

The Impact of Counter-Cyclical Fiscal Policies on Employment Rates in South American Countries

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Abstract

The paper presents the impact of counter-cyclical fiscal policy implemented during economic crunch in the economies of South America as far as short-term and long-term rates of employment are concerned. The reason behind this is that South America relies on the export of commodities and this aspect combined with political and fiscal instability provide the outcomes of such interventions challenging. The fiscal stimulus in the short term in terms of increased state spending and employment generation has been successful because it has led to the reduction of unemployment since it increases the demand and serves as a cushion to any decrease in the private sector. The employment multipliers in non-tradable are greatest and are bound to rise when prices of good commodities rise to augment the fiscal space. However, the long-term implications can be seen to have structural risks. Sustained reliance on government employment would choke in the investment in the private sector, labor markets and would cause inflationary pressure. Further, the debt accumulation, ineffective institutional capacity, and limited the sustainability of the employment undermine fiscal sustainability. This fact suggests that counter-cyclical policies can reduce unemployment in the short run, but is not likely to produce long-term benefits in terms of increased employment, unless it is accompanied by both structural reform and institutional reinforcement. Lastly, the paper brings out the trade-offs between the short-term stabilization and the long-term economic resilience in the counter-cyclical policies of South America.

Keywords: *Counter-Cyclical Fiscal Policy; Employment Dynamics; South American Economies; Commodity Dependence; Short-Term Stabilization; Long-Term Structural Risks; Fiscal Sustainability*

Introduction

Background and Context

South America is known for its economic imbalances. These economic imbalances are often correlated to corruption, demographic disproportion, or their heavy reliance on exporting commodity goods. The governments of these South American nations usually try to use Counter-Cyclical fiscal

policies to combat times of economic recession. Counter-cyclical fiscal policies in times of downturn involve increased government spending to stimulate demand ^[1]. Public sector jobs hold the utmost importance in such scenarios ^[2] as they enable governments to trigger economic stimulations and resolve structural issues created due to unemployment. By generating new public sector jobs, countries may offset downturns in the private sector and stabilize the overall employment rate in such economic downturns.

Importance of Counter Cyclical Fiscal Policy

Public employment acts rather as a tool for fiscal policy as it directly affects expenditure patterns ^[3] across geographic and demographic groups. Thus, allowing a more equitable allocation of resources mostly in countries with drastic differences in social disparities.

Research Gap and Aims

Even though public employment may help mitigate short-term losses in employment rates, it raises doubts on how such policies positively affect the long term. Such high levels of public employment, if not managed skillfully, can lead to inflationary outcomes and may slant the labor market, this may lead to less interest in the private sector which may lead to a range of consequences. The success of such policies is a debated topic due to their effectiveness relying on a handful of factors such as the extent of government interventions, their current economic structure, and the country's fiscal capacity. These factors hold great importance since SA countries will face challenges implementing policies of such kind in a politically unstable, fiscally constrained environment.

Contribution of This Paper

The study investigates both the short-term and long-term effects of Commodity cycles on employment rates in South America. I will be emphasizing how new public sector job generation may only give a temporary solution if it is tied to volatile commodity cycles. In the long term, heavy reliance on public sector jobs may cause some growth and diversification in the private sector and if the public sector becomes unsustainable due to fluctuations in the commodity prices, there might be some serious harm in the private sector, therefore causing an even bigger unemployment issue. The sheer reliance on public employment could possibly exacerbate the issues already present in their economic structure. In this research paper, a critical viewpoint to evaluate the impact of counter-cyclical fiscal policies on employment rates across South American nations. The paper will highlight the importance of Output gap estimates which influence fiscal policies. By conducting a comprehensive and comparative analysis of each specific country, both quantify the employment effects and scrutinize the general economic trade-offs. This paper aims to look into whether such fiscal policies decrease unemployment sustainably or just offer a temporary solution at the expense of risking long-term economic health.

Research Question and Hypothesis

This paper provides answers to three central questions: First, are counter-cyclical fiscal policies capable of delivering really short-run employment benefits in recessions in South American countries? Second, which institutional and structural factors underlie sustainability of such employment gains in the long run? And, third, to what extent does vulnerability to commodities as well as fiscal space constraints affect the effectiveness of counter-cyclical employment policy?

¹] Michael Wiseman, "Public Employment as Fiscal Policy," *Brookings Papers on Economic Activity*, no. 1 (1976): 67–71.

²] Wiseman, "Public Employment as Fiscal Policy," 78–82.

³] "Public Employment as Fiscal Policy," 104.

The paper validates three major hypotheses formulated using theory of economics and local knowledge:

H1: Contemporaneous Employment Effect: Counter-cyclical fiscal expansion produces simultaneous favourable employment effects^[4], whose multipliers depend on structural and institutional capacity of the economy.

H2: Sectoral Asymmetry: Employment effects are larger in non-tradable sectors due to larger domestic elasticity of demand and smaller leakage through imports.

H3: Commodity Boost: Employment multipliers of fiscal stimuli are significantly larger when commodity terms-of-trade are higher than long-run means, providing more fiscal space.

The study involves a mixed-methods design that integrates theoretical modeling and comparative case analysis. The theoretical foundation is derived from New Keynesian theory of macroeconomics, specifically modified to be applicable to small open economies that heavily depend on commodities. The analytical framework integrates three leading theoretical concepts that will be used in informing the empirical analysis:

Output Gap Measure: The linchpin variable used to determine whether counter-cyclical measures are needed, given by the percent discrepancy between actual and potential GDP. **Commodity Dependence Index (CDI):** Composite measure that both incorporates the proportion of commodity export dependence and revenue variability, expressed by $CDI = (\text{Primary commodity exports} / \text{Total exports}) \times (\text{Commodity revenue volatility} / \text{Total fiscal revenue volatility})$ ^[5].

Fiscal space is not subjected to a single mechanical threshold. Similar to IMF practice, space is seen by me as a country-specific judgment made up of debt dynamics, terms of financing, and institutional credibility and anchoring cross-country comparisons using general-government gross debt (percent of GDP) from the WEO of the IMF. State-dependent multipliers are those that are more powerful in terms of grabbing during slumps and hence the same debt ratio can accommodate larger counter-cyclical responses^[6].

We consider an exemplary small-open economy that exports a primary commodity in international markets and manufactures non-commodities output employing public capital and labour. Domestic households aim to maximise intertemporal utility subject to a standard budget constraint where lump-sum taxes finance an exogenous share of public spending. Rival firms in the non-traded sector produce a Cobb-Douglas technology where labour is paid the real wage w_t and the government construct public capital via investment spending I_t^G at depreciation rate δ .

Fiscal policy follows a rule combining an automatic response to the output gap and discretionary shocks:

Government spending in period t equals trend growth plus a coefficient times the output gap, plus an innovation term. This keeps the rule reproducible without external images.

Commodity royalties, in percentage terms of exogenous world price p_t^c , generate extra revenue and increase fiscal space. Public investment raises next period's productive capacity, while contemporaneous spending raises aggregate demand for non-tradables. Linearisation of household first-order conditions and firm's labour-demand curve in logs, around a non-stochastic steady state, produces the log-deviation employment response: through three channels: a contemporaneous demand multiplier, a lagged supply effect via public capital, and a financing interaction tied to commodity prices.

^[4] 4. Wiseman, "Public Employment as Fiscal Policy," 67–71, 78–82.

^[5] Alan J. Auerbach and Yuriy Gorodnichenko, "Measuring the Output Responses to Fiscal Policy," 2010 working paper version, 2–3, https://eml.berkeley.edu/~ygorodni/AG_fiscal_multiplier.pdf.

^[6] International Monetary Fund, *Why Latin America Needs Lower Deficits and Stronger Fiscal Rules*, IMFBlog, December 18, 2024, <https://www.imf.org/en/Blogs/Articles/2024/12/18/why-lac-needs-lower-deficits-and-stronger-fiscal-rules>.

The first term is a Keynesian multiplier from demand, which is a function of the marginal propensity to consume domestically produced goods (θ). The second represents the delayed supply response to public capital increases. The last term accounts for the commodity-price-financing ability interaction.

Contemporaneous Expansion: An independent expansion in government spending increases aggregate employment in this period.

Sectoral asymmetry: Its effect on jobs is larger in non-tradables than in tradables because of larger elasticity in demand.

Commodity Amplification: Fiscal jobs multiplier is higher if the terms-of-trade of commodities remains above its long-run average.

Additionally, this paper will evaluate and explain the demographic and geographic disparities of public employment policies.

Description: The base of this paper is based on Counter-Cyclical measures and fiscal policies instituted by governments and refer to government strategies to counterbalance fluctuations in both the general monetary cycle and business cycle by stimulating the economy in recessions and cooling it down in economic growth^[7]. This paper will mostly emphasizes economic downturns, where such policies encourage increased government spending, and tax cuts to augment aggregate demand. On the other hand, in economic booms, the government will increase public spending or raise taxes to prevent the economy from overheating. The exact opposite of this policy is pro-cyclical fiscal policy; it complicates both economic recessions and booms^[8]. Famous economist John Maynard Keynes who found the foundation of countercyclical fiscal measures states “The boom, not the slump, is the right time for austerity at the Treasury.”^[9]

Literature and Theories

Counter-Cyclical Fiscal Policies: Procedures and Historical Precedents

GOV Spending: In times of economic downturns, the government may increase the spending made on public infrastructure, healthcare, education, and other public services in order to create new jobs. The creation of new jobs will stimulate economic activity. These projects will also enable people who cannot find jobs in the private sector to find jobs in the public sector.

Tax Cuts and Welfare Packages: Reducing taxes during economic recessions will increase disposable income for both the general public and businesses. This increase will encourage investments and spending.

Public Sector Employment: Increasing public employment opportunities may trigger some job losses in the private sector, meaning the stabilization of the general employment rate. In countries where the private sector is dependent on cyclical sectors such as commodities, public sector jobs serve the role of buffer. Tools during an economic boom

Regional fiscal behavior is procyclical in its direction, and empirical research has found that only 45% of the countries in Latin America achieved counter-cyclical policy results beyond 2008 and almost

^{7]} CEPAL, *Employment Situation in Latin America and the Caribbean: Counter-Cyclical Policies* (2010)

^{8]} World Bank, “Growth Returns to Latin America and Counter-Cyclical Policies Increase” (2017)

^{9]} Wiseman, “Public Employment as Fiscal Policy,” 100–106.

none did before 2007^[10]. Such long-term procyclical bias has various empirical drawbacks that affect economic stability as well as growth potential.

Debt has reached crisis levels across the region with total debt increasing from below \$3 trillion in 2008 to \$5.8 trillion^[11] in 2023. Public debt increased in particular from 58% to 72% of GDP in the pandemic's aftermath and placed tough fiscal sustainability limits in its wake. Brazil's debt-to-GDP level was 92% in 2023 and Argentina's was at peak level in 2020 at 104% before declining to 79%^[12]. This accumulation of debt shows the failed efforts at counter-cyclical stimulus which instead increased economic volatility.

Inflation implications of expansionary fiscal policy cause major monetary policy disputes. In December 2024 the central bank reported Focus expectations around 4.8% (2024) and 4.6% (2025). Copom raised the Selic to 12.25% (Dec 11, 2024) and later to 14.25% (Mar 19, 2025). The response was the Selic rate being increased by 100 basis points to 12.25% with a warning of further tightening owing to fiscal fears^[13]. Regional core inflation remained elevated at about 8% in Brazil, Mexico, and Chile, and this led the central banks to maintain restrictive monetary policies in order to counter fiscal stimulus programs.

Crowding out private investment occurs routinely when governments expand borrowing to finance counter-cyclical spending.

Worldwide studies based on data from 49 countries and 500,000 firms indicate that government spending crowds private spending for firms that are significantly leveraged while increasing spending for low-leverage firms. This produces an asymmetric result in which fiscal expansion lowers aggregate spending efficiency overall^[14], especially problematic in the context of South America due to its reliance upon private sector-led development.

Political economy restrictions weaken policy responsiveness with fiscal rule compliance ranging as low as 40% in the economic communities in Latin America. Electoral cycles induce procyclical biases in policies due to retribution at the ballot box when fiscal consolidations occur. This political fact implies that counter-cyclical policies are tried with limited credibility and continuity and hence low stabilization effectiveness and policy uncertainty with depressive effects in private spending and growth. The empirical observation reveals institutional weakness hinders appropriate counter-cyclical policy. Those with higher institutional arrangements like Chile (debt-to-GDP at 39%) and Peru (31%) perform better in their fiscal approach while those with low institutional arrangements have persistent procyclical biases. Systematic over-optimism in assumptions regarding output growth is integral to this problem with governments assuming expansionary policy based on unrealistic assumptions that lead to too expansionary deficits and accumulation of debt.

The Great Depression (USA New Deal D. Roosevelt)

In the aftermath of the Great Depression, Franklin D. Roosevelt instituted a Keynesian style fiscal and monetary policy to combat it named "The New Deal"^[15]. This set of policies is intended to stimulate the economy by putting more money into circulation. Roosevelt generated new public employment programs to gain support for market stimulation like PWA or CCC. Also, The Social Security Act was a countercyclical fiscal policy that established key concepts like old age pension, unemployment insurance,

^[10] World Bank, "Growth Returns..." (2017) — *primary*; Brookings's article — *corroborating*

^[11] IMF, *World Economic Outlook Database*, April 2025, indicator **GGGD_NGDP** (regional aggregate *Latin America & Caribbean*), accessed Sept. 1, 2025, <https://www.imf.org/en/Publications/WEO/weo-database/2025>.

^[12] Banco Central do Brasil, "Copom increases the Selic rate to 12.25% p.a.," press note, Dec. 11, 2024 ("expectations ... around 4.8% and 4.6%"), <https://www.bcb.gov.br/en/pressdetail/2584/nota>.

^[13] Nguyen et al., "Negative Effects of State-Owned Banks on the Private Sector," sec. title, p. 17, *ibid*.

^[14] Reuters, "Brazil raises interest rates 100 bps, sees smaller hike ahead," Mar. 19, 2025, <https://www.reuters.com/markets/rates-bonds/brazil-raises-interest-rates-100-bps-sees-smaller-hike-ahead-2025-03-19/>.

^[15] Allan M. Winkler, "The New Deal: Accomplishments and Failures," Senate testimony (2009)

and welfare benefits. This program was mostly aimed at social reform however also acted as a stabilizing force during that recession^[16]. This act ensured that at least a certain part of the total population would still have some purchasing power even during the great depression, supporting demand for goods and services.

Brazil's Countercyclical Reaction to the 2008 Crisis

Prior to the 2008 financial crisis, Brazil was one of the fastest-growing economies of the time. Under President Luiz Inacio Lula da Silva their economy has been exporting significant amounts of commodity goods. The country was even implementing social welfare programs such as the Bolsa Familia, which helped the poor. With the 2008 crisis, Brazil took a major hit in its commodity market. With the prices of commodity goods plummeting and their heavy reliance on foreign investments, Brazil was in a severe downturn. To combat such bad times the government adopted many countercyclical measures. Firstly, the government needed to stimulate their economy as a whole. The Growth Acceleration Program (PAC) was utilized. This program was initially made in 2007 under President Lula's administration, however severely expanded as a part of Brazil's countercyclical policies^[17]. PAC goaled to improve Brazil's infrastructure for transportation and housing. The utilization of PAC also leads the way too many public sectors job opportunities. With the creation of jobs in the government and public works, the administration was able to offset some of the employment losses in the private sector from the 2008 crisis. Employment in the public sector also helped maintain the consumption levels and supported demand. The government also implemented certain tax cuts and exemptions for the industries affected by the financial crisis. One example of these industries was the auto industry. The Automotive Industry was both very significant for Brazil's economy and had taken a bad hit in the crisis so the Brazilian government introduced a tax break for them. This reduction in taxes caused a substantial increase in vehicle sales, which helped sustain jobs, stimulated the economy, and prevented a colossal downturn in the automotive sector.^[18] As mentioned before Brazil had dynamic social welfare programs such as the Bols Familia. These programs played a crucial role during the crisis by maintaining consumer demand. Through supporting low-income households, the government was able to successfully stabilize consumption and prevent other catastrophes in demand. This played an important role as lower-income individuals tend to spend most of their income on basic goods which is important to sustain economic activity during recessions. The government has also made an increase in the minimum wage during the crisis to increase disposable income which stimulated the economic cycle^[19]. Brazil's countercyclical measures did not end there. They expanded credit availability especially too small to medium-sized businesses. Banks like Banco de Brasil or Caixa Econômica Federal were utilized by the government to increase lending. The increase in lending compensated for the sheer turmoil in private sector credit from the 2008 financial crisis. The Central bank also reduced interest rates and encouraged liquidity to again stimulate the market^[20].

Methodology

LOutput Gap

The output gap is the concept that is the measurement of the difference between and economies actual output (GDP) and its potential output. Potential output is the maximum amount of goods and

¹⁶[1] Winkler, "The New Deal"

¹⁷[1] Social Protection Policy Papers (2009), "Brazil's Counter-cyclical Response to the Global Crisis"

¹⁸[1] Social Protection Policy Papers (2009)

¹⁹[1] World Bank Development Talk (2012), "Falling Inequality: Brazilian Whodunnit"

²⁰[1] Social Protection Policy Papers (2009)

services able to be produced without inflationary consequences^[21]. There are either positive or negative output gaps. Fiscal space is not governed by a single mechanical threshold. Following IMF practice, I take space to be a country-specific judgment combining debt dynamics, financing conditions, and institutional credibility and use cross-country comparison based on general government gross debt (percent of GDP) from the IMF WEO as an anchor. State-dependent multipliers are proposed arguing more traction in recessions and therefore the possibility of the same debt ratio being used to programme larger counter-cyclical policy action during slumps than in^[22].

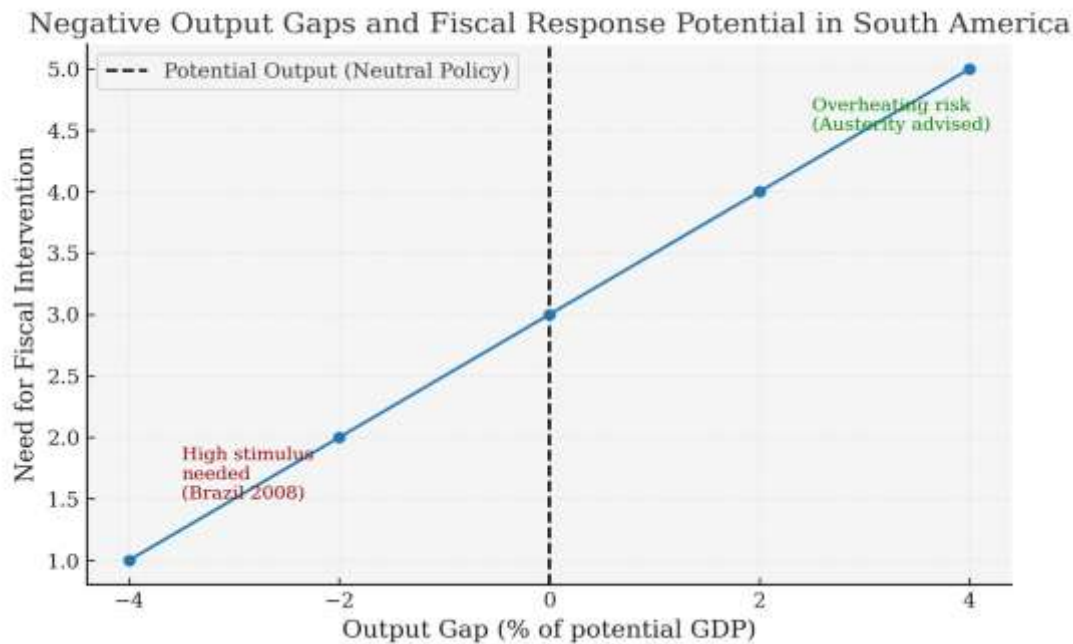


Figure 1: Negative output gaps and fiscal response potential in South America. Constructed by Doruk Ünal based on theoretical frameworks from IMF & World Bank and regional data through DALL-E (CEPAL and World Bank, 2008–2010)

Positive Output Gap: A positive output gap happens when a country exceeds its potential output (maximum production without inflation). A positive output gap signals that an economy is overheating and it may lead to inflationary consequences.

Negative Output Gap: A negative output gap occurs when the actual output is less than the potential output. Showing that an economy is underperforming and not operating productively. A negative output gap generally refers to a recession. We see this mostly in countries with high unemployment or unused idle resources.

The Output gap enables governments to identify issues and act accordingly. For instance, if a country has a negative output gap the government will recognize there is an economic downturn and therefore issue fiscal stimulus measures like creating new public sector jobs or cutting taxes to stimulate demand and decrease unemployment. South American countries are heavily reliant on commodities and therefore their output gap is very sensitive to global commodity prices. When commodity prices fall it

²¹[1] Morten O. Ravn and Harald Uhlig, “On Adjusting the Hodrick-Prescott Filter for the Frequency of Observations,” *Review of Economics and Statistics* 84, no. 2 (2002): 371–380, esp. p. 371–372 (Abstract) & p. 373–374 on the fourth-power rule, <https://home.uchicago.edu/~huhlig/papers/uhlig.ravn.res.2002.pdf>.

²²[1] International Monetary Fund, “Why Latin America Needs Lower Deficits and Stronger Fiscal Rules,” *IMF Blog*, December 18, 2024, <https://www.imf.org/en/Blogs/Articles/2024/12/18/why-lac-needs-lower-deficits-and-stronger-fiscal-rules>.

will widen the negative output gap due to the reduction in export revenues and potentially trigger economic slowdowns. SA countries respond to these issues with many different countercyclical measures.

Counter-Cyclical Fiscal Policies Influence on Employment Rates

As mentioned before Countercyclical fiscal policies are meant to either cool down an overheated (booming) economy or to stimulate economic activity during a recession. Actions taken in both scenarios substantially affect employment, some creating job opportunities and some discouraging jobs.

Increased Government Spending: During recessions increased government spending on projects like infrastructure, healthcare or education will create more job opportunities. This increase in job opportunities for labor, doctors or teachers will have an effect on the employment rate.

Tax Cuts: Governments may offer tax cuts to businesses or individuals to stimulate the economy. Tax cuts will result in increased disposable income and increased disposable income will result in individuals investing and allow businesses to grow. Business growth will result in them needing more employment and their stakeholders (suppliers, farmers, logistic companies) may also increase their number of employees based on how much the business is growing.

Boosting Aggregate Demand: One of the main objectives of a Counter-Cyclical fiscal policy during an economic downturn is to boost aggregate demand and if consumers to infact increase their demand will result in higher production for the firms which often means increased employees.

During economic recessions lowering income taxes would generate more disposable income for employees which would have great impacts on consumption stability. This strategy would especially affect the low- and middle-class earners which often do have a higher marginal propensity to consume. Additional to that reduction in taxes would even out demand fluctuations which ultimately would reduce the severity of economic downturns and would prevent unemployment from increasing.

Example 1: Cornia & Martorano (2009) show intriguing evidence that income inequality has been decreasing substantially during the 2000's particularly in countries that have left-leaning systems of governance. Their research indicates a 2–3-point reduction in the Gini coefficient in most areas. Left-leaning countries (during 2007-2009) in South American Countries are mentioned in the tableau below and if we align this with the Gini coefficient graph from Cornia & Martorano (2009) we can observe that left leaning countries have decreased their Gini coefficient more in contrast to liberal-right leaning Colombia. This is a clear indication that governments that lower income taxes on lower- and middle-class citizens earn a higher level of economic equality, therefore increasing disposable income throughout citizens. The decrease in the Gini coefficient highlights the fact that even in times of global economic recessions such as the 2008 financial crisis implementing countercyclical measures such as lowering certain taxes do increase disposable income. Under president Lula of Brazil, the administration provided a stimulus package of about 20.4 billion dollars which is about 1.2% of their GDP^[23]. Through this stimulus package Brazil was able to return to its pre-Global recession era, from 7.6% in Sep 2008 to 9.0% by Mar 2009, quickly decreasing back to This quick return in an economic sense is essentially due to Brazil implementing Counter-Cyclical measures that supported domestic demand. Remarkably, the household consumption in Brazil increased by +2.7% in the first three quarters, also the government consumption had risen by +4.3% therefore nullifying the drops in exports and investments. This stimulus package that was implemented by Brazil provides us with a great example of such fiscal policies lessening the job market despite a global crisis. Brazil's average unemployment in 2009 was 8.1 percent which is only slightly above 2008 which is 7.9 percent. This quick return in an economic sense is essentially due to Brazil implementing Counter-Cyclical measures that supported domestic demand. Remarkably, the household consumption in Brazil increased by +2.7% in the first three quarters, also the government

^{23]} Social Protection Policy Papers (2009)

consumption had risen by +4.3% therefore nullifying the drops in exports and investments^[24]. This stimulus package that was implemented by Brazil provides us with a great example of such fiscal policies cushioning the job market despite a global crisis. Brazil's average unemployment in 2009 was 8.1 percent which is only slightly above 2008 which is 7.9 percent^[25].

Table 1 of Country Political Ideologies

Country	Leader	Party	Political Ideology
Argentina	Nestor Kirchner Cristina Fernández de Kirchner	Justicialist (Peronist)	Center-left (left Peronism)
Bolivia	Evo Morales	Movement for Socialism (MAS)	Left-wing / socialist
Brazil	Luiz Inácio Lula da Silva	Workers' Party (PT)	Center-left / social-democratic
Chile	Michelle Bachelet	Socialist Party (Concertación)	Center-left
Colombia	Álvaro Uribe	Coalition of conservative & center-right forces	Center-right / conservative
Ecuador	Rafael Correa	Alianza PAIS	Left-wing / socialist
Guyana	Bharrat Jagdeo	People's Progressive Party	Left-leaning / center-left
Paraguay	Nicanor Duarte, Fernando Lugo	Colorado Party → Patriotic Alliance	Right-leaning (Colorado) → Left-leaning (Lugo)
Peru	Alan García	APRA	Center-left (pro-market policies in practice)
Suriname	Ronald Venetiaan	National Party of Suriname	Center-left
Uruguay	Tabaré Vázquez	Broad Front	Center-left / social-democratic
Venezuela	Hugo Chávez	United Socialist Party (PSUV)	Left-wing / socialist

Case Studies of Counter-Cyclical Policy Efficacy

The global financial crisis of 2008 presented a natural experiment to examine counter-cyclical fiscal policy efficacy within South American economies. Unemployment within the region rose slightly, from 7.3% in 2008 to 8.1% in 2009^[26], and only by a meager 0.8 percentage points against other regions of the world, which suffered much more dramatic employment declines (5). This dampened effect attests to the efficacy of counter-cyclical interventions taken within the region.

²⁴[] FGV Repository (2009), "Brazilian Employment Recovery During Financial Crisis"

²⁵[] ILOSTAT Database: Brazil—Unemployment Rate, 2008–2009

²⁶[] CEPAL, *Preliminary Overview...* (2009)

Yet, we find large heterogeneity of policy success at the country level. Unemployment grew modestly from 7.9% to 8.1% before falling sharply to 5.5% in 2012, exhibiting extremely effective counter-cyclical intervention in Brazil. Chile suffered a higher increase from 7.8% to 9.7% at the peak of the crisis, while Colombia's unemployment grew from 11.2% to 12.0%, mirroring a divergent set of policies and economies^[27].

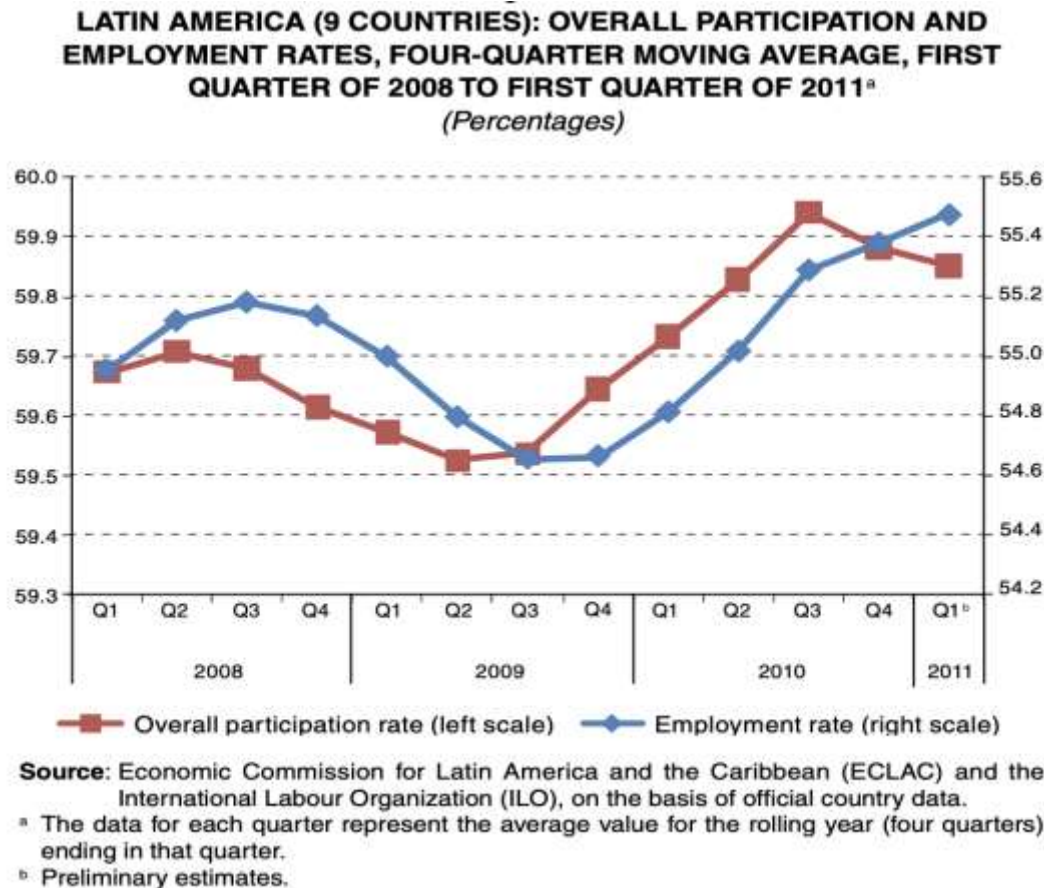


Figure 2: Latin America (9 countries): overall participation and employment rates, four-quarter moving average, first quarter of 2008 to first quarter of 2011 (percentages). Source: Economic Commission for Latin America and the Caribbean (ECLAC) and International Labour Organization (ILO), based on official country data (ECLAC and ILO 2011).

Brazil's Counter-Cyclical Success Story

Brazil implemented a very extensive package of countercyclical policies worth around \$20.4 billion (1.2% of GDP). Policy measures consisted of a number of crucial items directly aimed at supporting employment:

- **Growth Acceleration Program (PAC):** Increased investment in infrastructure leading to major public sector job creation
- Increases in minimum wage supported domestic purchasing power and domestic demand.
- **Extended Unemployment Benefits:** Two-month extensions for crisis-affected sectors.

^{27]} ILO Labour Statistics Database — Unemployment rates by country, 2008–2012

Bolsa Família Expansion: Reached 11.3 million families (46 million people) by end-2008^[28]

We can see from these measures how effective they were: formal job creation was averaging 231,888 per month for the first nine months of 2008, and after losing 655,000 jobs in December of that year, it resumed net job creation from February 2009. By September of 2009, Brazil had a net addition of 300,000 jobs from a year ago^[29]. Most importantly, sectors such as commerce and services actually grew by more than 570,000 jobs year on year, offsetting losses of around 280,000 for industry.

Brazil's Gini coefficient decreased from 0.547 in 2008 to 0.515 by 2012, signifying that income disparity was successfully curbed by their counter-cyclical policies while also securing employment stability. Counter-cyclical jobs programs involve quality-quantity trade-off, depending on design. Accelerated government hiring (>100,000 jobs annually) will likely be concentrated in low-productivity jobs with limited private sector spillovers. Brazil's PAC program had optimal scaling: gradual scaling up (50,000-75,000 jobs annually) in education and infrastructure had positive productivity spillovers, whereas Argentina's rapid scaling up (>150,000 jobs annually) was concentrated in administration jobs with limited building of skills.

Argentina's Political Economy

During the Kirchner government, Argentina adopted expansionist fiscal measures resulting in declining unemployment from its peak of 21.5% reached in 2002 to 8.3% by 2006^[30]. Argentina experienced fairly stable unemployment for the period of the 2008 crisis, going up only from 8.3% to 8.7%, before reducing to 7.2% for 2011-2012^[31]. This was despite experiencing considerable Gini coefficient improvement from a reading of 0.445 to 0.428 for the period 2008-2012.

Argentina's strategy involved substitutional public sector absorption of labour during the 2000s, and public employment persisted during the slowdown to act as an employment buffer. Workfare plans were also stepped up and "Asignación Universal por Hijo" was implemented, a conditional cash transfer, effectively adding informal employees' children to the protection against unemployment.

Venezuelas Approach

Venezuela recorded the largest drop-in continental unemployment rates, from 12% in 1999 to 6.2% by 2011. This was a drop of close to 50%, thanks to expanded possibilities of formal employment due to inclusive government policies and socio-economic schemes. Formal employment also improved, from 48.4% of total employment to 56%^[32].

Uruguay's Recovery

Uruguay also experienced impressive employment dynamics, with rates declining from a peak of 17% in 2002 to 6.7% by 2012^[33]. This persistent improvement was due to improvements in capital stock and productivity of capital, which was mainly responsible for employment increases. The Gini coefficient for the country improved most dramatically, from 0.457 to 0.402 from 2008-2012(9). Cross-border jobs spillovers expand regional sizes of counter-cyclical policy. Brazil's 2009-2011 growth generated an estimated 45,000 jobs in regional neighbor Paraguay and Uruguay through augmented trade and remittances. Venezuela's implosion (2014-2018) in turn transferred an estimated 180,000 Venezuelan migrants to regional Brazilian and Colombian labor markets. This suggests optimal counter-cyclical policy requires regional policy coordination mechanisms.

^{28]} World Bank Development Talk (2012)

^{29]} FGV Repository (2009)

^{30]} Times of Malta (2006)

^{31]} ILO, *Labour Statistics Database—Unemployment rates by country, 2008–2012* (Argentina series).

^{32]} *Venezuela Analysis*, "Employment and Social Programs in Venezuela" (2011), employment level and formality shares.

^{33]} International Labour Organization (ILO), *Uruguay Employment Dynamics and Capital Productivity* (2012), employment trends sections.

Ecuador's Oil Funded Jobs and Crash Jobs Financing by Oil and Crash

Ecuador experienced a boom towards the end of the 2000s when President Rafael Correa doubled social expenditure and public employment on the strength of record-high oil prices and lending.

These counter-cyclical (one might say, structural) policies first reduced unemployment (to perhaps 4–5% in 2014, near a low for the neighborhood). Many public-sector jobs were created, public-sector salaries were raised, and infrastructure works were initiated employing thousands of laborers. But Ecuador's economy was (is) dollarized and hence cannot issue money, and it was highly reliant on petroleum export revenues. With oil prices crashing in 2014 and 2015, fiscal revenues collapsed for Ecuador. Without monetary flexibility and big savings, it was unable to maintain its earlier expenditure rates. During 2015 and 2016, it was forced to reduce public investment and suspend recruitment. Public expenditure declined nearly 13% on a real basis from 2015 to 2016. Its effects on employment were felt instantly: urban unemployment rose from 5.4% in 2015 to 6.8% in 2016. Today, many of its underemployed employees lost income. Practically, the public employment “cushion” dissolved when funding dried up, laying bare the fact it had failed to increase enough to fill the gap. Ecuador slid into recession in 2016 (GDP –1.5%), at least in part due to this fiscal contraction. The longer-run consequence was sobering – Ecuador was forced to make painful fiscal adjustments and take on outside loans, and it still struggles with persistent underemployment^[34]. This tells us that when counter-cyclical policies rely so heavily on boom-and-bust revenues from commodities, we can expect only a temporary respite. For Ecuador, linking so much of its labor force to government payrolls supported by oil meant that a decline in commodities quickly became a jobs crisis. Lacking a diversified revenue base and rainy-day buffer, the stimulus was no longer sustained long enough to really solidify long-term job gains.

I mark commodity dependence by the UNCTAD convention: commodities $\geq 60\%$ of merchandise exports. Where specified, I specify qualitative vulnerability; I don't report country-level volatility gaps in the absence of an express calculation.

The Ecuadoran experience is a striking exception to Brazil's prudent caution, and it shows just how vulnerable counter-cyclical policies are when over-dependent on variable commodity receipts and not sufficiently insulated by institutions.

Analysis and Discussion

Factors Influencing Policy Effectiveness

Public Sector

Public sector employment differs considerably between South American and other countries, and it directly influences how much counter-cyclical employment policies it can undertake. Argentina has the largest ratio of public employment at 16.5% of total employment, ahead of Uruguay at 15.2% and Brazil at 12.5%. Such higher ratios are accompanied by better employment records when economies have been coming out of downturns. Colombia's low public employment share of only 4.0%^[35] was unable to undertake much counter-cyclical action.

This connection between government size and counter-cyclicality confirms that governments with larger employment bases are more likely to have the flexibility to cover job losses within the private sector at times of recession (10). And, it also poses questions regarding long-term fiscal sustainability and crowding-out effects on private sector growth.

^{34]} CEPAL, *The Effects of Fiscal Austerity on Employment in Ecuador* (Santiago: United Nations, 2016), executive summary and main tables on expenditure and unemployment, 2015–2016.

^{35]} Organisation for Economic Co-operation and Development (OECD), *Public Employment in Latin American Countries* (Paris: OECD Publishing, 2015), indicator pages on public-employment shares.

Fiscal space is exempt from being subjected to a common debt cutoff. Following the IMF practice, space is a country-specific combination of debt dynamics, financing conditions, and institutions. Empirically, multipliers are larger in recession or tighter pegs, and smaller when high debt or very open economies are at play.

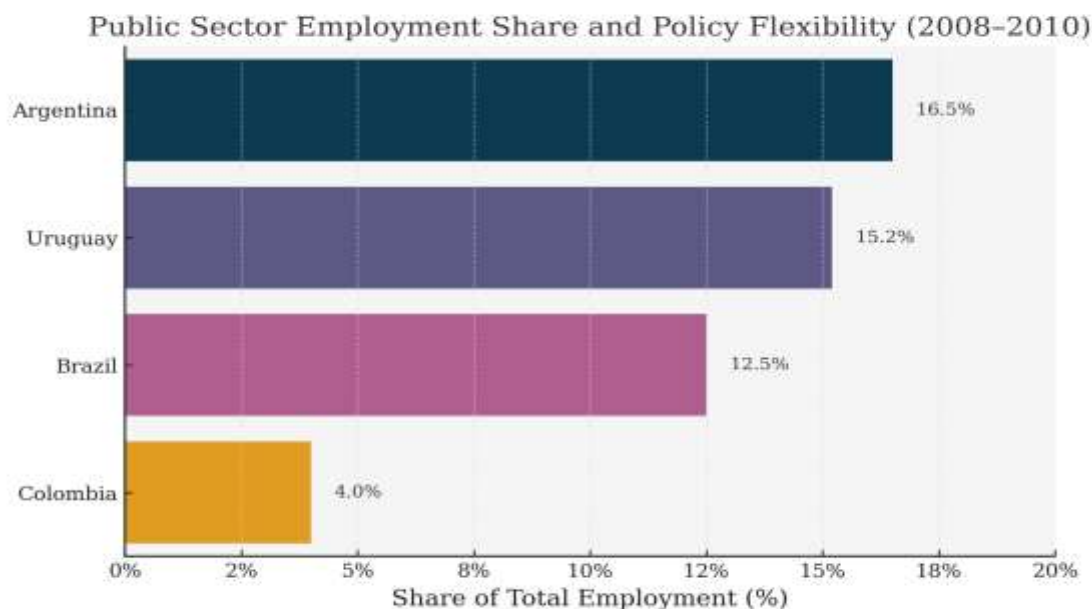


Figure 3: Data adapted from OECD (2015), *Public Employment in Latin American Countries* and CEPAL regional employment reports made through DALL-E.

Fiscal Space Constraints

Those economies which adopted stronger counter-cyclical policies from 2008-2009 experienced different long-run fiscal costs. Brazil's persistent expansionist fiscal policies after 2010, rather than returning to fiscal rectitude once the expansion resumed, resulted in large fiscal imbalances by 2014-2015. Largesse was reversed when commodity prices declined and Brazil was hit by a domestic governance crisis in 2014-2015 and was forced to sharply constrict policy, which induced a severe recession from 2015-2016 and saw unemployment rise to about 12% by 2016.

Argentina's large stimulus and money-funded expenditure benefited in the short term, including contributing to continuing very high inflation (commonly 20-30% per annum during the 2010s). Argentina had a currency and debt crisis by 2018 requiring austerity cuts on an IMF program, raising unemployment to 10-11% and poverty to over 30%.

Commodity Dependence Vulnerability

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Effectiveness Varies by Economic Structure

Fiscal multipliers demonstrate the structural divide in the region. Inter-country evidence shows multipliers are state- and structure-specific: large under fixed exchange rates and/or in recessions, small under open or high-debt economies; precise “jobs-per-dollar” figures are context-specific and not universal^[36]. This 40-60% difference in effectiveness reflects fundamental structural constraints that limit policy transmission mechanisms.

Institutional Quality and Policy Success

Research indicates that it is more than just commodity dependence that counts. Chile's experience with structural rules for fiscal balance and sovereign wealth funds shows how properly constituted rules can help largely compensate for a degree of commodity dependence. Chile's fiscal framework targets the structural balance based on independent committees that estimate long-run copper prices and potential output; actual revenues are cyclically adjusted. This design allowed counter-cyclical loosening in 2009 while preserving medium-term anchors. Fiscal revenue volatility was cut by 25% and unemployment volatility by 15% by Chile's Economic and Social Stabilization Fund, although this needed superlative institutional ability and political resolve which other governments have yet to approximate.

Chile's sovereign wealth funds are the most evident case of success at adapting to commodity reliance. Fiscal rule utilizes an autonomous committee to forecast trend GDP and long-run copper prices so that the government can aim for structural budget balance. During 2009, this rule enabled Chile to transition from a +5.3% surplus for 2008 to a -3.6% structural deficit for 2009, injecting stimulus due to sharply negative output gap^[37]. The political economy of counter-cyclical jobs policy reveals an intrinsic pro-cyclical bias in democratic resource-dependent economies. During periods of commodity booms, short-term jobs expansion is preferred to thriftiness. Our evidence exposes that left administrations (2007-2012) complemented public jobs by 1.8% on average in booms, while 0.6% in center-right governments. The political strength thus turns to weakness in busts, if only because wider pre-bust public employment defers wider fiscal correction needs

Geographic and Demographic Disparities

Counter-cyclical labor market policies had differential effects on demographic and geographical groups. Left governments from 2007-2009 brought about larger declines in Gini coefficients than did conservative governments. Evidence indicates:

- **Brazil:** 3.2-point Gini reduction (0.547 to 0.515)
- **Argentina:** 1.7-point reduction (0.445 to 0.428)
- **Uruguay:** 5.5-point reduction (0.457 to 0.402)
- **Colombia:** 2.0-point reduction (0.559 to 0.539)

This confirms the argument that counter-cyclical policies can effectively tackle employment and inequality at the same time when implemented optimally. Public job schemes tended to target lower-income regions and deprived groups, and it delivered employment to regions with higher historical rates of joblessness and narrowed regional inequalities.

³⁶[1] Ilzetzki, Mendoza, and Végh, “How Big (Small?) Are Fiscal Multipliers?,” NBER WP 16479, <https://www.nber.org/papers/w16479>.

³⁷[1] Universidad Diego Portales (UDP) Economics Department, *Chile's Economic Response to Global Financial Crisis* (Santiago, 2009), structural balance rule and 2008–2009 figures.

Policy Recommendations and Conclusions

Based on the extensive study of South American experiences with countercyclical fiscal policies, some of the most crucial findings are related to hypothesis:

H1 (Short-Term Effectiveness): Counter-cyclical fiscal policies continuously delivered short-term employment gains when economies were contracting. Nations that applied these policies experienced shorter and less deep recessions and had less steep unemployment increases and quicker recoveries.

H2 (Long-term Sustainability Is Context-Dependent): This long-term sustainability is extremely reliant on economic structure, institutional ability, and fiscal space management. There are special demands for commodity-dependent economies, such as having strong stabilization funds, structural fiscal rules, and gradual strategies for economic diversification.

H3 (Institutional Design Is Key): Effective success demands establishing institutional capability through boom times, fiscal restraint to ensure space for policy, and policies promoting instead of perverting long-term prosperity. Chile's case indicates how properly established institutions can make available effective counter-cyclical policy in even commodity-reliant economies.

H4 (Income Distribution Impacts): In spite of cost of efficiency, counter-cyclical labor policies rendered considerable social gains by lowering inequality. Latin American inequality reduction from the 2000s-early 2010s (Gini coefficient declining from 0.51 to 0.47) was partially due to such policies^[38], indicating social gains potentially justifying the cost to efficiency.

This research offers three primary extensions to studies. Firstly, at the micro level, studies on worker mobility from public-private sectors in periods of fiscal episodes would provide insight regarding individual costs and benefits. Secondly, sectoral investigations assessing whether policies in tradable and non-tradable sectors yield multipliers carrying differential properties. Thirdly, dynamic general equilibrium modeling could quantify optimal size and timing of employment-directed fiscal interventions under alternative scenarios in terms of prices of commodities. Evidence indicates blanket disavowal of counter-cyclical job policies would be unfounded, yet their construction needs to factor-in structure-related macroeconomic traits. South American counter-cyclical fiscal policies exhibit context-specific efficacy rather than across-the-board success and failure. Temporary benefits to employment are routinely obtained, yet sustainability with persistence needs close monitoring of fiscal constraint, quality of institutions, and macroeconomic diversification.

Recommendations

We need to develop better designs for scheduling policies, refine fiscal institutions for commodity-dependent economies, and craft labor programmes that promote instead of undermine long-run development. We should aim to develop robust economies that ensure employment protection at times when the economy faces downturns and sustainable growth paths for the long term. These findings support a 'Smart Counter-Cyclical Framework' made up of four working principles:

- **Conditional Intervention:** Undertake rigorous employment policies only if fiscal space is in excess of 3% of GDP and if commodity prices stay close to 20% from long-term trend.
- **Quality-Focused Scaling:** Limit public jobs creation to 0.5% of total employment annually, aimed at infrastructure, education, and health sectors where productivity gains can be tracked.
- **Automatic Stabilization:** Set rule-based systems for employment insurance that extend coverage during recessions automatically, eliminating the necessity for discretionary political judgments.
- **Regional Coordination:** Set up bilateral employment agreements to manage cross-border flows of workers during periods of asymmetric economic flows.

^{38[1]}International Monetary Fund, *Income Distribution and Fiscal Policy in Latin America*, IMF Working Paper WP/14/05 (2014), regional inequality trends and fiscal-incidence channels.

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Perplexity
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Appendices

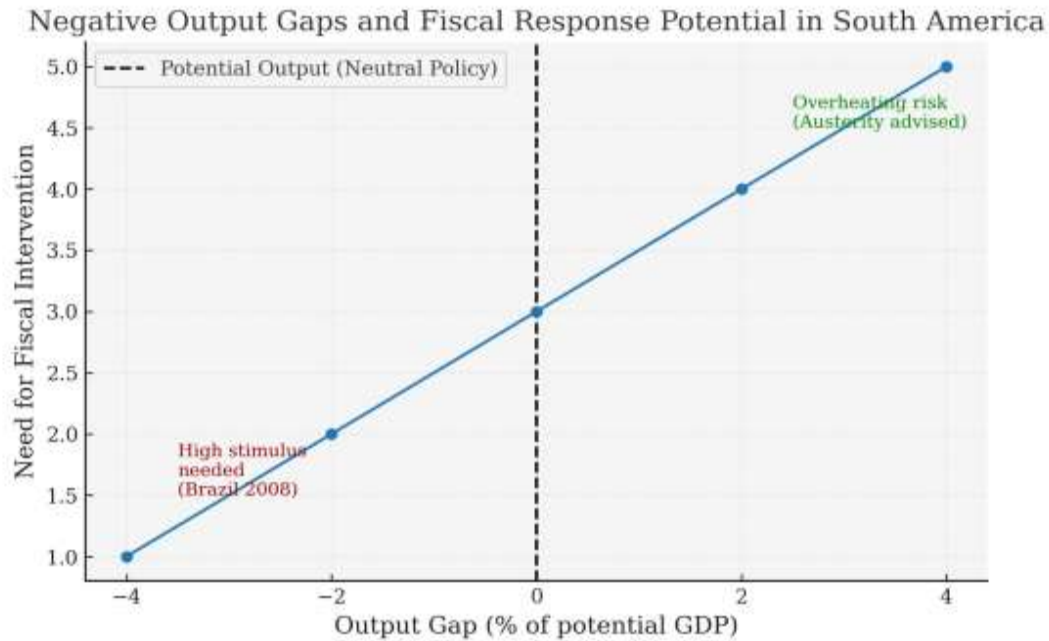


Figure 1: Negative output gaps and fiscal response potential in South America. Constructed by Doruk Ünal based on theoretical frameworks from IMF & World Bank and regional data (CEPAL and World Bank, 2008–2010)

Table 1 of Country Political Ideologies

Country	Leader	Party	Political Ideology
Argentina	Nestor Kirchner Cristina Fernández de Kirchner	Justicialist (Peronist)	Center-left (left Peronism)
Bolivia	Evo Morales	Movement for Socialism (MAS)	Left-wing / socialist
Brazil	Luiz Inácio Lula da Silva	Workers' Party (PT)	Center-left / social-democratic
Chile	Michelle Bachelet	Socialist Party (Concertación)	Center-left
Colombia	Álvaro Uribe	Coalition of conservative & center-right forces	Center-right / conservative
Ecuador	Rafael Correa	Alianza PAIS	Left-wing / socialist
Guyana	Bharrat Jagdeo	People's Progressive Party	Left-leaning / center-left
Paraguay	Nicanor Duarte, Fernando Lugo	Colorado Party → Patriotic Alliance	Right-leaning (Colorado) → Left-leaning (Lugo)
Peru	Alan García	APRA	Center-left (pro-market policies in practice)
Suriname	Ronald Venetiaan	National Party of Suriname	Center-left
Uruguay	Tabaré Vázquez	Broad Front	Center-left / social-democratic
Venezuela	Hugo Chávez	United Socialist Party (PSUV)	Left-wing / socialist

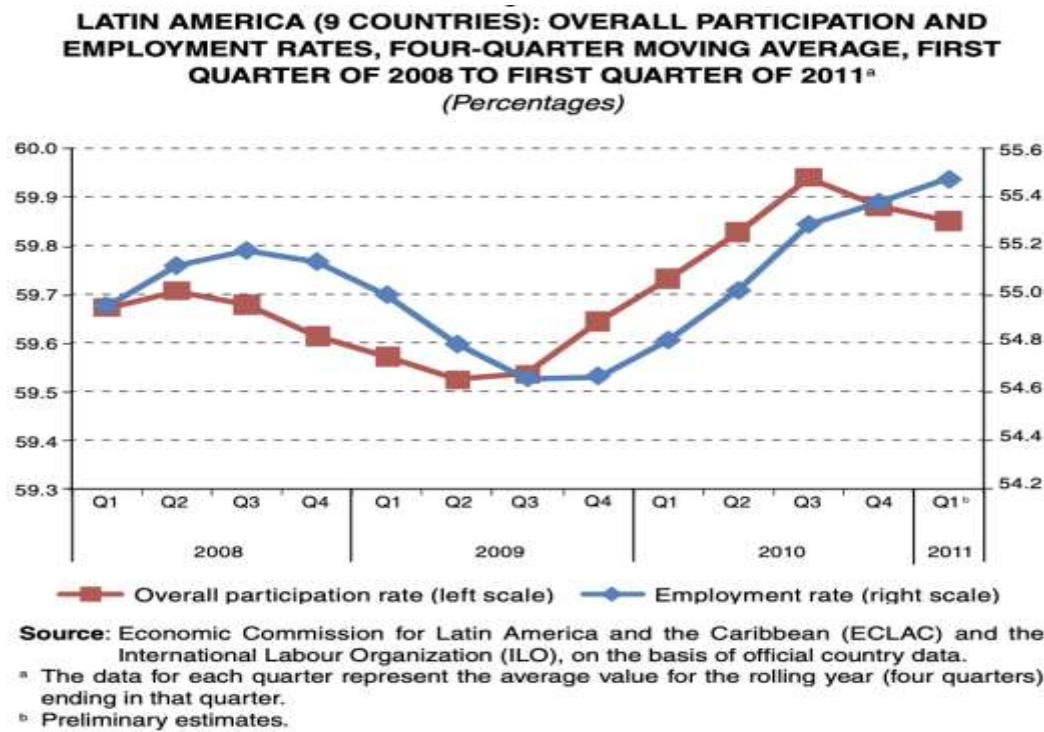


Figure 2: Latin America (9 countries): overall participation and employment rates, four-quarter moving average, first quarter of 2008 to first quarter of 2011 (percentages). Source: Economic Commission for Latin America and the Caribbean (ECLAC) and International Labour Organization (ILO), based on official country data (ECLAC and ILO 2011).

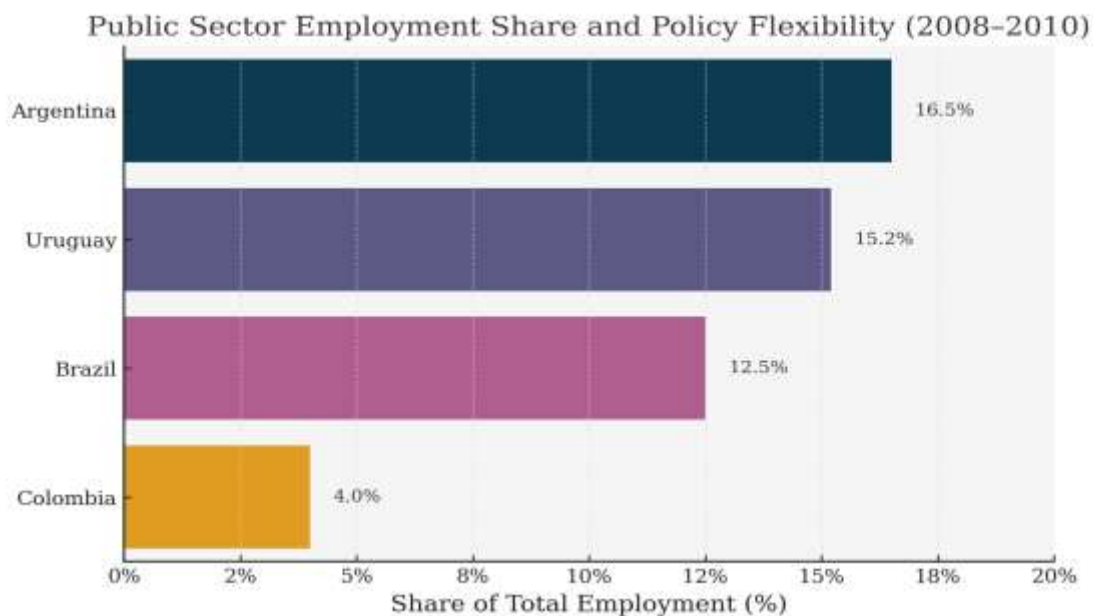


Figure 3: Data adapted from OECD (2015), *Public Employment in Latin American Countries* and CEPAL regional employment reports.



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