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A Literature Review of Human Capital and Educational Policies in Colombia's Education System.

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ABSTRACT:- The article enhances the existing literature on Colombia's educational system by exploring the nation's education policies and comparing key economic indicators with the aggregate trends of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Honduras, Mexico, Nicaragua, Panama, Peru, El Salvador, Uruguay, and Venezuela. This study stands out as one of the few that have analyzed and broadened the understanding of Colombia's educational policies in relation to other countries, making it invaluable for economists, educators, and the economic development sector in Colombia.

Contribution to Colombia's Literature on Human Capital and Economic Growth:

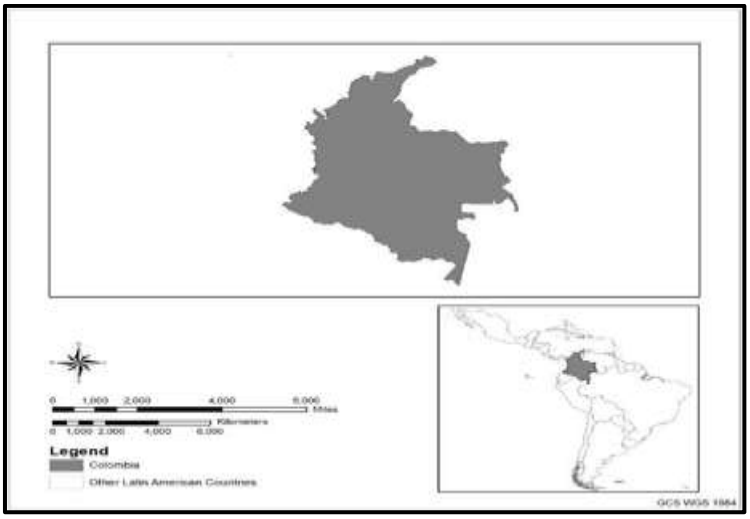
While an aggregate model compared Colombia with the SLAC, this study enriches the existing literature on the impact of HC on economic growth and development. It specifically focuses on the crucial educational policies implemented by the Colombian government and their influence on the HDI level of Colombia's economy. Various studies examining Colombia's economy include works by Barro (1991 & 1993), Birchenall (20001), Florez et al. (2003), Rubio (1997), Cardenas & Ponton (1995 & 2001), Riascos & Vargas (2011), Marotta et al. (2007), and Cardenas (2001). The relationship between HC and economic growth in Colombia has been theoretically analyzed in studies by Agiomigianakis et al. (2002), Gillis et al. (1992), and Osiobe (2019, 2020a, 2020b, & 2020c). These formulations consistently suggest that the knowledge embedded in humans is vital for fostering innovation, productivity, and economic growth. Nevertheless, this relationship is not uniformly observed across all studies, as noted by Devarajan et al. (1996), Temple (1999), and Quiggin (1999 & 2002).

JFL Classification
E10, I21, I24, I25, I28, O11, O12, O15

I. INTRODUCTION:

Colombia is situated in the northwestern region of South America. It ranks as the 26th largest country globally and the 4th largest in South America (Google Earth (GE), 2019). As of 2018, the country has a population of 49.6 million, making it the 3rd most populated country in Latin America and 29th worldwide (World Development Index (WDI), 2019).

Figure 1:
Colombia on the continental map of Latin America

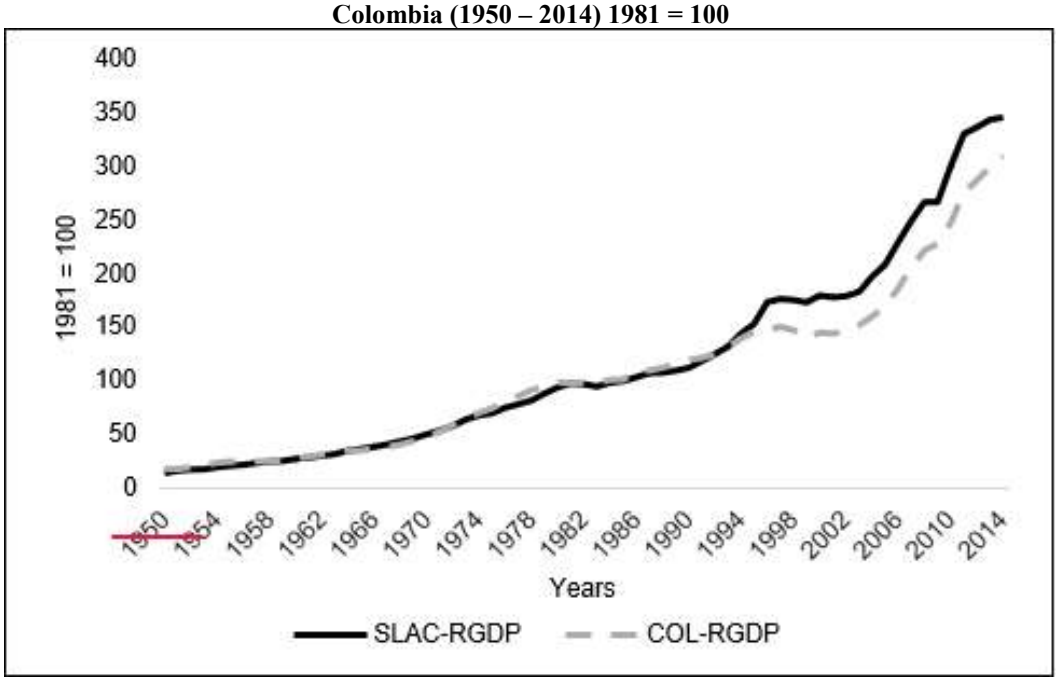


Author's creation (GE, 2019)
***Gray-specific country of interest**

According to the 2018 Environmental Performance Index (EPI) by the Yale Center for Environmental Law & Policy, Colombia ranks 42nd globally and 2nd in Latin America. Historically, Colombia's economy relied entirely on gold mining during the colonial era. Today, it is driven by agriculture, hydrocarbon exploitation, precious metal mining, and manufacturing goods and services for domestic and international markets. Political instability in the past has resulted in a skewed wealth distribution and an ongoing illegal drug trade, particularly in cocaine, which disrupts Colombian society significantly. Despite these challenges, Colombia holds the 60th position out of 140 countries in the Global Competitiveness Index Report (GCIR) for 2018.

For the comparison benchmark in this study, Selected Latin America and the Caribbean (SLAC) countries include Argentina, Bolivia, Brazil, Chile, Costa Rica, Honduras, Mexico, Nicaragua, Panama, Peru, El Salvador, Uruguay, and Venezuela (note that Colombia is excluded from this grouping). Figure 2 illustrates Colombia's Real Gross Domestic Product purchasing power parity ($RGDPppp$) with a base year of 1981 set to 100, contrasting it with the SLAC moving average from 1950 to 2014. Figure 2 indicates that Colombia matched the benchmark moving average from 1950 to 1997. However, from 1998 to 2014, Colombia fell behind the SLAC moving average. Consequently, when the data in Figure 3 is converted to the base index of 1981 = 100 to analyze changes in $RGDPppp$ and assess economic production trends, it becomes evident that Colombia underperforms relative to the SLAC group.

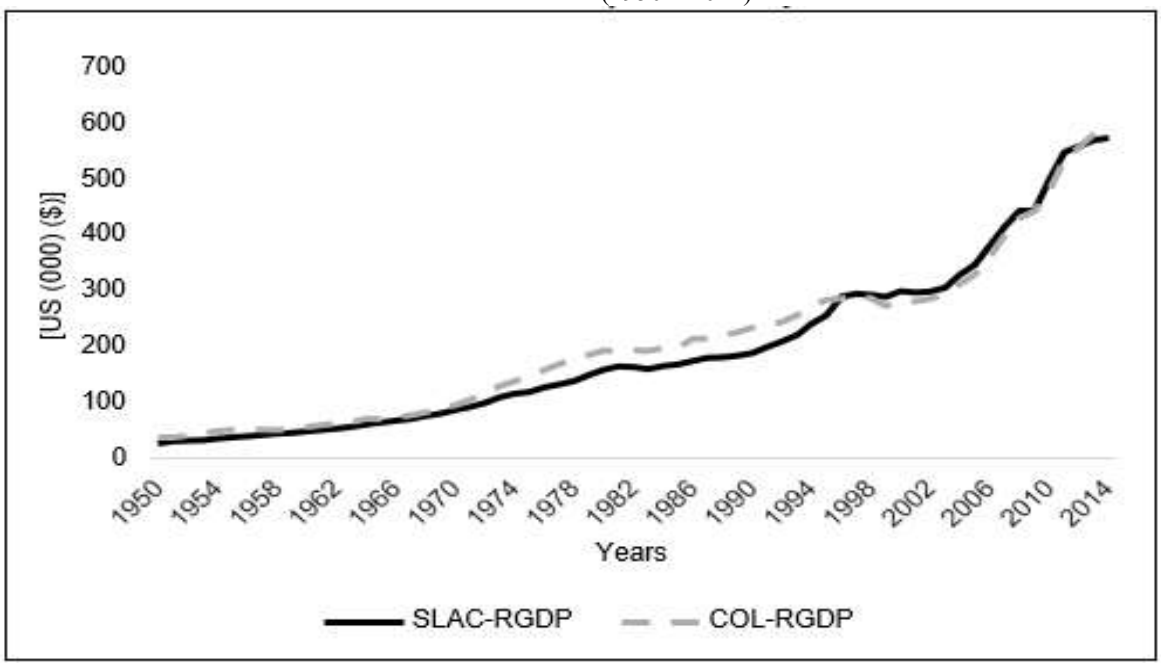
Figure 2
A comparison of our SLAC $RGDPppp$ at chained (in Mil. 2011 USD (average)) with that of Colombia (1950 – 2014) 1981 = 100



Source: (Penn World Table (PWT), 2019).
Author's creation

Colombia's economic system is primarily characterized by private enterprises, with limited direct government involvement, particularly in communication, railways, and petroleum. The government aims to stimulate economic growth, development, and stability to support private enterprises through indirect strategies, such as favorable tax policies, government subsidies, and the provision and extension of business credits. Organizations like the Cauca Valley Corporation have been created to foster regional economic development, focusing on hydroelectric power development and flood control. Notably, Colombia is one of the few SLAC countries that avoided a debt crisis in the 1980s, maintaining the healthiest economy in South America from 1980 to 1990.

Figure 3
A comparison of our SLAC $R\ G\ D\ P\ p\ p\ p$ at chained (in Mil. 2011 USD (Average)) with that of Colombia (1950 – 2014)



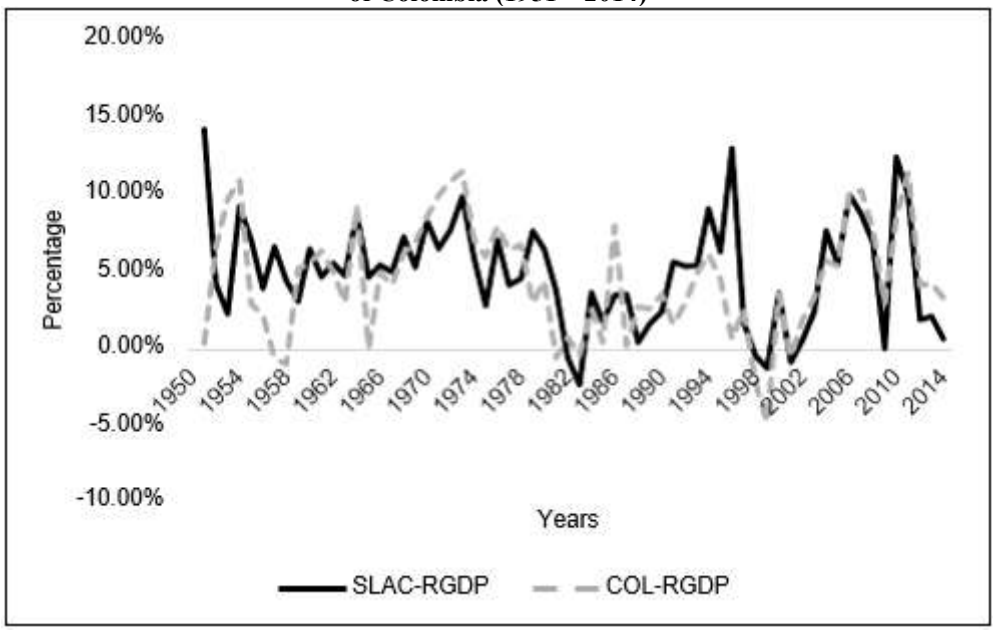
Source: (PWT, 2019).
Author's creation

Figure 3 shows Colombia's actual $R\ G\ D\ P\ p\ p\ p$ number, as compared to that of the SLAC moving average from 1950–2014. Figure 3 depicts Colombia at par with the benchmark moving average for most years, except from 1970–1994 when it outperformed our stated average, and 1995–2009 when the nation marginally underperformed that of our SLAC moving average. Today, agriculture remains a primary component of the Colombian economy, although the industrial development in the country since the 1940s is remarkable. A reasonable portion of the nation's landmass is uncultivated due to the country's poor soils and unfavorable climate conditions.

However, the country is blessed with an abundance of renewable and non-renewable resources. Their non-renewable resources include gold reserves, petroleum, and coal, while the renewable resources include land for agriculture and its river belts, which are used to generate hydroelectric power. Excluding Brazil, Colombia's potential for hydroelectric power stations is of higher significance than any other nation on the continent. Colombia produces about three-fourths of the nation's electricity; however, the 1992–1993 drought interrupted service, and supplemental thermoelectric plants have been built to substitute the hydroelectric power stations.

Figure 4 shows Colombia to be on par with that of the SLAC moving average in terms of $R\ G\ D\ P\ p\ p\ p$ volatility. This implies that the nation is less sensitive to positive and negative economic shocks. The Colombian education system has grown exponentially since the 1960s, and education funding has increased five-fold. As a result of the increase in funds, Colombia's primary school enrollment rate more than doubled, resulting in a six-fold rise in secondary school enrollment and an increase in university enrollment as well. Despite this funding progress, there is a gap in equal access, opportunities, and quality of education in Colombia between the rural and urban areas. An example of this gap is the location of most of the nation's universities established in big cities.

Figure 4:
A comparison of our SLAC % change of $RGDPppp$ at chained (in Mil. 2011 USD (Average)) with that of Colombia (1951 – 2014)



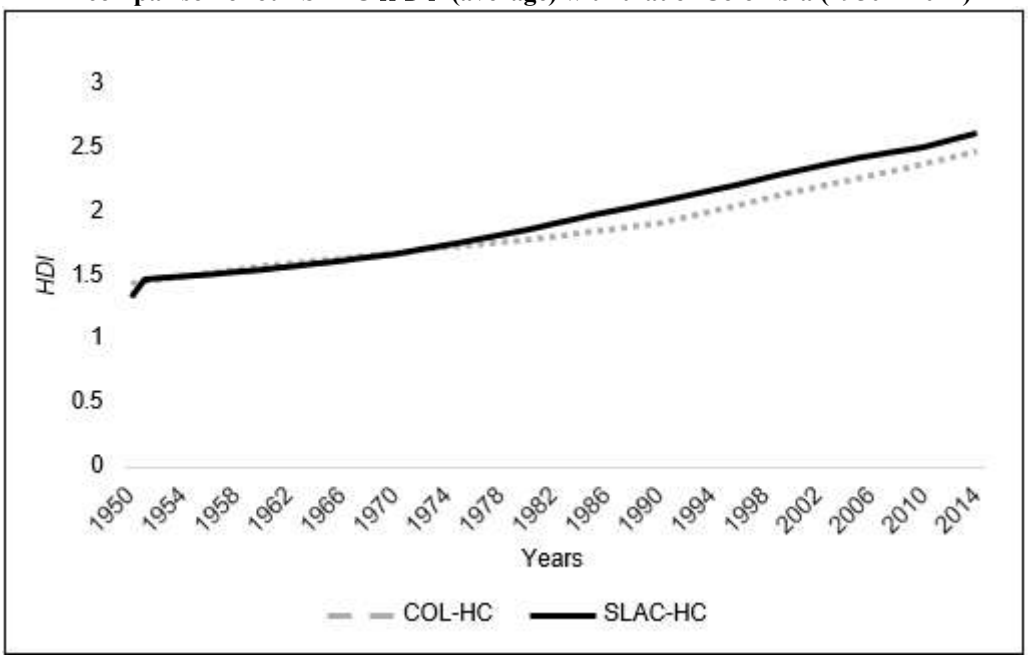
Source: (PWT, 2019).
Author's creation

To address educational disparities, the Colombian government has implemented a significant initiative over the past two decades. In 2002, it introduced a broad educational enhancement program known as the revolución educativa. This reform represents a complete overhaul of the educational system, focusing on improving quality and expanding access nationwide, particularly in rural areas. The Ministry of Education (ME), or Ministerio de Educación Nacional, oversees all educational levels across the country' s 32 states and departments. Additionally, the ME manages academic standards and accreditation according to its regulations and guidelines.

The authority overseeing education at the state level is called the Secretariat of Education/Secretaría de Educación. While the Federal ME defines the educational objectives and subject areas for each grade, lower-level schools have the flexibility to tailor their specific study plans to their regional, state, and community contexts. According to a constitutional mandate from 2010, basic education from ages 5 to 15 became free and compulsory for all citizens. At the university level, fees are determined by students' socioeconomic backgrounds. The Colombian ME offers two school calendar options, referred to as calendar "A" and calendar "B. " Most departments use calendar A, consisting of two semesters from February to November, while calendar B runs from September to June. In conjunction with these reforms, the 2010 mandate from the Colombian Constitutional Court requires that all public primary schools be accessible to all citizens, and in 2012, this accessibility was extended to public secondary schools.

As a result of these policies, Colombia' s educational budget saw a 5. 5.75% increase in 2015. The aim is to position Colombia as the most developed and civilized country in Latin America by 2025. Recent data indicates that improved access to education has led to higher levels of educational attainment, particularly among students from low- income families. This indicates that increased educational funding and opportunities in Colombia benefit students from diverse economic backgrounds.

Figure 5
A comparison of our SLAC HDI (average) with that of Colombia (1950 – 2014)



Source: (PWT, 2019).
Author's creation

Figure 5 illustrates Colombia's Human Development Index (HDI) in comparison to the SLAC moving average from 1950 to 2014. It shows that Colombia matched the benchmark moving average from 1950 to 1978 but lagged behind from 1979 to 2014. This suggests that Colombia's HDI growth trajectory indicates that the national literacy rate was comparable to the SLAC from 1950 to 1978, but fell short of our benchmark moving average from 1979 to 2014 in terms of residents' years of education and returns on education (PWT, 2019).

Summary:

Main Findings on Education Policy Orientation:

- Spanish serves as the primary instructional language in the country, though some private institutions teach in English, German, or French.
- Basic education is provided free of charge and is compulsory.
- Textbooks are available for loan to families from low-income backgrounds.

- University fees are determined based on each student's socioeconomic status and background.
- Following the launch of the 2004 National Bilingual Program by the ME, English has been included as a foreign language in the overall education curriculum.

Policies that Advanced the Nation:

- In 1886, a constitutional law was enacted to regulate the education system by the ME.
- 10% of the government's budget is allocated to the national education system.
- Bill 1064 of 2006 and the 2888 decree of 2007 introduce integrated technical and university degrees that connect education with employment and human development.
- Colombia dedicates 4.5% of its GDP to education.
- English is included in the national curriculum, while bilingualism is the standard nationwide.

Policies Implications and Recommendations:

- These various education growth policies offer valuable insights that other economies can gain from. However, these lessons come with challenges regarding how strategies for economic growth, development, and stability influence the enhancement of Human Capital (HC) and Capital Structure (CS) in an economy.

- The Institute of International Education ranks Colombia 22nd globally and 3rd in South America for education spending. Despite this, 55% of children in rural schools drop out before finishing their studies. To address this, more programs should be introduced to improve the national student graduation rate.

- Access to educational services remains a critical issue in rural areas, with an estimated 2 out of 10 children not attending school. While 4.6% of the nation's Gross Domestic Product ($G\ D\ P$) is allocated to education, only 0.5% of that budget reaches rural communities. Conversely, rural education constitutes 80% of the overall educational offerings, often featuring isolated schools, many of which lack electricity. It is advisable to direct more resources to these communities and implement a decentralized budgeting system to better address their educational needs.

- Colombian education statistics reveal that enrollment in early childhood and tertiary education has more than doubled, and students now spend two more years in school than they did two decades ago. The Ministry of Education (ME) in Colombia should focus on improving the quality of the education system, in addition to increasing enrollment rates, despite the nation being among the leaders in reading improvements as observed in the 2012 OECD Program for International Student Assessment (PISA).

Further Research:
To examine the unique socio-economic challenges faced by the nation and to understand their implications, it is necessary to conduct additional studies focusing specifically on the Colombian economy and the connection between $H\ C$ and economic growth.

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