Colombia an atypical LDC: Financial aid for education and its impact on the income distribution gap.

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Colombia an atypical LDC: Financial aid for education and its impact on the income distribution gap.

Juliana Vengoechea Barrios

I. Introduction

Many economists claim that human resources are more important in the development and growth of a country, claiming that human resources are active whereas capital and natural resources are passive. Education is thought to be the key element to positively influence both economic growth and development, because it generates positive externalities. Externalities are defined as an effect of consumption or production, which is not taken into account by the consumer or the producer and which affects the utility or costs of other consumers or producers. Education is thought to bring many positive externalities to the country, and for that reason many countries spend a high percentage of their fiscal budget in education.

Some of the positive externalities that education generates are the following: a more productive labor force is created, which is richly endowed with knowledge and skills, this in the long run is a result of investment made in the past. Education provides income generated by the employment created in new job opportunities such as teachers, school constructors, school materials and many more, this is a positive externality in the short run. An educated and skilled labor force is essential for a country to have sustained growth. Education also has a very important impact on fertility and child health. It has been found that there is an inverse relationship between education and fertility, particularly at the primary level. This shows that the more women are educated, the less number of children they will bear and as a result, population growth rates are lowered. Likewise, education leads to better pre-natal care and better parenting, which could imply a decrease in the infant mortality rate and an increase in the life expectancy of the country. In theory, education should improve the income distribution gap because it gives the same or similar job opportunities to all the members of the community, as well as giving them the capability of managing their money in several ways, for example in investment or saving.

Although education has proven all its benefits, there are still some economists that think that if education is not well structured and planned out it can be more harmful than beneficial to the country. In some Lesser Developed Countries (LDCs) there has been a trend in which education has proven to worsen the income distribution gap. This has shown to be a typical phenomenon in LDCs caused by inequality in the distribution of education opportunities. This means that the quality of primary and secondary education and the people receiving tertiary education are the people that belong to the higher income groups. Thus, the rich are becoming richer and the poor are becoming poorer, due to the higher education levels and to the difference in the job opportunities.

The research question which this essay attempts to answer is the following: Does the method of awarding aid to finance tertiary education in Colombia, actually worsen the income distribution gap rather than improve inequality by offering equal opportunity to all members of society?

Of all the different fields of economics, development is the one that I find the most interesting. The fact that I live in a LDC makes development economics a reality for my country. Education is in my opinion the key element for development and because of this I found it to be an excellent topic for my extended essay. I thought it is an important issue to look at, because I think if a country like Colombia is going to spend a high percentage of its fiscal budget on education, it should be doing it in a wise and effective way.

II. Historical Background and Theoretical Framework
LDCs realized the importance of education, and as a result they started investing a large percentage (15% to 29%) of the fiscal budget into education. In the 1960s and 1970s spending doubled in Latin America and tripled in Asia and Africa. Spending has been reduced since the 1980s. Generally enrollment rates are high but drop out rates are also high, (due to the high opportunity cost implied for low income families). Having a child at school has many expenses, for example food for lunches, school supplies, clothing, etc. For a poor family, having a child attending school may imply the loss of income, because that child could be working instead of attending school. Although in the long run, having an educated child is more profitable than a child without any education, in the short run it is not beneficial for low-income households to have children at school, due to the fact that in the short run the cost outweighs the benefit.

A very important factor in the profile of education in almost all LDCs is the one of costs and earnings. The cost ratio of primary to secondary is 11.9 and to tertiary 87.9, that is to say that for everyone who is being educated at secondary level, 11.9 students could be educated at primary level, in the same way for each person who is being educated at tertiary level, 87.9 could be educated at primary level. Whereas it costs 88 times more to educate a University student, he will only earn 6.4 times more.

Another very important issue is the one of “brain drain”. This issue is very relevant to the hypothesis and analysis of this extended essay. There are two kinds of brain drain, the first is international brain drain, which is the migration of high level educated workers from poor countries to rich countries. International brain drain implies a high social cost to the developing nation and a benefit with no cost, because they did not finance the education, for advanced countries who already have many skilled workers and do not really need these workers as much as the developing country. The second type of brain drain is internal, it is when the professional workers in the LDC are specialized or focused in jobs that are not really useful or appropriate for the country. For example there may be some economists working for the government and many of their proposals for economic reforms could not be appropriate for the development of the country. These reforms or policies could be investing money in the development of high tech apparatus, which are inappropriate for the country rather than investing in education or health.

The educational system in Colombia is structured in three parts: formal education, non-formal education and informal education. Formal education is provided by government approved institutions, which are regulated by the Ministry of Education. It is based on a sequence of levels, which are progressive and they lead to degrees and diplomas. It is organized in pre-school, primary or basic, middle or secondary and superior. This education is offered by an approximate number of 57 thousand institutions, kindergartens, public and private schools, technical institutions and universities. Non-formal education serves as a complement to formal education and it can also help people to update their knowledge. It is made up of many small institutions, trade schools which specialize in teaching arts, specific jobs and in some cases the validation of primary or secondary education. Finally, informal education in Colombia is not regulated by the government, and it is structured by many institutes and services that provide many different educational elements. This informal education uses communication media, traditions, and social behaviour, linking family members and communication media in order to fulfill an educational task.

In Colombia many policies regarding education have been implemented, policies such as the voucher program which failed. The latest policy is called An Education Plan for Peace, the plan is aimed at achieving peace using education as a tool. It hopes for the participation of all society set by the same goals and objectives, through an educational revolution. It is divided into two lines of action formal and non-formal education. The central plan is to make sure that education is available to all the population of the country, that this education is of good quality, having the participation of parents in the extracurricular education and the creation of a complementary school schedule to enhance the quality of the education given. The program also aims into the quality of the teaching of non-formal institutions that will generate tools for
development. Although the purpose of this proposal is very good in theory it is not well explained as to how it is going to be put into practice in order for it to be effective.

After summarizing the many positive externalities of education and also taking into account the arguments that give evidence that if education is not properly approached, it can lead to worsening poverty and inequity in a country, the analysis of the research question is possible.

III. Analysis

In Colombia an organization called ICETEX (The Colombian Institution of Technical Studies Abroad), grants loans and scholarships to Colombian students to study in Colombia or abroad. In the beginning ICETEX only granted scholarships to study abroad, later on it became an institution that grants loans to study abroad or locally. The creator and founder of this organization, Gabriel Betancur, granted an interview for this essay. In his interview he explained the evolution of this organization; he also discussed the problems of the educational system in Colombia and the many implications it has for the social and economic growth of the country. The way the loans and scholarships are distributed in the different social strata of the country is very important for the analysis of the research question.

Although education is thought of as great investment in a country, and it has proven to have many positive externalities, the levels of education show a trend of cost-benefit change. This is the issue of social versus private costs and benefits of investment in education. The social costs of education refer to the opportunity cost to the whole society for the financing of education, whereas the private cost refers to the costs of each student himself. The following graphs illustrate the private costs and returns of education, in the same way the other graph represents the social costs and returns.\(^5\)

In the first graph it can be seen how private returns tend to increase with the more years of schooling received, and thus the private returns outweigh the private costs. Yet in the second graph it can be noticed how in the first part of the curve of social returns there is a sharp rise but as years of schooling increase the social costs curve rises and the social returns progressively fall.

This shows how primary and secondary level represent a social cost to the country yet it still presents high social benefits, whereas superior education (university and technical careers) imply a very high cost with a very low benefit. In Colombia the percentage of the population receiving higher education has been increasing progressively. One of the institutions that is responsible for this increase is ICETEX. Thanks to its financial aid many people that do not have the resources to pay for a higher education but that are interested in obtaining it, have a chance to receive it and later on they pay for it. The graph below shows the percentage growth in the last 5 years.\(^6\)

Among the benefits of education one of the most important is that education helps to shrink the income distribution gap. If people in the country are receiving a good solid education, no matter what social group they belong to, these people are receiving working skills, and with this acquired knowledge they are able to work in better paying jobs. Education also helps them learn how to manage their money properly and by this they can make better economic decisions, such as investing, saving or spending money more effectively. This is true in theory, but for it to be true in practice equity among all social groups is necessary even more so, the least wealthy should be given preference, to actually help shrink the income distribution gap.

ICETEX grants financial aid to Colombian students or professionals that have good academic levels and lack the money to pay for higher education. In attempting to give more benefits to those people who belong to low and middle income groups ICETEX came up with a ranking to approve the loans they grant. If a
person applying for a loan comes from a lower strata they will have more points added than someone of a higher strata. In the same way the ICETEX awards more points to people who are graduates of public schools, and to people who apply for loans to study in a public university. Although academic performance is taken into account, ICETEX has noticed that people of high-income groups, or that come from private schools have received better education than those of low-income groups, as a result they tend to have a higher academic level. People of higher strata also receive higher incomes that help to finance their education, than those of mid to low income, and because of that ICETEX has given some advantages to the low-income groups.

<table>
<thead>
<tr>
<th>Stratum</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications</td>
<td>724</td>
<td>2.743</td>
<td>4.395</td>
<td>1.370</td>
<td>428</td>
<td>118</td>
<td>9.778</td>
</tr>
<tr>
<td>Awarded</td>
<td>557</td>
<td>2.067</td>
<td>2.648</td>
<td>889</td>
<td>226</td>
<td>70</td>
<td>6.457</td>
</tr>
<tr>
<td>%Awarded</td>
<td>77</td>
<td>75</td>
<td>60</td>
<td>65</td>
<td>62</td>
<td>60</td>
<td>66</td>
</tr>
<tr>
<td>%Of the total</td>
<td>8.6</td>
<td>32</td>
<td>41</td>
<td>13.8</td>
<td>3.5</td>
<td>1.1</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Icetex

The table above shows the amount of loans demanded and awarded by ICETEX for the first semester of 2001. In the percentage of how much is awarded it can be noticed that an average of 66 % of the loans requested are granted, but that in the two lower strata the higher percentage of the loans are approved. In stratum 3 is where the demand is higher, and although only 60% of the loans are granted, the 60% is 41% of the total number of loans given. The two highest strata are awarded the least percentage, at the same time they are the strata that demand the less, and they represent the smallest percentage of the total loans granted. Strata 2 and 3 are the ones that demand and get the largest number of loans, an although stratum 1 is awarded the highest percentage (77 %) of what is demanded it still has the third lowest number of loans requested. This shows that very few people that receive the lowest income are seeking higher education.

<table>
<thead>
<tr>
<th>Departm</th>
<th>Per Capita GNP</th>
<th>Gini Coefficient</th>
<th>Stratum (loans granted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antioquia</td>
<td>1.004</td>
<td>0.551</td>
<td>12</td>
</tr>
<tr>
<td>Bogotá</td>
<td>1.019</td>
<td>0.416</td>
<td>71</td>
</tr>
<tr>
<td>Cauca</td>
<td>0.428</td>
<td>0.615</td>
<td>27</td>
</tr>
<tr>
<td>Chocó</td>
<td>0.281</td>
<td>0.530</td>
<td>23</td>
</tr>
<tr>
<td>N.Santander</td>
<td>0.468</td>
<td>0.418</td>
<td>18</td>
</tr>
<tr>
<td>Sucre</td>
<td>0.343</td>
<td>0.483</td>
<td>15</td>
</tr>
<tr>
<td>Valle</td>
<td>1.011</td>
<td>0.590</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: ICETEX and the Colombian Human Development Index
The table above is a combination of the information given by ICETEX and the data found in the Colombian Human Development Index. The departments in it were chosen by different criteria: Antioquia, Bogotá and Valle are the three wealthiest departments in the country, Chocó and Sucre are the poorest. Cauca was chosen because it has the worst Gini coefficient in the country and N.Santander had the second best. This table was done to see if there is a trend among these departments, and also to see if there is a relationship between the gini coefficient and the loans granted.

In the three departments with the lowest per capita GNP it is noticeable how the loans are awarded in the greatest part to the lower income strata. Strata 2 and 3 tend to have the greatest amount of loans, with the exception of Chocó that has in strata 1 and 2 the majority of its loans, and in the three higher strata has no loans awarded. The three wealthiest departments follow the trend of having the majority of loans in strata 2 and 3, but they also have high number of loans in the upper strata. Antioquia and Valle are departments that have two of the biggest cities of the country, and Bogotá is the capital of Colombia. This can explain why these departments have high per capita GNP, and the fact that these cities have high populations gives a logical explanation to the high number of loans granted to them. Nonetheless, with the exception of Bogotá, the wealthy departments have a very high gini coefficient, which shows that education is not necessarily leading into a more equal income distribution. Whereas Chocó the poorest department in Colombia has a high gini coefficient but not as high as the one in Antioquia and Valle.

Between 1978 and 1988 the national gini coefficient had grown, and it kept growing until 1996. This means that the income distribution gap grew during these 15 years. In the urban areas it dropped from 1978 to 1988 but after this year it went up again until 1993 when it started decreasing. In the rural areas it started decreasing since 1991. This decrease in the gini coefficient indicates that although Colombia’s per capita GNP has been decreasing due to several reasons -an economic recession, and a civil war among others- the income distribution gap in the country has been decreasing, leading to equity.

One reason that could have influenced this change in the income distribution gap could have been education. In the interview with the creator and founder of ICETEX, Gabriel Betancur, one of the important aspects discussed was the management of the loans and scholarships in the past. He said that in the early stages of ICETEX, favoritism was very common, this means that the people that received financial aid were the relatives of the ones in power, and thus the rich people were getting the education rather than those in the lower income groups. He said that with time people were chosen based on their academic standards, and it has now evolved into not only basing its standards on academic merit but also giving certain advantages to those people who are poorer.

Some of the information and data used to do the analysis of the research question of this essay not only helped me to notice that Colombia is not a typical LDC when it comes to granting financial aid. It also enabled me to notice some positive and negative aspects of the Colombian education. For example, in my research I noticed that Colombia is an atypical LDC; in mostly all LDCs the illiteracy rate is higher among women, in Colombia it is the opposite, the illiteracy rate for men is 4.2 whereas for women it is 2.9. In the theoretical framework the benefits of educating women were stated, in which many positive externalities for a country are generated, such as a decrease in fertility rate and better parenting.

Although there are many positive aspects of education in Colombia, there are still many advances to be made. The difference in years of education in the labor force between the richest and the poorest is seven years and the difference between the richest and the middle-income groups is five years. Of the total amount of people registered in education programs, 26 % are people in rural areas and 74 % in urban areas. In Colombia education availability is very high in urban areas but it is very low in rural areas which not only leaves a good percentage of the population without any education but it can also result in rural to
urban migration. In urban areas, more women tend to receive education whereas in rural areas more men are receiving education.

The information provided by ICETEX showed that mostly all scholarships are being given to people who are going to study administrative careers or engineering and very few people are going into agricultural related careers or into education. This is critical due to the fact that these careers are very important to a developing country such as Colombia. The comparative advantage\textsuperscript{10} of a country like Colombia is found in its agricultural, primary sector products. If very few people are studying this type of careers the country is slowly killing this sector which is crucial for its development. In the same way, the careers that are related with education are very important because these have a trickle down effect on the country, that is to say, it benefits many people in the country, it has a multiplier effect on the economy.

IV. Conclusions

After gathering data on Colombia’s education statistics, and analyzing this with the relevant economic theory on education, it can be seen how Colombia is an atypical LDC when it comes to education patterns. The purpose of this essay was to see if financial aid provided for tertiary education worsened or helped the income distribution gap of the country. There is a trend that shows how education in most LDCs tends to worsen the income distribution gap, instead of helping decrease it. The reason for this is that mostly all students in LDCs that actually go as far as receiving tertiary education, are the ones that make part of the upper income brackets. As a result, the money that is invested in this type of education is received by the members of the upper brackets. This is to say, there is a transfer payment from the poor to the wealthy. In Colombia this was the trend in the past but as this essay shows the institutions that award financial aid have changed their policies in order to benefit those members of the low-income groups. This is done with the purpose of trying to attain more equality in job opportunities and thus trying to shrink the income distribution gap of the country. Colombia also proved to have a higher literacy rate among women than men, when generally LDCs tend to have more illiterate women than men.

Although financial aid is given taking into account the strata which people belong to, the institutions are neglecting the areas in which they are giving this aid for. The data proved to show that mostly all people in the country are asking for loans to study careers such as administration, accounting and engineering, which are necessary in the country but they are areas that tend to be more useful in urban areas. The careers with the less number of students are those related with agriculture and veterinary, these are careers that are extremely important for an LDC like Colombia. Colombia has a comparative advantage in agricultural products, and it’s economy is mainly based on primary sector goods. The fact that very few people in the country are studying these type of careers implies that they are slowly killing the industry in which we mainly depend upon. The country has a very high rural to urban migration caused by the displacement of people because of the ongoing civil war between the Government and leftist armed forces; yet the low number of professionals in the rural areas reinforces this problem.

Colombia’s education shows a very positive trend, however many changes and advances have to take place. The country has to try to motivate people to study careers such as agriculture which are extremely important for the growth and development of the country. Not only that, but the Ministry of Education has to come out with a plan in order to reduce the drop-out rates in primary and secondary level because these are still relatively high. If drop-out rates are lowered more, low and middle income students will have the education level and skills to attempt tertiary level. I was able to see how education is one of the main interests of the Colombian Government and how they are trying their best in investing the money wisely, regardless of that I think many more changes have to be made in order to enhance the education system. Hopefully education will help the country to have a progressive decrease in the income distribution gap.
BIBLIOGRAPHY

1. Journals
   - Cajiao, Francisco. “Andando en Contravía”, EL TIEMPO, September, 12, 2000; Section 1, pg 15.
   - International Correspondent, “Mujeres Exigen Igualdad”, EL TIEMPO, September, 21, 2000; Section 2, pg 3.
   - Leal, Francisco. “BM Alerta por una mayor brecha entre ricos y pobres”, La Republica, September, 26, 2000; Section A, pg 5.

2. Magazine Articles
   - Yunis, Emilio, “¿Dónde Estamos?”, Lecturas Dominicales del Tiempo, July, 23, 2000; pg 6

3. Books

4. Documents
   - ICETEX, Prestamos Demandados y aprobados 2001, (Bogotá, Instituto Colombiano de estudios tecnico al exterior, 2001)

5. Interviews

6. Internet
   - http://www.mineducacion.gov.co
   - http://wbinfo.worldbank.org/hdnet/hddocs.nsf/49fl.../ae3ab5ce30a019378525668e006d4d2
   - http://www.aci-usa.org/pubs/journals/2105295.html
   - http://www.icetex.com