

# Differences in Resource Endowments and the Impact on the Argentine Education System

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## 1. Introduction

Several years ago, economist and sociologist Paul Samuelson proposed dividing the world into four categories: the rich countries, the poor countries, Japan and Argentina. Everyone knows the state of rich countries and poor countries. However, no one understands why Japan is doing so well and Argentina so badly.

– *Explaining the Argentine Enigma* by Marcos Aguinis

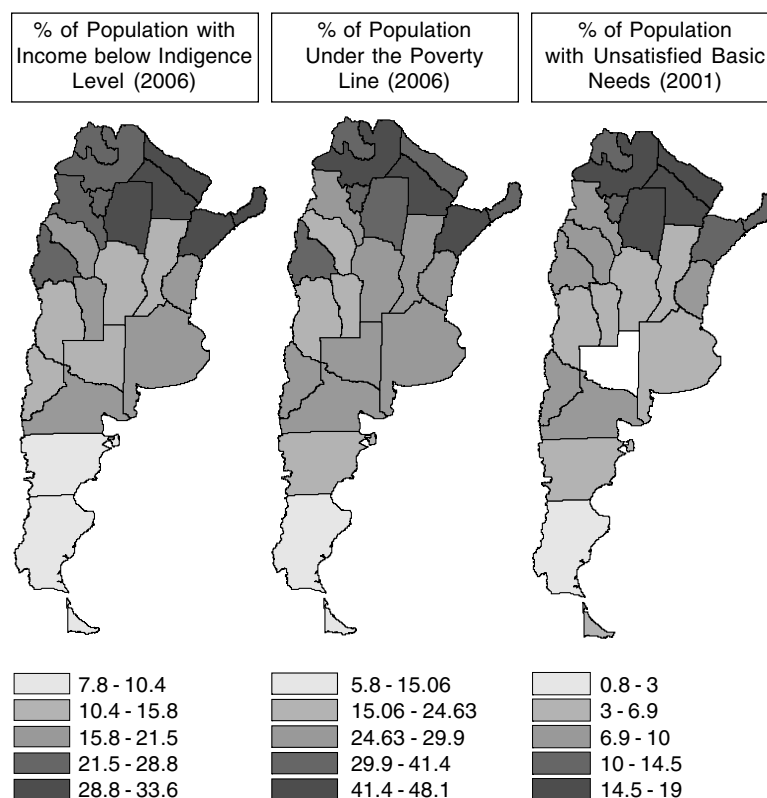
Argentina is a country well-known for an abundant and diversified endowment of natural and human resources. Natural resources include a generous stock of renewable as well as non-renewable resources. Vast fertile lands are dedicated to the production of agro-industrial exports. The country also has an extensive sea platform and forests. It is well endowed with oil and gas, and is a net exporter of fuels. And finally, it has a large, educated middle class. Despite all this, its growth has been dismal in comparison to the rest of the world and has suffered a huge crisis every ten years or so that has taken the country back to its starting point. Hence, it is argued that the endowment is not the only important factor: the

distribution of these resources is also crucial when explaining the Argentine reality. An uneven distribution of resources, coupled with an absence of a distributive mechanism in a federal country with decentralized social services, will deepen the regional disparities and prevent a sustainable and equitable development path.

## 2. The Provincial Inequalities

### 2.1 *The Socio-Economic Differences*

Argentina is a country marked by strong regional inequalities. Economic production is geographically concentrated in the centre-



Source: CIPPEC, based on data provided by INDEC.

Figure 1: Map of Unsatisfied Basic Needs

east of the country: the capital city of Buenos Aires together with the province of Buenos Aires is responsible for producing 58 per cent of GDP. Adding the province of Santa Fe and Córdoba, 74 per cent of GDP can be accounted for. The other 20 provinces are unevenly responsible for the remaining 26 per cent of GDP. In per capita terms, the richest district (the Autonomous City of Buenos Aires) produces eight times the amount generated in the poorest district.

When observing other social indicators such as poverty, indigence levels or population with unsatisfied basic needs, huge disparities appear too, with the south of the country exhibiting the most positive picture, while the north-east is the worst hit by poverty (as can be seen in Figure 1).

## ***2.2 The Consequent Inequality in Their Fiscal Capacity***

These differences in their economic and social situation are reflected in their abilities to collect taxes. In 2005, six provinces were able to collect less than 200 Argentine pesos per capita, while three collected more than 1000 pesos per capita. The difference between the lowest and the highest was almost 13 times as much.

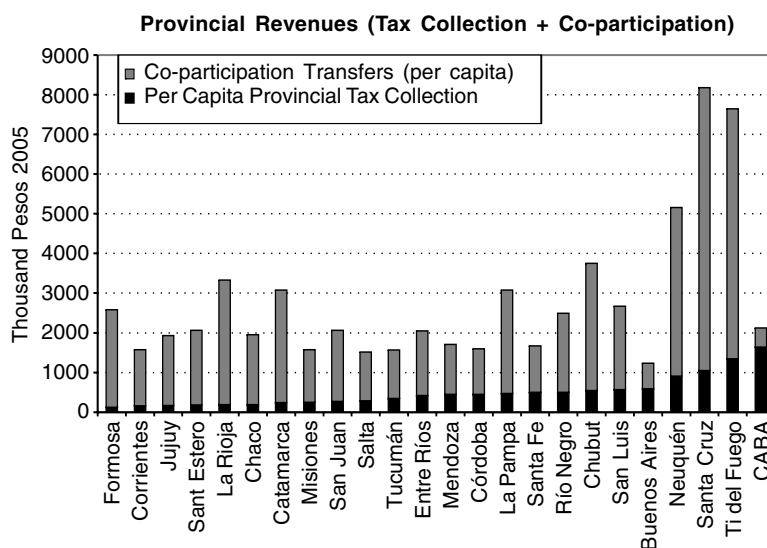
Fiscal capacities are also dependent on the productive structure. For example, the current tax system allows provinces to collect taxes on fuels and minerals. This has given a huge advantage to the provinces of the south, rich in oil and gas. Instead, several agricultural provinces complain about taxes on exports (particularly relevant for the agro-industrial provinces), which are collected by the national government and are not co-participated. The tax system hence does not take into consideration the differences in resource endowments among the provinces.

## ***2.3 The Absence of a Distributive Mechanism***

What is worse, the fiscal federal arrangement in Argentina, known as “the tax co-participation system” does not compensate for these inequalities. The secondary distribution coefficients among the provinces were determined in Law 23548 of 1988 based on the

average negotiated bilaterally by each province during the period 1985-8, a period marked by hyperinflation and a lack of an institutional arrangement. These coefficients do not respond to fiscal needs or the socio-economic situation, but rather the negotiating and political capacities during the period previous to the implementation of the law. The dependence on this distribution system varies among the provinces, going from almost 90 per cent in the case of Formosa to less than 15 per cent in the City of Buenos Aires.<sup>1</sup>

Figure 2 shows quite clearly the absence of a distributive mechanism. Ranking the provinces according to their fiscal capacities, as measured by their per-capita tax collection in their territory, and then adding what the co-participation system grants to each of them, it becomes clear that the system does not prioritize equaliza-



Source: CIPPEC, based on data provided by MECON.

Figure 2: Co-participation is not a Distributive Mechanism

<sup>1</sup> Admittedly, the capital city is a special case and is sometimes left out of the analysis for comparative purposes: one explanation behind its low dependence on co-participated funds lies in the fact that several services are still administered by the National Government in this federal district, as is the case with the justice system and the police, in contrast with the rest of the provinces.

tion. On the contrary, the current distribution system seems to somehow favour the provinces of the south, which have the highest fiscal capacities and a few other provinces scattered in the territory. Another way of seeing this is by observing the wide differences in transfers between provinces with relatively similar fiscal capacities.

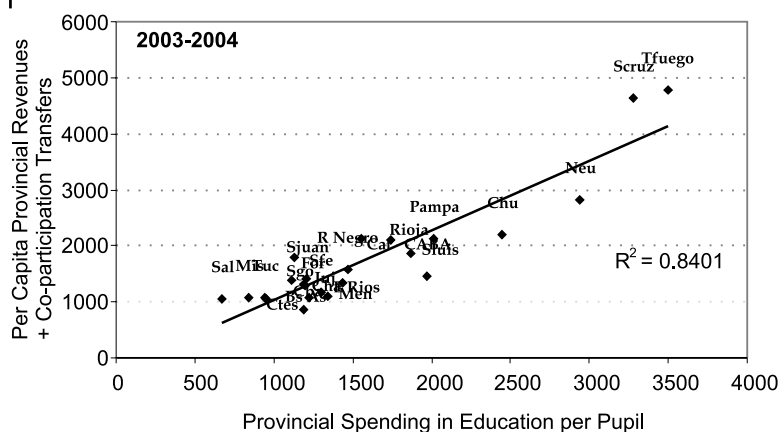
#### *2.4 The Differences in Investment in Education*

Historically, responsibility for education was shared by the national and provincial governments. However, a decentralization process started back in the 1960s and culminated in 1992 with the final bestowal of the last remaining national schools to the provincial administrations. Hence, provinces are currently responsible for administering the pre-primary, primary and secondary education system. Wide differences appear when observing how much money each province puts in its education system. Three variables expose this reality: teachers' wages, spending in education per pupil, and spending in education as a percentage of provincial spending.

Comparing a teacher's wage, with 10 years of experience in teaching, working one shift in standard education, the best paying province pays 2.5 times the amount paid by the province that pays the least. Spending in education per pupil shows an even wider difference, as Tierra del Fuego invests 5 times what Salta does. An analysis of provincial budgets shows that there is a notable divergence between the highly populated province of Buenos Aires, which dedicates 34.6 per cent of its budget to education, and the much less populated province of Santa Cruz which invests 12.7 per cent.

#### *2.5 The Relationship between Provincial Resources and Spending in Education*

As can be seen in Figure 3, there is a strong and positive correlation between provincial resources and spending in education per pupil. Naturally, provinces with more fiscal capacity and transfers may well dedicate more resources to the education system. But if there is no distributive mechanism that ensures that the poorest provinces



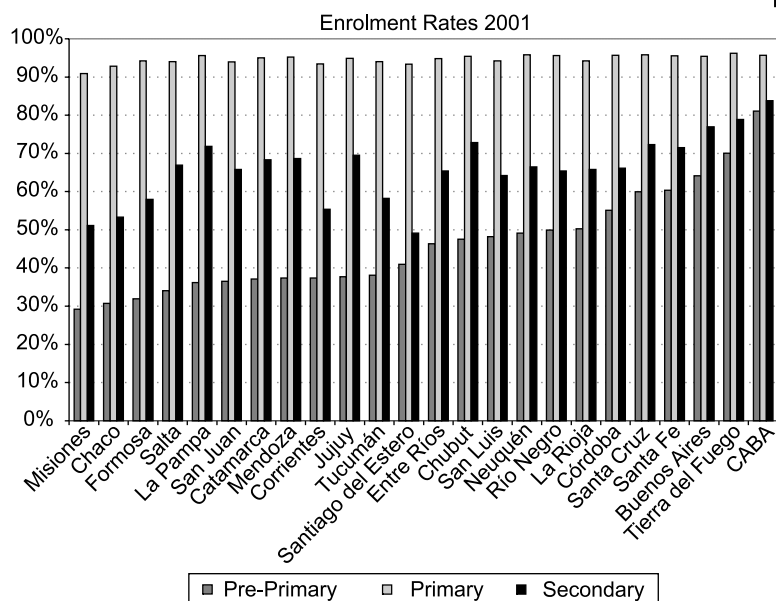
Source: CIPPEC, based on data provided by MECON.

Figure 3: Strong Correlation between Provincial Resources and Spending per Pupil

have enough resources, it is difficult for them to maintain similar levels of investment in education. Hence, education, once seen as an equalizing platform, is now preserving disparities in development within the country.

### 3. The Consequences on the Education System

The quality of education also varies a great deal across Argentina's provinces. This becomes obvious by analysing even the most simple quality indicators. For example, Argentine provinces display different capacities to maintain high enrolment rates. The most significant differences appear at the pre-primary and secondary schooling, while in primary education the levels are quite similar, going from a minimum of more than 90 per cent to as high as 96 per cent, with an average of 94.6 per cent. This is due to the fact that primary education has been compulsory for many years now. Instead, the gap grows in pre-primary education, where enrolment rates go from as low as 29.2 per cent to a maximum of 81.1 per cent, and an average of 46.2 per cent. Wide differences are also evident in secondary enrolment rates, which go from 49.1 to 83.8 per cent, and



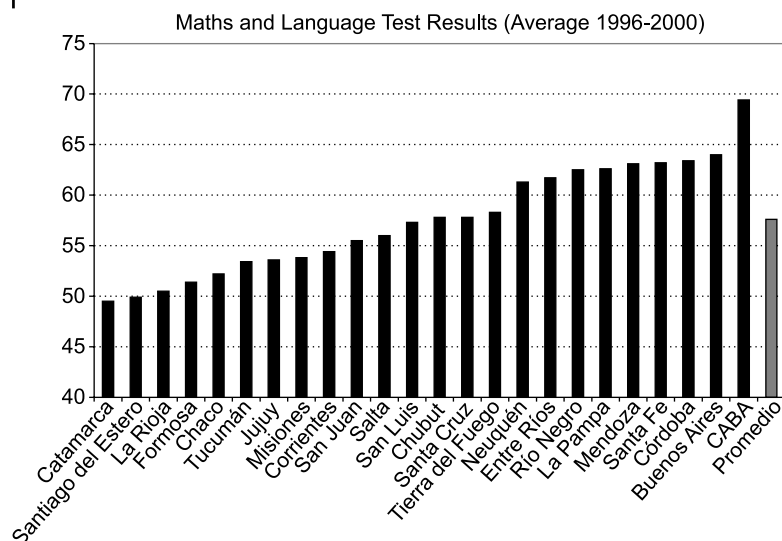
Source: CIPPEC, based on data provided by INDEC, National Census 2001.

Figure 4: Provincial Different Enrolment Rates in Initial, Primary and Secondary Education

an average 66.1 per cent. Figure 4 shows the provincial enrolment rates.

Another indicator, the frequency of teacher's strikes (causing loss of schooling days) goes up in provinces where teachers' wages are lower (Mezzadra and Rivas 2005). Probably as a consequence of this, wide disparities can be observed in test results. In national exams in mathematics and language, results go from less than 50 out of 100 points to almost 70 and an average of 57.6, showing 20 points difference even in provincial averages, as can be seen in Figure 5.

Of course these averages hide even deeper inequalities within the provinces. Very recent studies analyse the distribution of teachers inside each province. The main conclusion is that teachers with less experience go to the poorest schools, where there is higher rotation of teachers (Mezzadra 2007). Most micro-data studies conclude that poor students go to poor schools and rich students



Source: CIPPEC, based on data provided by Ministry of Education.

Figure 5: Provincial Results in Evaluation Tests

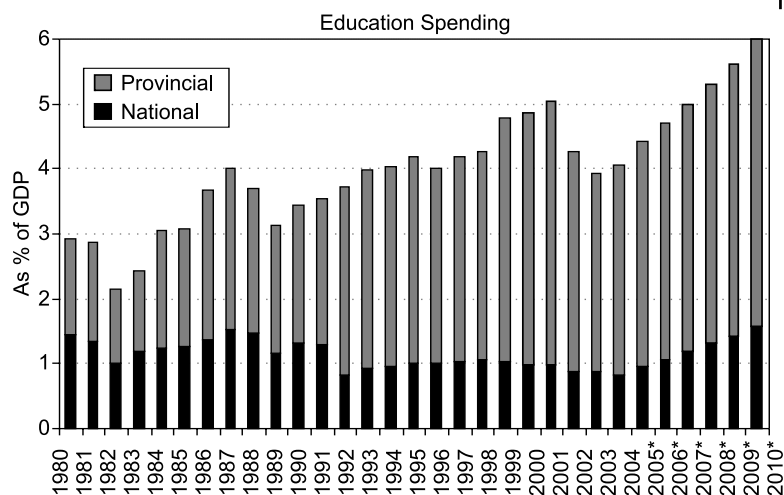
go to well-endowed schools, thus magnifying the differences that exist among provinces (Llach, Montoya, and Roldán 2001).

#### 4. The Solution Proposed by the Government

Despite the fact that schools are administered by the provinces, many expect the solution to the education challenges to come from the national government. In reply to this demand, the Law of Education Financing (Law 26075) of 2005 and the recently approved Law of National Education (Law 26206) of 2006 have been passed. The main goal of these laws is to increase public investment in education from an estimated 4.3 per cent of GDP in 2005 to 6 per cent in 2010.

As can be seen in Figure 6, the effort will be shared by the national government and the provinces, respectively responsible for 40 per cent and 60 per cent of the increase. This will imply that the national government will increase its share in education spending from 21 per cent in 2004 to 26 per cent in 2010 while





Source: Prepared by CIPPEC, based on Dirección de Análisis de Gasto Público y Programas Sociales. MECON.

Note: \* Projected based on the fulfilment of Law of Education Financing.

Figure 6: Spending in Education as a percentage of GDP by Level of Government (1980-2010)

the provinces will supplement the remaining 79 per cent in 2004 and go towards 74 per cent in 2010.

The previously sanctioned Law of Federal Education (Law 24195) of 1993 also established the goal of increasing investment in education to 6 per cent of GDP but did not ensure how this increase would be financed and who would be responsible for it. The main difference is now that the source of financing is clear. There are three sources: the national budget, the increase in co-participated taxes that go to the provinces, and the provincial budgets. The law now explicitly determines the coefficients that the provinces must use to assign the increase in co-participated taxes to their education systems.

The priorities of this new spending follow the historical distribution of responsibilities:

- (i) The national government will invest mainly in building schools, providing scholarships, enabling more inclusion

mechanisms, distributing textbooks and investing in 'science and technology' areas as well as universities. Also, the national government created a programme targeted at diminishing wage gaps among teachers in different provinces (Programa de Compensación Salarial, Article 9 of the Law).

- (ii) The provinces will dedicate the new funds to finance the expansion of education, for example including all children aged five in initial education and providing extended day education to more children. The provinces are also responsible for improving teachers' wages and working conditions.

However, no significant change has been made other than the promise to commit more resources to education. This is a promise that may not be met, however, particularly by the provinces that face fiscal and financial trouble ahead. Moreover, these added resources are targeted at too many objectives. The structural problems, those that arise from the fiscal federal arrangements and its entrenched inequalities, still remain.

## 5. Conclusion

Argentine provinces show huge economic disparities and a very uneven distribution of resources, with an important concentration of production in the centre-east of the country and some provinces enjoying the windfall gains of oil, gas and other non-renewable resources. These disparities affect the fiscal capacities of the provinces. Furthermore, the current tax structure benefits provinces rich in minerals and fuels while it is relatively detrimental to agricultural provinces.

The existing federal co-participation system of tax-sharing does not properly address these inequalities. Neither has it rationally defined how much money corresponds to each level of government according to the responsibilities assigned to it, nor has it designed a system that can accomplish equality of opportunities as set out in the national constitution.

The consequences of this system can be seen in many social services. As was seen in this study, these consequences heavily affect

the education system, which also shows enormous disparities. Education in Argentina has suffered the negative impact of the macroeconomic crises and the ensuing high poverty and inequality rates. The decentralization of the education system with insufficient transfer of funds has deepened the regional chasms. Also, growing enrolment rates and the real depreciation of teachers' wages have negatively affected the education system.

In the face of these problems, the new Laws of Education Financing and National Education have been passed with the intention of investing more public money into the system. However, the structural problems, those that arise from the fiscal federal arrangements, still remain. To be more in line with principles established by theories on federalism, Argentina should, in the first place, convert its current co-participation system into a more redistributive one, with the aim of complementing fiscal capacities with fiscal needs and better accommodating the differences in resource endowments.

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