



**Secretariat of Science, Technology and Higher Education  
The State of Paraná.**



**Federal University of Paraná  
Post-Graduate Programme in Economic Development**

## **Supporting the Contribution of HEIs to Regional Development**

**BRAZIL: Northern Region of the Paraná State**

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## 1. Regional Characteristics

### ▪ The State of Paraná

Brazil is a federative republic with more than 160 million inhabitants, a Gross National Product of close to 777 billions of dollars (1998) and per capita national product of around 5000 dollars. The Brazilian State has three governments level: federal , state and local level. The states have a good independence from the Federal government and they have their own Constitutions. However a complex system of sharing tax and transfers give to the Federal government a power stronger than it has in legal terms. The relative independence of the local level depends of its size. The majority of the small municipalities (about 70% in a universe of 5,562) depend of transfers from the other levels. Day by day they are learning to work together in consortium of municipalities and some of them are able to run higher education institutions.

The state of Paraná (Fig. 1), is a member of the federative union, possessing 199,554 square kilometers, 2/3 the size of Italy. Its GNP is around 6% of the Brazilian one. It has a population close to 9 million inhabitants, and its capital city is Curitiba, with a greater metropolitan area of close to 2 million which is rapidly becoming site of new investments in the Brazilian automobile industry.

Fig 1. – The State of Paraná



The state of Paraná has a history of recent settlement. In the early days of Brazilian colonization, in the 16<sup>th</sup> century, only the coast and the area which is today Curitiba were

inhabited by colonizers. The intensive occupation of the north of the State began in the 1940s, as a spin-off of the São Paulo state coffee growing industry. Until recently, it was one of the richest areas of the state. The occupation of the southeast was initiated only in the 1950s, as a result of migration from Rio Grande do Sul, where family-based subsistence agriculture still prevailed.

Thus, the state was populated along three different fronts of occupation, coming from different parts of Brazil, each in its own historical moment. This created a large problem for state administration, which on numerous occasions had to confront attempts to emancipate parts of its territory. In other words, the way in which the occupation took place became an element that worked against the emergence of a territorial identification, that is, the emergence of a state identity.

Paraná has also been characterized as an agricultural state, and one that for the last 15 years boasts one of the most modern agricultural systems in the country. On the other hand, the state's capital, Curitiba, underwent an industrialization process beginning in the 70s in which traditional industries linked to wood and food production gave way to more modern branches of Brazilian industry, whose products belong to the electrical and electronic and metal and mechanical groups. These new industries, to a large extent branches of multi-nationals and industries from the state of São Paulo, result from the expansion of firms located in the Greater São Paulo metropolitan region, or, in other cases such as that of the Volvo company in the seventies and other automobile industries in the 1990s (Renault, Audi, Chrysler, etc.) represent new investments in Brazilian territory. Some locational advantages notwithstanding, the major factor that attracted these firms to the Greater Curitiba, is linked to the extremely generous policy of fiscal incentives that has been offered.

- **The North of Paraná Region**

The Paraná state is divided into ten regions (see Fig 2). These regions are supposed to be a base for an administrative decentralization, but actually they are used as a geographical reference. The region under our attention is the Central-North, which is the second most important region in Paraná. The two main cities, after the capital Curitiba, are in this region. The two main State Universities, Londrina e Maringá, are in these cities.

**Fig 2 – Ten regions of the Paraná State.**



Source: Ipardes, 2003.

In fact, the area called North of Paraná embraces, according to map above, four regions: Norte Central (Central-North); Norte Pioneiro (Pioneering North); Noroeste (Northeast); and Centro Oriental (Western-Centre). However, the most important part is an axis around 120 km linking Londrina and Maringá in the Central-North region. This axis works as a pole attracting the other areas of North of Paraná and neighboring areas of the São Paulo state and the State of Mato Grosso do Sul. This expanded area has more than three million inhabitants. Despite these characteristics, this study will focus on the Central-North region, particularly Londrina and Maringá, which has 24,419 square kilometers. This region, during the 1970s, had more than 25% of the total value added in Paraná. Nowadays, it has only 15%, being the emergence of the Metropolitan Area of Curitiba as a new locus for the Brazilian industry the main reason for the loss of importance of that region. Almost 65% of the value added in industry is in Curitiba region and only 11.6 % in the Central-North.

This region has been settled and developed through the coffee bean plantations. By virtue of the economic declining of this harvest as well as of climatic problems, this crop, since the middle of the 1970s, is almost disappeared. Despite this fact, other cultures have been increased, principally soya bean and cattle, which means that this region is still a very important area of agribusiness in Brazil. Besides that, this region has a remarkable tradition of organization in big cooperatives. In addition, it is also the second place in terms of concentration of industries in the Paraná state. These industries are connected to the agribusiness as well as to the urban markets with products, such as clothing, fabric, furniture, food, alcohol, plastic, mechanical parts and so on. However, it is worth noting that due to the increasing urbanization, which is remarkable along the axis Londrina-Maringá, the service sector has been increased as the major economic sector.

Comparing the Central-North region with Curitiba, it is possible to verify that both of them have high level of urbanization. However, Curitiba has more than 30% of Paraná state population (table 1). In relation to the participation in the state employed population, the

numbers are similar to the share in total population, but the most significant difference is related to the share in GDP. The share of Curitiba Metropolitan Area is almost four times North-Central's. Another important difference can be seen in their economic structure.

**Table 1 - Population in Brazil and Paraná, 2000**

<b>Population 2000</b>				
	<b>Total Population</b>	<b>Urban ratio</b>	<b>% PR</b>	<b>%BR</b>
North Central	1.829.068	88,4	19,1	1,1
Curitiba Metropolitan area	3.053.313	90,6	31,9	1,8
Paraná	9.563.458	81,4	100,0	5,6
Brazil	169.799.170	81,3		100,0

By analyzing the numbers of employed population, it is clear the importance of the primary activities for the North-Central region (table 2). These numbers show that in spite of the share of primary activities on the economic structure of that region, it is smaller than the corresponding share on Brazil and on Paraná. On the other hand, the manufacture's share in the North-Central area is equivalent to Curitiba's share and both are higher than Brazil's and Paraná's.

In short, North-Central is a region whose main economic axes Londrina-Maringá polarize a large territory, which embraces three Brazilian states. In this territory, agribusiness and light industries are important, but it is important to stress here that the service activities are emerging in the main cities.

**Table 2 – Employed Population by Economic Sector in Brazil and Paraná, 2000**

<b>Employed Population 2000 and GDP Share 2002</b>				
	<b>Brazil</b>	<b>Paraná</b>	<b>Metropolitana de Curitiba</b>	<b>Norte Central</b>
Agropecuária	18,8	20,3	5,5	16,3
Manufacture	20,8	22,1	25,5	24,5
Commerce	16,6	17,1	19	18,3
Service	43,8	40,5	48	40,0
	65.629.892	4.055.739	1.286.980	808.455
% E.P. BR		6,2	2,0	1,2
% E.P. PR			31,7	19,9
% GDP BR 2002	100,0	6,3		
% GDP PR 2003		100,0	28,5	7,7

## 2. Characteristics of the HEIs in the Region

Brazil has put considerable resources with the clear purpose of improving its higher education system over the past three decades. As a result, a system has developed in which some institutions have achieved recognizable excellence in teaching and research, while the most part of the higher education institutions has struggled to provide a good quality education at reasonable cost.

In fact, there is a sharp division in Brazil's higher education system between the public and private higher education sectors. The public sector, which includes the majority of the country's best institutions, provides, in general, high quality education, charges no tuition, and limits the number of places. The private sector comprehends a very few research-oriented institutions and the vast majority of low quality, and teaching-only courses. In addition, it is worth noting that the highest quality, public and private, higher education institutions are mainly located in the Centre-South of Brazil.

The Paraná state has five public universities, being two of them the most representatives: the State University of Londrina (UEL) and the State University of Maringá (UEM), which are located in northern Paraná. The importance of them in the regional context can be illustrated by the comparison with the other state universities. In this regard, they: a) provide 45.76% of all undergraduate courses; b) have 50% of the total of enrollments in the Paraná state universities; c) offer 56.64% of all specialization courses; d) provide 80.70% of all master courses ; and e) also 100% of all Ph.D. programmes.

It is important to stress that both universities, UEL (State University of Londrina) and UEM (State University of Maringá), have an influence that goes beyond the Paraná borders. This influence can be illustrated by the table 3, which shows that a considerable number of students of those universities came from the São Paulo state.

**Table 3 - Origin of Students Enrolled in the UEL and the UEM, 2002**

Region of Origin	UEL		UEM	
	Nº of Students 2002	%	Nº of Students 2002	%
Paraná	8,714	65.52	10,968	88.85
São Paulo	3,672	27.61	372	3.01
Other Brazilian States	879	6.61	967	7.83
Not Classified	-	-	-	-
Total	13,300	100	12,344	100

Source: SETI, 2005.

The table 4 shows clearly that the number of private higher education institutions in Brazil as well as in Paraná is much bigger than the public one. However, it is important to take into consideration that the public universities are those which provide a high quality education and, at the same time, are much more productive in academic terms (the vast majority of all kinds of post-graduate programmes are offered by these universities) than the private ones.

**Table 4 – Number of HEIs by Academic Organisation and Localisation (Capital and Interior)**

Unit of Federation/Type of HEIs	Institutions																	
	Total			Universities			University Centres			Faculties			Faculties, Schools and Institutes			Centres for Technological Education		
	Total	Capital	Interior	Total	Capital	Interior	Total	Capital	Interior	Total	Capital	Interior	Total	Capital	Interior	Total	Capital	Interior
<b>Brazil</b>	1.859	665	1.194	163	77	86	81	32	49	119	33	86	1.403	472	931	93	51	42
Public	207	76	131	79	42	37	3	-	3	4	-	4	82	13	69	39	21	18
Federal	83	52	31	44	29	15	1	-	1	1	-	1	6	3	3	31	20	11
State	65	24	41	31	13	18	-	-	-	-	-	-	26	10	16	8	1	7
Municipal	59	-	59	4	-	4	2	-	2	3	-	3	50	-	50	-	-	-
Private	1.652	589	1.063	84	35	49	78	32	46	115	33	82	1.321	459	862	54	30	24
Particular	1.302	472	830	26	13	13	47	21	26	95	29	66	1.080	379	701	54	30	24
Commun/Confes/Philan	350	117	233	58	22	36	31	11	20	20	4	16	241	80	161	-	-	-
<b>Paraná</b>	151	40	111	10	3	7	4	2	2	8	4	4	124	26	98	5	5	-
Public	22	4	18	6	1	5	-	-	-	-	-	-	15	2	13	1	1	-
Federal	2	2	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-
Estadual	17	2	15	5	-	5	-	-	-	-	-	-	12	2	10	-	-	-
Municipal	3	-	3	-	-	-	-	-	-	-	-	-	3	-	3	-	-	-
Private	129	36	93	4	2	2	4	2	2	8	4	4	109	24	85	4	4	-
Particular	111	28	83	3	1	2	3	2	1	7	4	3	94	17	77	4	4	-
Commun/Confes/Philan	18	8	10	1	1	-	1	-	1	1	-	1	15	7	8	-	-	-

Source: MEC, 2005.

**Table 5 – Enrollment in Undergraduate Courses by Academic Organisation and Localisation (Capital and Interior)**

Unit of Federation / Type of HEIs	Enrollment in Undergraduate Courses																	
	Total			Universities			University Centres			Faculties			Faculties, Schools and Institutes			Centres for Technological Education		
	Total	Capital	Interior	Total	Capital	Interior	Total	Capital	Interior	Total	Capital	Interior	Total	Capital	Interior	Total	Capital	Interior
<b>Brazil</b>	3.887.022	1.775.799	2.111.223	2.276.281	1.054.513	1.221.768	501.108	252.301	248.807	208.896	73.511	135.385	841.030	354.289	486.741	59.707	41.185	18.522
Public	1.136.370	497.784	638.586	985.465	461.925	523.540	16.605	-	16.605	8.991	-	8.991	80.513	6.855	73.658	44.796	29.004	15.792
Federal	567.101	376.818	190.283	527.719	351.962	175.757	1.159	-	1.159	785	-	785	3.637	1.371	2.266	33.801	23.485	10.316
State	442.706	119.893	322.813	404.821	108.890	295.931	-	-	-	-	-	-	26.890	5.484	21.406	10.995	5.519	5.476
Municipal	126.563	1.073	125.490	52.925	1.073	51.852	15.446	-	15.446	8.206	-	8.206	49.986	-	49.986	-	-	-
Private	2.750.652	1.278.015	1.472.637	1.290.816	592.588	698.228	484.503	252.301	232.202	199.905	73.511	126.394	760.517	347.434	413.083	14.911	12.181	2.730
Particular	1.475.094	716.328	758.766	400.791	185.397	215.394	292.659	168.085	124.574	163.490	67.950	95.540	603.243	282.715	320.528	14.911	12.181	2.730
Commun/Confes/Philan	1.275.558	561.687	713.871	890.025	407.191	482.834	191.844	84.216	107.628	36.415	5.561	30.854	157.274	64.719	92.555	-	-	-
<b>Paraná</b>	272.714	102.526	170.188	129.248	47.294	81.954	27.313	16.846	10.467	16.969	10.911	6.058	85.367	18.743	66.624	13.817	8.732	5.085
Public	100.817	27.230	73.587	66.950	18.473	48.477	-	-	-	-	-	-	21.490	1.465	20.025	12.377	7.292	5.085
Federal	31.235	25.765	5.470	18.858	18.473	385	-	-	-	-	-	-	-	-	-	12.377	7.292	5.085
State	65.991	1.465	64.526	48.092	-	48.092	-	-	-	-	-	-	17.899	1.465	16.434	-	-	-
Municipal	3.591	-	3.591	-	-	-	-	-	-	-	-	-	3.591	-	3.591	-	-	-
Private	171.897	75.296	96.601	62.298	28.821	33.477	27.313	16.846	10.467	16.969	10.911	6.058	63.877	17.278	46.599	1.440	1.440	-
Particular	135.859	53.485	82.374	42.854	12.522	30.332	24.206	16.846	7.360	14.075	10.911	3.164	53.284	11.766	41.518	1.440	1.440	-
Commun/Confes/Philan	36.038	21.811	14.227	19.444	16.299	3.145	3.107	-	3.107	2.894	-	2.894	10.593	5.512	5.081	-	-	-

Source: MEC, 2005.

When the focus is the enrollment, and not, in the Brazilian higher education system, it is worth noting that the difference between private and public universities is not so huge (see table 5). By taking into consideration the number of private and public universities, it is possible to underline that the latter ones receive, in proportional terms, more students than the private universities. This aspect is relevant, principally in the context of the Paraná state.

The table 6 shows that the more qualified human capital is within the public universities. Looking at the Paraná context, 68.87% of the academic staff of all public universities has a PhD or a master title, while this percentage decreases to 52.77% in those private universities. This difference is more visible when the only variable to be taken into account is the number of PhD. In fact, there are twice more PhDs at the public universities than in the private ones. These numbers illustrate that public universities provide, in general, a higher quality education than those private universities.

**Table 6 – Human Resources of HEIs**

Unit of Federation / Type of HIEs	Academic Staff					
	Total	no bachelor	bachelor	specialisation	MSc	PhD
<b>Brazil</b>	268.816	23	37.970	78.075	96.510	56.238
Public	95.863	3	13.458	17.582	28.555	36.265
Federal	52.106	-	8.332	6.222	16.225	21.327
State	36.098	2	4.292	8.144	9.645	14.015
Municipal	7.659	1	834	3.216	2.685	923
Private	172.953	20	24.512	60.493	67.955	19.973
Particular	94.939	-	12.599	37.034	36.563	8.743
Comun/Confes/Philant	78.014	20	11.913	23.459	31.392	11.230
<b>Paraná</b>	21.580	1	1.962	6.804	8.859	3.954
Public	8.845	1	894	1.858	3.287	2.805
Federal	2.187	-	185	229	765	1.008
State	6.478	1	687	1.539	2.460	1.791
Municipal	180	-	22	90	62	6
Private	12.735	-	1.068	4.946	5.572	1.149
Particular	10.218	-	919	4.218	4.385	696
Comun/Confes/Philant	2.517	-	149	728	1.187	453



### **3. A Brief History of HEIs Engagement in the Regional Development**

The State University of Londrina and also the State University of Maringá have a long tradition of engagement in the regional development. Due to the historical process of settlement, Norte-Central and North of Paraná as a whole had problems related to the connection with Curitiba, capital of Paraná. Because of this, a tradition of community cooperation has been developed in the region. There are a lot of institutions, public and private, dealing with regional and local matters. One of the most important institutions is CODEL (Londrina Development Agency) and its equivalent in Maringá. The universities have been present in these agencies since their beginning working in common projects.

These universities are located at medium-size cities. Londrina has around 490,000 inhabitants in 2005 and Maringá around 320,000. This is a factor that makes personal contacts easy and makes institutional interactions easier. However, the regional engagement goes beyond these cities. There are a considerable number of programmes that give support to municipalities. In general, they are related to sets of small municipalities, being their aim draw up common development strategies.

There are also several projects related to the development of new enterprises, which are supported by universities and other institutions, hospital, juridical assistance for the poorest population, technological parks, museum, concerts and so on. Although this engagement is far from perfect, it is qualitative better than many kinds of engagement seen in other parts of Brazil and even in Curitiba. One indicator is the high respectability and influence of the rectors within the regional community.

### **4. Resources for Further Information on the Region**

- The Paraná government: [www3.pr.gov/e-parana](http://www3.pr.gov/e-parana)
- IPARDES (The Parana Institute of Social and Economic Development): [www.ipardes.gov.br](http://www.ipardes.gov.br)
- SETI (The Secretariat of Science, Technology and Higher Education of the State of Parana): [www.seti.org.br](http://www.seti.org.br)
- UEM (State University of Maringá): [www.uem.br](http://www.uem.br)
- UEL (State University of Londrina): [www.uel.br](http://www.uel.br)
- INEP (National Institute for Educational Research): [www.inep.gov.br](http://www.inep.gov.br)
- MEC (Ministry of Education): <http://portal.mec.gov.br>