revenues. Their percentages of royalties are defined in the Political Constitution of the four countries that also define predetermined applications of the royalties. Specific royalties should in turn be agreed upon in each exploration and development contract.
- The oil rent is a source of income for the state which in turn distributes it in accordance to the Law and in compliance with the regulations established for the use of public funds. Therefore, recipient institutions of these revenues must have a legal mandate. Moreover,

they should have investment mechanisms in place and an adequate system of auditing and control for the use of Funds. As long as indigenous communities lack such legal framework as well as the capacity to manage public funds in an accountable transparent manner, they will continue to experience difficulties to benefit directly from the allocation of revenues.

- Revenues perceived from oil rents should not be tied to the general allocations from the national budget at each entity or region. This means that if a region is receiving high revenues from oil royalties, it would not suffer under any circumstance from a proportional cut of its national budget allocations.
- The distribution of rents has a direct correlation with the level of political decentralization. As long as regions and municipalities have greater political and administrative capacity for making use of their resources, they will have better access to revenues.
- From 2001 Colombia will be the only country currently legislating on rents that should be directly benefiting Indigenous Peoples Communities impacted by the industry operations.
- In some countries, social support is to be recognized from environmental impact studies (Ecuador, and Colombia).
- Contractual clauses influence the level of social expending by companies. That is why contracts which recognize those expenses either for calculating the distribution or royalties, or for fiscal purposes, permit companies to dedicate larger amounts to social funds.

Country-specific Conclusions

The structure of rent distribution can vary significantly among the countries involved. To develop a comparison we suggest to estimate for each country an average rent distribution structure for the 6 years (1995-2000) period of the study and at the same time estimate for the four countries together a nominal overall average structure. On this basis, we could do the following comparative analysis:

Table 5.1: Country-Specific Rent Distribution

Concept	Bolivia (%)	Colombia (%)	Ecuador (%)	Peru (%)	Average
Central Government	53.50	32.10	62.14	49.24	49.25
Departments	21.18	27.34	1.42	25.9	18.91
Municipalities	1.25	15.37	2.4	18.76	9.45
Funds	23.1	22.1	3.3	-	12.13
Social Support	0.19	2.55	-	1.06	0.95
Other	0.8	0.63	30.94	5.04	9.35
Total	100.00	100.00	100.00	100.00	100.00

Bolivia

Bolivia distributes its revenues in average as follows: 54% to the Central Government, 22% to Departments and Municipalities, 23% to Funds, and 0.9% to Social Support funds. These percentages reflect a structure where the Central Government and the Departments are receiving above the average of other countries 49.25% and 18.91% respectively, while municipalities fall under the sub-regional averages. In the same manner, we can see that Funds represent 23% of total rents, basically covering Pension Funds resulting from the capitalization of YPF. In the case of Social Support funds, they represent 0.19% compared to the sub-regional average of 0.95%.

Colombia

Colombia distributes its revenues in average as follows: 32.10% to Central Government, 42.7% to Departments and Municipalities, 22.04% to Funds, and 2.55% to Social Support funds. These percentages reflect a structure where the Central Government share is significantly below the sub-regional average (49.25%) and where Departments and Municipalities are above it, together receive 42.71% of the rents compared to a sub-regional average of 28.36%. As far as Funds, they represent in Colombia 22.09% of the rents above the sub-regional average (12.13%). As for Social Support funds, they represent 2.55% also above the sub-regional average (0.95%).

Ecuador

Ecuador distributes its revenues in average as follows: 62.14% to the Central Government, 3.7% to Departments and Municipalities, 22.04% to Funds, and 3.3% to Funds. These percentages reflect a structure where the share of the Central Government (62.14%) is significantly above the sub-regional average (49.25%) and Departments and Municipalities below the average of other countries 18.91% and 9.45% respectively. As for Funds, they obtain in Ecuador a 3.3% below the sub-regional average (12.13%). Ecuador is the country with the most centralized distribution of rents structure, and probably the less transparent one, because rents in the Other category still have a significant share (30.94%) of the national total. The distribution of these amounts by a large percentage has been taken place usually in the context of yearly budget allocation.

Peru

Peru distributes its oil rents in average as follows: 49.24% to the Central Government, 44.7% to Departments and Municipalities and 1.06% to Social Support Funds. The percentages shown reflect a structure where the share of the Central Government is nearly at the same level of the average of the other countries (49.25%). Departments and Municipalities are above the sub-regional average 18.91% and 9.45% respectively. Social Support funds represent 1.06% of total rents very near the sub-regional average (0.95%). Peru is the country with a rent distribution very similar to the regional average.

Recommendations

Without a fair distribution of rent, it is difficult for hydrocarbon exploitation to be compatible with the concept of sustainable development in regions where oil operations are located. It is evident from the analysis made that there is no scientific formula containing the perfect structure for the rent distribution in a given country. However, some recommendations can be made that will permit an improvement of the state's presence in regions where oil exploration occurs and as such to overcome concepts such as "communities are considering oil companies social programs a replacement for the state's presence."

To overcome this perception, and to ensure a structure for the distribution of rent that would promote sector investments while generating more harmonic relations among oil companies, the government and the community at large, the following are the recommendations proposed:

- Departments and Municipalities –in particular those in which exploitation is present- should perceive a significant share of the oil revenues – in certain cases the largest possible percentage of the rents- because not only this will contribute to the region's own development in terms of accelerating hydrocarbon activities, but it will also contribute to the country's decentralization process. Specific royalties are the most adequate way for distributing rents to Departments and Municipalities in producing areas.
- On the other hand, it is not recommended that income taxes (national tax) be used as a way to distribute rents to Departments, Municipalities, or Social Funds, etc. The tax amounts depend on the companies activities and investment plans and therefore, are subject to variations that do not respond to the needs of regional or institutional development budgets. The variations could indeed generate conflicts between private companies and the community.
- In addition to the percentages designated to Departments and Municipalities, it is necessary to create Funds which would allow an efficient rent management. The general characteristic of such funds is that they're public sector institutions apart from the national budget that receive surplus flows derived from hydrocarbon exploitation. Funds tend to have numerous mechanisms for collection of the rents and for their use, and very frequently, multiple objectives. Two of the most commonly sought-after funds are: the Savings or Investment Funds and the Stabilization Funds.
 1. Savings Fund/ Investment Fund. The savings are generated when hydrocarbon prices in international markets have exceeded the original budget estimates. The resulting surplus is used to stimulate the economy when prices are down. Investment funds are generally used for investment projects influenced by oil operations.
 2. Stabilization Funds. These funds are used to stabilize gains and government expenses, and foreign currency disbursements, attacking both problems:

stabilization and the “Dutch Disease”³; a “financial disease” to nominate the dependency of a domestic economy on resource exploitation (oil and gas), could bring devastating consequences when the international prices of these resources drop or increase abruptly.

3. Other Funds: For example the fund created in Bolivia for the distribution of benefits derived from the capitalization/privatization of national companies. This fund could also be used, as a percentage, for provision of pension payments or for other social purposes. Given the fact that indigenous peoples from communities where oil operations are take place lack access to pension plans, they could be potential beneficiaries of other funds.
 - Indigenous communities will have to organize themselves in order to obtain legal advice and a minimal administrative capacity to directly access benefits derived from oil rents, and to manage public funds. In this context, it would be prudent to learn from the Colombia recent experience. Since indigenous communities lack the legal advice, it is imperative that the connection between municipalities and communities in Colombia be analyzed to evaluate whether it is possible to adapt Colombia’s decision to other countries. Development assistance should be focused to enhancing the capacity of the indigenous peoples organizations.
 - With respect to the social support to indigenous communities, it is recommended that social support funds be established and allotted to enhance their own development in regards to the Environmental Impact Study (Ecuador and Colombia). Social funds in support of indigenous communities should be recognized in the accounting procedures of contracts for oil and gas activities.
 - The characteristics of oil rent distribution vary by country, and they are not only tied to the function of hydrocarbon activities. Furthermore, it is for this reason that entities that participate in the distribution of rents in each country should centralize information with the intent of maintaining clear and updated statistics on the distribution of oil rents. Maintaining these statistics will help in carrying out modifications to the established policies. Additionally, this record keeping will help in overcoming situations such as a price increase, or a change in production or vice versa. The best way to establish a good structure begins with having an accurate and complete set of statistics.
 - The study did not include the analysis of project selection mechanisms nor did it include auditing mechanisms in the case of the use of oil resources. Such diligence would allow improving the benefits to society derived from the oil and gas exploitation in the countries involved. But such a task is beyond the terms of reference of this preliminary study.

³ The “Dutch Disease” term is used to describe Holland’s economic woes derived from the high and unexpected concentration of resources derived from gas exploitation at the end of the 60s. During this period, Holland endured an excess in currency, an unprecedented rise in domestic prices and a decline of its economic competitiveness.

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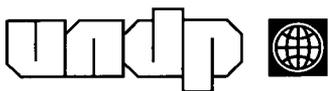
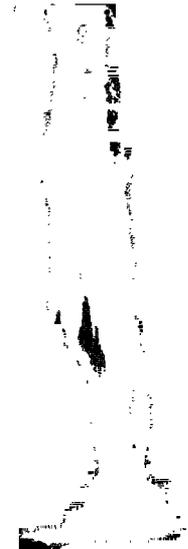
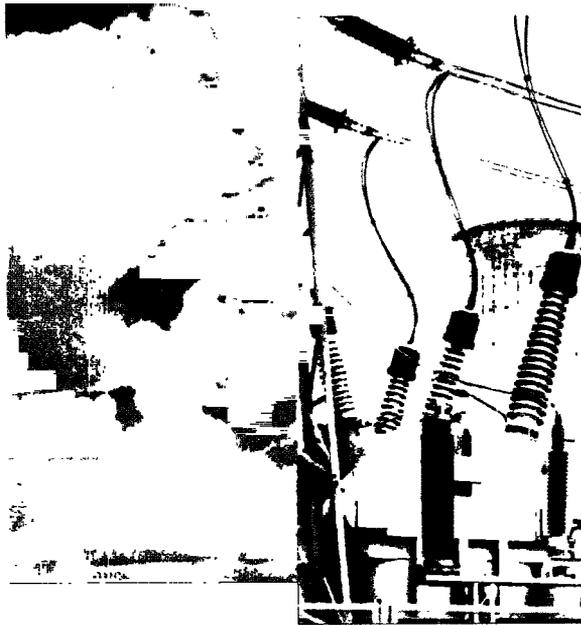
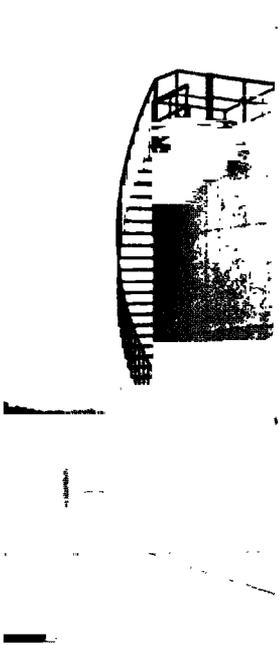
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