

РОЗДІЛ 7. ДЕМОГРАФІЯ, ЕКОНОМІКА ПРАЦІ, СОЦІАЛЬНА ЕКОНОМІКА І ПОЛІТИКА

THE ROLE OF EDUCATION IN THE FIGHT AGAINST INEQUALITY: THE CASE OF BRAZIL

МІСЦЕ ОСВІТИ В БОРОТЬБІ З НЕРІВНОПРАВНІСТЮ НА ПРИКЛАДІ БРАЗИЛІЇ

The paper identifies the main problem in high level of inequality in Brazil. Because we predict that education plays a vital role in the reduction of inequality, we analyse the role of education in reducing the inequality in Brazil. On the basis of this paper, we wish to investigate whether the programme Bolsa Família is effective in the fight against the poverty and inequality through the improvement of education system. The results indicate that Bolsa Família has a positive impact on school attendance, literacy rate, dropout rate and pass rate. The results also add some new evidence to the broader discussion about the effectiveness of education system after implementation of Bolsa Família.

Key words: *Bolsa Família, Brazil, Education, Inequality, social policy.*

Дана стаття ідентифікує основну проблему високого рівня нерівності в Бразилії. Оскільки ми припускаємо, що освіта відіграє життєво важливу роль в зменшенні нерівності, ми аналізуємо роль освіти в процесі скорочення нерівності в Бразилії. На підставі цієї статті, ми хочемо з'ясувати, наскільки ефективна в боротьбі з бідністю і нерівністю, за допомогою вдосконалення системи освіти, програма «Bolsa Família». Результати показують, що «Bolsa Família» робить позитивний вплив на відвідуваність шкіл, рівень грамотності, відсоток відсіву і прохідний бал. Резуль-

тати нашого дослідження також додають деякі нові докази до ширшої дискусії про ефективність системи освіти після реалізації програми «Bolsa Família».

Ключові слова: *Bolsa Família, Бразилія, освіта, нерівність, соціальна політика.*

Данная статья идентифицирует основную проблему высокого уровня неравенства в Бразилии. Поскольку мы предполагаем, что образование играет жизненно важную роль в уменьшении неравенства, мы анализируем роль образования в процессе сокращения неравенства в Бразилии. На основании этой статьи, мы хотим выяснить, насколько эффективна в борьбе с бедностью и неравенством, посредством совершенствования системы образования, программа «Bolsa Família». Результаты показывают, что «Bolsa Família» оказывает положительное влияние на посещаемость школ, уровень грамотности, процент отсева и проходной балл. Результаты нашего исследования также добавляют некоторые новые доказательства к более широкой дискуссии об эффективности системы образования после реализации программы «Bolsa Família».

Ключевые слова: *Bolsa Família, Бразилия, образование, неравенство, социальная политика.*

UDC 316.34;364.6;364-7

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Introduction. Recently, considerable attention has been paid to the issue of inequality and relation between inequality and growth. Huge increases in income inequality, also in advanced economies, have raised interest in potential impact on society and economic performance. New researches show the following: when income inequality rises, economic growth falls [5]. And it is usually reported that human capital positively affects growth [8]. These works tend to confirm the idea that low education and unequal access to education are obstacles in economic growth because the poor inhabitants are not able to invest in their education and they cannot contribute to higher productivity and innovations. Education is also a key to determining each individual's chances during his lives.

Thus, the role of education has been gaining importance in solving of high inequality in recent years. Even, education could be viewed as the main factor contributing to the reducing income inequality and to accelerate human capital and development. In our paper, we predict that education plays a vital

role in the reduction of inequality. This claim confirms many research works [4; 5; 6; 8].

In this paper, we focus on the programme Bolsa Família because we also study reducing inequality via reducing education inequality. Bolsa Família is the Brazilian conditional cash transfer programme (CCT) launched in 2003, during the presidency of Luiz Inácio Lula da Silva and is the largest CCT programme in the world and assisted more than 14 million families nationwide that represents one quarter of Brazilian population.

The main aim of programme is to reduce the poverty; to break the intergenerational transmission of poverty and to avoid future poverty related problems such as inequality. The reduction of poverty is achieved via the income transfers per month to poor families and the second aim through the enforcement of conditions regarding education and health. Because in this paper, we deal with the improvement of educational system, we discuss briefly the conditions of Bolsa Família related to education. The conditions concern to students aged from 6 to 17 years.

Children 6-15 years old must maintain 85 per cent school attendance and adolescents 16- 17 years old must maintain 75 per cent. The tolerance of some absence is allowed because the most of children work in order to help their family and bring more money in the family budget.

The social policy focuses on creation of better human capital through this condition. The programme Bolsa Família was implemented under the umbrella of the Ministry of Social Development but the Ministry of Education is responsible for the area of education.

Analysis of recent research and publications.

The issue of the role of education in the fight against inequality paid attention to such researchers as Thomas Piketty, Guenther Rehme, Vinod Thomas, Yan Wang, Xibo Fan, Laura B. Rawlings, Gloria M. Rubio, Julio Racchumi, Regiane Carvalho, Alan de Brauw, Daniel O. Gilligan, John Hoddinott, Shalini Roy, Fernando Gaiger Silveira, Bernardo Campolina and Ross van Horn; and also to international organization such as the Organisation for Economic Co-operation and Development, the International monetary fund, the World Bank and the United Nations, namely Economic Commission for Latin America and Caribbean. Dedicated literature reports evidence about relation between the education and the reduction of inequality.

Settings objectives. Paper identifies the main problem in high level of inequality in Brazil and the aim of paper is to detect the role of education in reducing the inequality in Brazil. On the basis of this paper, we wish to investigate whether the programme Bolsa Família is effective in the fight against the poverty and inequality through the improvement of education system.

The main material research. Firstly, we examine briefly the general education trends in Brazil. We started with literacy rate. In the basis of data from Economic Commission for Latin America and Caribbean (ECLAC/CEPAL), we found out that the literacy rate has reached 91.3 per cent in 2012. Today, Brazil belongs to the countries with high literacy rate that has increased by approximately 5 per cent since 2000 (Figure 1). Statistics also suggest that women were always more literate in both, urban and rural areas.

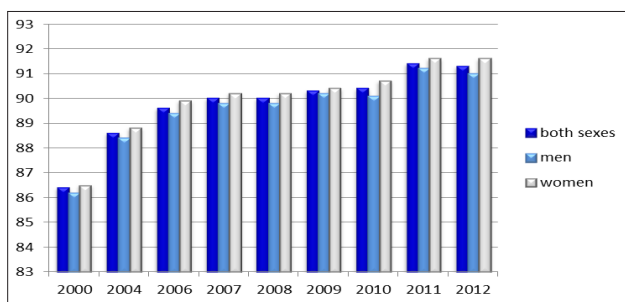


Fig. 1. Literacy rate in Brazil (2000-2012)

Own processing based on data from: CEPAL [1]

The improvement of literacy rate has been higher in rural areas than urban areas. These findings suggest that the programme Bolsa Família is more effective in rural areas.

We also analysed the percentage of population completed primary and secondary education. As the figure below shows, all researched indicators (percentage of population completed primary education, percentage of urban population completed primary education, percentage of rural population completed primary education, percentage of population completed secondary education, percentage of urban population completed secondary education, percentage of rural population completed secondary education) have been improved since implementation of Bolsa Família (2002). But the distribution of education is unequal in Brazil. The most positive change in primary education has been recorded in rural areas where the most of poor population live. With regards to urban areas, the population completed primary education has been improved by approximately 4 per cent and secondary education by 20 per cent what means much less than in rural areas. But at this point it is appropriate to say that the character of poverty in urban areas is a different and more difficult issue. Although the education performance is better in urban areas in comparison with countryside, the solving of mentioned problem is more difficult because the jobs of urban children are paid and their wages are higher than the support from Bolsa Família. On the contrary, the rural children help on fields and in households. It is not surprising that we consider this issue as weakness of Bolsa Família that aims to reduce poverty from long term and to break the inter-generational transmission of poverty. We identify the main problems in the percentage of population completed secondary schools. If Bolsa Família does not focus on vulnerable population aged 16 to 17 (secondary school's students), the long term objective of programme will not be achieved.

In general, the percentage of population that completed the secondary education is low. Just 61.8 per

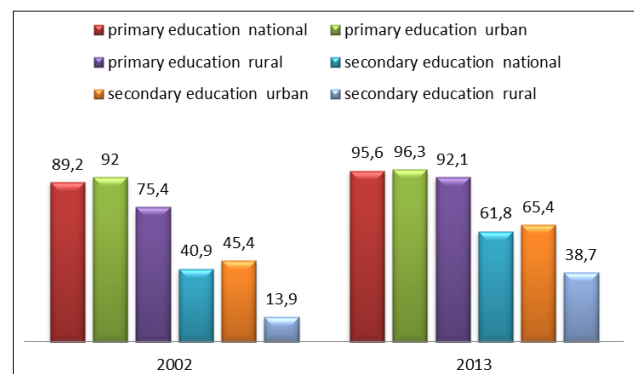


Fig. 2. Percentage of population completed primary and secondary education, by geographical area

Own processing based on data from: CEPAL [1]

cent of Brazilians had secondary education in 2013 while almost 96 per cent had primary education (Figure 2). It is probably caused by education law that order compulsory primary education.

The unequal distribution is also typical between women and men. In both cases, in primary and secondary education, women have reached better successes what is surprising because men are more educated than women worldwide. The figure below confirms our claims (Figure 3).

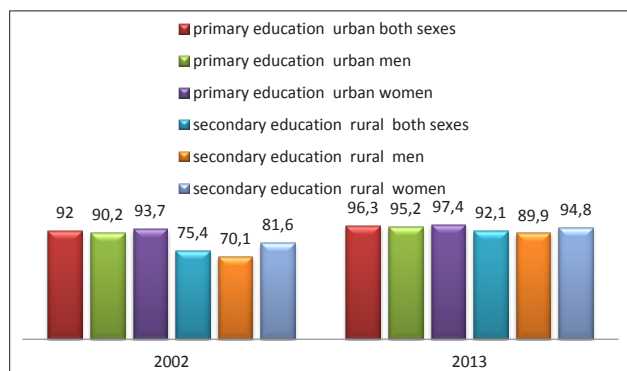


Fig. 3. Percentage of population completed primary and secondary education, by sex

Own processing based on data from: CEPAL [1]

The next researched indicator is number of years of schooling that has increased from 7.7 to 9.1 per cent since 2002 (Figure 4). This trend has been recorded in both, rural and urban areas. The effect of Bolsa Família is more significant in rural areas where the years of schooling have been increased by 2.4 year. Women reached better results than men in increase of years of schooling.

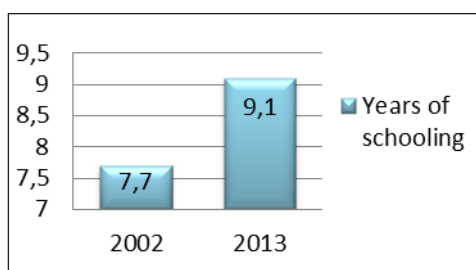


Fig. 4. Years of schooling in Brazil

Own processing based on data from: CEPAL [1]

We have also studied the school attendance by quintiles of per capita income of head of household. We found that the primary school attendance of first quintile (98.6 per cent), the poorest part of population, is comparable with other quintiles. Even, children of first quintile (77.2 per cent) reached the second best results in secondary school attendance after fifth quintile, the richest part of population (84.4 per cent) [1]. We attribute it to the impact of Bolsa Família.

In the next part of the paper, we deal with the impacts of the implementation of the above men-

tioned programme on school attendance, pass and dropout rate. We used the method of comparison in order to evaluate the impacts on both, recipients and non-recipients of Bolsa Família.

Within comparison, we found out that the more non-recipients than recipients of Bolsa Família completed the primary education. But the situation is reverse in the northeast region of the country. 71.3 per cent of recipients completed the primary education in comparison with 64.0 per cent of non-recipients (Figure 5). Data from the northeast region which is the poorest area of the country, allow suggesting that Bolsa Família is successful programme in the most vulnerable area of Brazil. Likewise, the Bolsa Família is successful in elimination of school dropout that is lower for recipients compared to non-recipients [3].

	Completed primary education	
	Recipient	Non-recipient
Brazil	75.6%	79.4%
Northeast	71.3%	64.0%

Fig. 5. Comparison of recipients and non-recipients of Bolsa Família within primary education

Own processing based on data from: INEP [3]

High school students that are part of Bolsa Família reached better successes than non-recipients in both, in dropout and pass rate. The pass rate in high school is higher for recipient of Bolsa Família in almost all regions, except southeast and south region. Further, the dropout rate is higher for non-recipients of the programme in all regions. The biggest difference has been recorded in northeast region, the poorest area of Brazil (Figure 6). These findings show that the Bolsa Família is effective programme and improves the school attendance of its recipients, mainly in the poorest municipalities and rural areas.

	Dropout rate		Pass rate	
	Students in BF	Other students	Students in BF	Other students
Brazil	7.4	11.3	79.7	75.5
North	8.7	17.1	79.8	71.1
Northeast	7.7	17.5	82.6	72.0
Southeast	6.3	7.5	78.4	78.5
South	8.4	9.0	73.2	76.9
Central- West	7.9	11.4	75.0	72.8

Fig. 6. Comparison of dropout rates and pass rates between recipients and non-recipients of Bolsa Família (secondary education, %)

Own processing based on data from: INEP [3]

Besides the school attendance and pass rate, we have also researched the effectiveness of education and proficiency in two subjects: Mathematics and Portuguese. According to research [7], the non-recipients of Bolsa Família are more suc-

cessful in the proficiency in Mathematics and Portuguese language in both, elementary and high school. These findings have been recorded in all analysed states and municipalities of Brazil. The analysis highlights that only receiving the support from Bolsa Família is not enough for building better human capital in the society. The following figures demonstrate the difference in the average proficiency of students in Mathematics (Figure 7) and Portuguese (Figure 8) for elementary and high school.

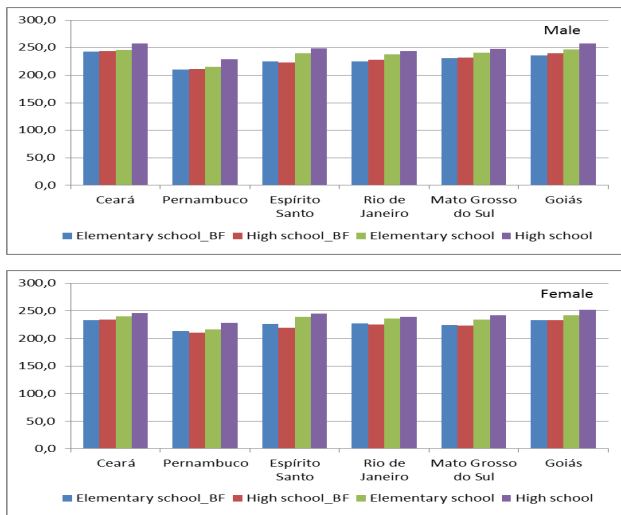


Fig. 7. Average proficiency of recipients and non-recipients of Bolsa Família in Mathematics

Source: [7]

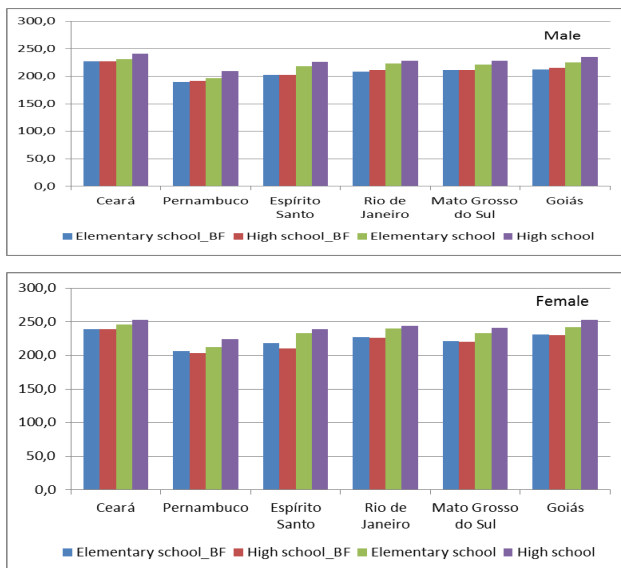


Fig. 8. Average proficiency of recipients and non-recipients of Bolsa Família in Portuguese

Source: [7]

The low family budget and poverty often lead to children's participation in the labour market what results in school dropout and worse proficiency in subjects. The following analysis is grounded in 4 groups: urban boys, rural boys, urban girls and rural

girls, all aged from 15 to 17 that are the most vulnerable categories of students. Our findings indicate that the Bolsa Família has the best impact on rural girls (Figure 9). The difference between recipients and non-recipients has reached 16 per cent in rural areas and 8 per cent in cities. We found out similar results in the category of rural and urban boys (10 per cent versus 6 per cent).

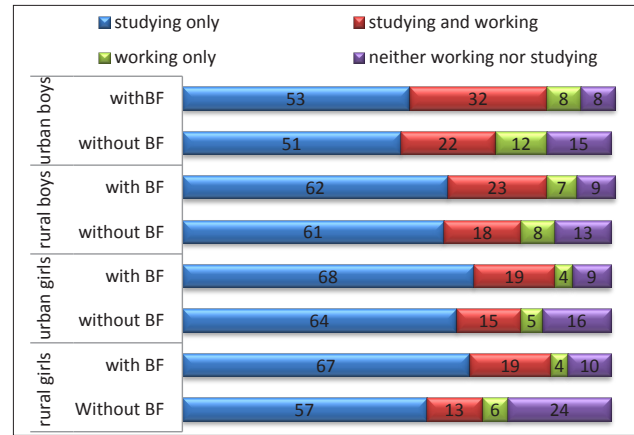


Fig. 9. Studying and working of children aged 15-17 in Brazil

Own processing based on data from: SILVEIRA, F.G. - CAMPO-LINA, B. - VAN HORN [9]

Conclusion and prospects for further research.

In the last few years there has been a growing interest in studying relations between economic growth and inequality. We deal with the case of Brazil, one of the highest unequal countries worldwide. Because we predicted that education plays a vital role in the reduction of inequality, we analysed the role of education in reducing the inequality in Brazil. On the basis of this paper, we wish to investigate whether the programme Bolsa Família is effective in the fight against the poverty and inequality through the improvement of education system.

We have considered the impacts of Bolsa Família on education in Brazil and it is not hardly surprising that Bolsa Família has a positive impact on school attendance, literacy rate, dropout rate and pass rate. But access and quality of school system are distributed among sexes and regions unequally. Bolsa Família has the best successes in northeast region, the poorest region of the country. With regard to sexes, women reach better results than men in all indicators related to education. Summing up the results, it can be concluded that the Bolsa Família has one important weakness: the low proficiency of recipients of Bolsa Família.

Continuing research on relations between education and inequality and on impacts of Bolsa Família on education system in Brazil appears fully justified and more experiments and calculations, such as regression analysis and statistical correlation, will be needed to verify the above mentioned claims.

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