"The role of subnational tax capacity: A path toward regional integration"

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# THE ROLE OF SUBNATIONAL TAX CAPACITY: A PATH TOWARD REGIONAL INTEGRATION

### Abstract

The tax capacity exercised by subnational governments in a country is fundamental in shaping the tax and economic system, especially when there is a coordination of interests, such as in the Pacific Alliance. Therefore, the coordination exercised by its member countries - Chile, Colombia, Mexico, and Peru - must be strategically aligned to comprehensively strengthen this Alliance. Considering the above, the objective of this study is to identify the similarities or differences between these four countries, check the tax behaviors of their subnational governments, and assess the degree of their impact on this trade agreement. Based on a longitudinal quantitative methodology, the results reveal significant differences between the subnational collection systems, identifying that Mexico and Peru are the only members that have maintained a similar trend, significantly differentiating themselves from Chile and Colombia. Despite their subnational tax structures, the main finding is that the Pacific Alliance needs to implement more coordinated actions in tax matters to strengthen its economic activities with other countries. A lack of coordination could counteract the commercial and financial strategies presented as a regional bloc, impacting investment, competitiveness, and regional sustainability. Overall, coordinated tax policies within the Pacific Alliance can drive regional integration, contributing to the region's long-term stability.

#### Keywords

taxation, national government, subnational government, Pacific Alliance, economic bloc

JEL Classification H20, H30

### INTRODUCTION

The tax system established by each country reflects a series of economic, political, and social aspects prevailing in their jurisdictions, which must align with the needs of each economic context to guarantee national sovereignty. Thus, the necessary configuration of these systems must contribute to satisfying the various existing social needs, always delimited by a legal context from tax burdens to the governed, depending on their economic and contributory capacity.

The tax capacity of subnational governments is fundamental for the health of an intergovernmental system and for the sustainability of decentralization processes. In Latin America, however, subnational tax autonomy is limited, which translates into a low capacity to generate its own revenues. This situation is due to the allocation of specific tax bases by the central government, the imposition of limits on tax rates, and the limited influence of subnational governments on the distribution of resources from revenue-sharing systems. Strengthening subnational tax capacity by giving them greater autonomy to define their tax policy is crucial to improve efficiency in the provision of public services and to promote a more balanced and sustainable development in the region. In this sense, every tax system must express the capabilities that governments must establish to address the economic role of the financial activity for which they are responsible, such as producing a fair and equitable distribution coordinated in its different levels of government.

Various studies have analyzed the tax capacity of subnational governments, examining factors that influence their ability to generate their own revenue and their fiscal autonomy (Jiménez & Ruelas, 2018; Victorova et al., 2020). Other studies analyze the influence of macroeconomic variables on tax capacity, such as per capita income, trade openness, productive structure, and inequality (Muller Duran, 2022). Some studies have used stochastic frontier models to estimate the potential revenue of subnational governments, identifying countries that are below their fiscal capacity (Galecka et al., 2020).

However, in Latin America, subnational tax autonomy is limited due to the allocation of tax bases by the central government, the imposition of limits on tax rates, and the limited influence of subnational governments in the distribution of revenue from revenue-sharing systems. For decades, Latin America has seen a strong trend toward tax decentralization structured around its subnational governments that reassign spending responsibilities without considering the necessary tax capacities, generating an asymmetry in their legislation that is a way of understanding collaborative economic functioning. Pacific Alliance is a block of economic, commercial, and political integration between Colombia, Chile, Mexico, and Peru. Its tax structures based on its subnational governments should be a strategic way of understanding and consolidating this important strategy at the regional level that should strengthen dynamism among its member countries and thus contribute to sustained regional development.

Considering the essence of this strategic Alliance, the tax capacities of the member countries should allow one to understand which economies have similar tax behavior and how the collaboration of these nations defines the area of economic integration as a space that produces benefits and international impact to remain relevant in the Latin American context.

### **1. LITERATURE REVIEW**

International taxation is of paramount importance as a detonating factor of international development, identifying the economic and institutional barriers to designing tax structures (Rodríguez, 2011). Operationally, tax systems refer to a set of norms, laws, and procedures that regulate tax collection in each country, whose bases are fundamental to finance public expenditures and provide the necessary services for the economic and social development of any country. As emphasized by Fernández et al. (2016), the primary role or taxes in the state's public agenda is fundamental to every public policy discourse.

Conveying the above into the lower levels of government, as emphasized by Gómez Sabaini et al. (2017), the phenomenon of taxation has been reflected in the formulation and execution of entrusted actions in important public policy activities, which determine comprehensive functioning. In this sense, the organization of tax systems as a development factor is important to guarantee and consolidate sustained efforts for a common goal: the social aspect predominating over the economy.

Therefore, assuming that taxation is an element related to the development of a region, the important role played by the subnational levels of a government in shaping better economic and social conditions in their territorial environments must be distinguished (Manet, 2014). The degree of participation converges in the creation of organizational structures oriented toward a common goal to define coordinated action strategies efficiently. Thus, the involvement and high responsibility that subnational levels must assume in order to achieve their tax objectives as part of their economic, legal, and social activity must be translated into a much more globalized and regionalized area that has an impact on delimiting more actions to assemble attractive markets for various purposes.

In addition, the subnational tax capacity must prevail in order to assemble any tax structure as

part of any national and regional strategy with greater scope. It is necessary to understand that all tax competence "consist of being able to collect tax when a generating event has occurred" (De la Garza, 1968). It is important to take into account the autonomy exercised by subnational governments, thus being a heterogeneous trend among countries in relation to tax decentralization from the central government toward its lower levels, identifying their financing modalities such as generation of own resources (taxes or non-taxes revenues), intergovernmental transfers and through debt (Jiménez & Ruelas, 2018), among others.

In this sense, tax capacity must refer to a faculty in which central and subnational governments participate. It is appropriate to visualize subnational governments' limitations regarding tax power, the restrictions on their tax authority, and the concurrence between the central and subnational governments (Castellanos, 2022). Therefore, the assessment that can be made in a regional context about these capacities is presented as a financial and administrative phenomenon whose scope must concern the needs of a country and, consequently, of an entire collaborative region, based on the principle that each level of national and subnational government can address the problems as their own (Rosas, 2019). Hence, the importance of subnational levels takes on great significance and commitment to guarantee a common goal.

The taxability term emerges as a main element, referring to the governments, regardless of their administrative level, to take on the tax activity of the state and preserve sustainable public institutions. In the case of subnational governments, it is recommended that both subnational tax and the faculties to execute resources be strengthened, allowing these governments to take on the local needs in a better way and contribute to local, regional, national, and international development, the latter one envisioning tight collaborative tie with other countries.

When considering economic and development initiatives between nations as an important strategy for collaboration between nations in Latin America, it is necessary to highlight the presence of the Pacific Alliance since its origin. This is a process of economic, commercial, and political integration to establish collaborative working conditions between its four member countries (Colombia, Chile, Mexico, and Peru), defining precisely an integration mechanism within a scheme of open regionalism strongly oriented toward a commercial environment. In this sense, the configuration of regionalism derived from these collaborative ties must somehow influence the construction of open public policies.

To counteract the great financial dependence that subnational governments defray with their income from their discretionary powers to determine the tax burden on citizens (Brosio & Jiménez, 2012), tax autonomy, given through tax decentralization, must take into account two actions: to increase the participation of subnational governments in tax collection (Larraín, 2022) and as a consequence, to contribute to a regional development with high economic potential to generate attractive areas.

For this reason, it is necessary to highlight the economic and social role that every tax context plays with its subnational administrations through its tax structure, which should contribute to regional, state, and national strengthening. Therefore, subnational tax competition implies participation by subnational governments in tax collection, with the capacity to compete through income generated by them or by the central government, affecting tax collection and the amount available for public spending and central government financing.

It is essential to find a balance between the tax autonomy of subnational and central governments to ensure the efficient and equitable distribution of resources. Moreover, it is necessary to establish mechanisms that regulate tax competition to guarantee that there are enough public resources at all levels of government, which implies defining tax policies more oriented toward effective economic development. However, in these tax regulation processes, taking into consideration governmentwide, the concentration of tax capacity remains in the hands of a federal or centralizing government, restricting that capacity (Sobarzo, 2006).

Mendoza (2004) emphasizes that the administrative conditioning of a subnational government opens new, clearer, and more efficient organizational structures that are worth analyzing, as the tax phenomena are no less important than the others, and their impact could be considerable.

In Latin America, the diverse tax structures that prevailed for several decades have been adapted for different reasons, which must guarantee an economic and social scope as well as development for each context. "Given that subnational governments usually have different resources to finance their public spending responsibilities, the level of financing and how these different resources are combined will largely determine the outcome of these processes" (Jiménez & Ruelas, 2018).

Latin America has demonstrated a strong tendency toward tax decentralization, whose origin begins from the central government toward its lower levels (Rezende & Veloso, 2012), which have assigned responsibilities that become expenses that must be assumed. It is quite common for subnational governments, because of the decentralization processes, to reallocate a greater portion of their spending responsibilities without the pertinent analysis of the necessary tax capabilities.

Nowadays, in the Latin American context, there are various subnational tax levels, with national, state, and municipal aspects, all of that based on a distributed political-economic organizational approach, leading to the tax capacity of the state being based on dimensional participation, which allows to define a harmonized tax area in a demographic context. Table A1, Appendix A, shows tax levels of the 23 countries that are part of Latin America, demonstrating their subnational distributions.

As Jiménez (2017) states, tax systems in Latin American countries have been globally regressive, mainly due to a tax design biased toward labor income, high evasion, tax benefits, or the great capacity to avoid tax obligations. However, the evolution of Latin American tax systems has undergone changes and reforms over time, compromising their efficiency in every national context.

In this sense, subnational coordination is based on the intention to strengthen an entire country or a given context, whose results must be reflected in economic and social development and growth.

"The central role played by taxes in issues related to income distribution makes the studies on the impact of tax system of utmost importance in any debate on public policies" (Fernández et al., 2016). The relevance of regional taxation is an important element of analysis that must be considered as a contingency to somehow personify an economic region, serving as a point of reference in any contextual analysis. In this sense, it is interesting to address an analysis focused on the commonly known Pacific Alliance, which descent significant variations between its tax systems and, at the same time, is worth understanding as an important economic region, mainly for its member countries: Chile, Colombia, Mexico, and Peru.

This Alliance occurred because of the Presidential Statement on the Pacific Alliance (Cumbre de Lima, 2011). In this key document, the former president of the Republic of Peru, Alan García Pérez, invited the leaders of that time from Chile, Colombia, and Mexico to participate in an Area of Deep Integration, putting together the political, economic, cooperation, and integration factors of the countries. The announcement was a preamble to the formalization of this agreement on June 6, 2012, when the representatives of the countries signed the Pacific Alliance Framework Agreement (PA, 2012), agreeing on the key objectives of this economic agreement.

The same entity defines the Pacific Alliance as an initiative that starts with the need to maximize the economic and development factors through political, economic, cooperation, and integration from the member countries of Chile, Colombia, Mexico, and Peru. It comprises a progressive advance and free circulation of goods, services, capital, and people (PA, 2023). The main objectives are to create an area of deep integration, advance toward the free circulation of resources, and boost member countries' growth, development, and competitiveness to become an economic and trade platform, mainly in the Asia-Pacific region.

Until 2021, this Alliance achieved great results, being some of its biggest achievements: first, the promotion of trade and economy, with more than 180 projects to attract investment, exports, and tourism. Here, 59 observer states have been reached, highlighting Canada and the United States in the American continent; Egypt and Morocco in Africa; Korea, Japan, and the People's Republic of China in Asia; Australia and New Zealand in Oceania and Germany, Norway and Switzerland in Europe (PA, 2021a).

Secondly, 92% of the goods purchased between the member countries were duty-free, still falling short to the expected goal of all goods traded between them being free of duties by 2030. Moreover, the Pacific Alliance includes candidates for Associate States to Australia, Canada, Korea, Ecuador, New Zealand, and Singapore (PA, 2021a).

Lastly, it sought to boost and consolidate the results that the economic Alliance has generated to date. The Strategic Vision was signed in 2018 to consolidate this mechanism as "a more integrated, global, and connected citizen-oriented Alliance" (PA, 2021b). This new vision aims to achieve a sustainable trade bloc with a more competitive, efficient, and productive market, a digitally connected and more communicated population, and free circulation of people. Table A2, Appendix A, shows details regarding each of the member countries.

There is limited direct research specifically addressing the tax capacity of local governments in the countries of the Pacific Alliance. However, some relevant insights can be inferred from broader studies on fiscal policies and local government capacities in these regions. Some studies have focused on understanding the Pacific Alliance through its subnational governments from different analytical perspectives, such as tax pressure and investment (Brito & Iglesias, 2018), fiscal adjustments in local governments in Colombia (Jaimes, 2020), and governance capacity (Gasca & Delgado, 2023). However, none have specifically addressed the topic of tax collection at the subnational government level.

Thus, this study aims to examine the tax behavior of each member country of the Pacific Alliance, focusing on their subnational governments, to understand the coordinated functioning that should prevail in any strategic bloc aimed at achieving comprehensive development.

## 2. METHODS

A quantitative methodology with a longitudinal explanatory approach was used, based on the tax revenue collected for each member country of the Pacific Alliance (Chile, Colombia, Mexico, and Peru) in 1990, 2000, 2010, 2015, 2020, and 2021 referencing the revenue statistics published by the Organization for Economic Cooperation and Development (OECD) on Latin American and the Caribbean in 2022.

Then, for each country, its local currency was converted into US dollars relative to the collection amounts of its tax revenues to identify the trend of its collection capacity in an exploratory statistical analysis. With this, it was possible to determine the ratio of tax revenues to total revenues, tax dependency ratio, to identify the country with the higher ratio as part of the explanatory analysis. Along with this, the study compared collection trends, highlighting that Mexico is the country that has had a high subnational distributive level during the period analyzed as part of its tax system.

Finally, to find out if there are similarities between the countries and their subnational distribution, a two-factor ANOVA analysis was carried out. The paper verified the existence of significant differences between these four countries and sought to identify one homogeneous group based on a robust generalization of the Welch Test and explain how the criteria of subnational tax distribution in each country contribute to strengthening tax systems as part of the Pacific Alliance.

# 3. RESULTS

Table 1 shows the data referring to the amounts collected for the years of study by each member country of the Pacific Alliance. A descriptive analysis reveals that Mexico has higher levels of tax revenue collection compared with other countries. A possible element to consider is a territorial extension in comparison with Chile, Colombia, and Peru, noting that the latter has been below collection levels. However, to identify the behavior of tax collection between these countries, it was more than necessary to carry out an in-depth data

| Country  | 1990      | 2000      | 2010       | 2015       | 2020       | 2021       |
|----------|-----------|-----------|------------|------------|------------|------------|
| Chile    | 4,772.88  | 12,682.35 | 40,719.30  | 42,313.89  | 49,782.56  | 56,570.25  |
| Colombia | 3,717.37  | 8,812.11  | 34,891.36  | 36,959.60  | 38,095.54  | 40,748.93  |
| Mexico   | 26,939.26 | 60,532.31 | 101,797.41 | 136,475.95 | 167,489.82 | 173,850.96 |
| Peru     | 1,176.04  | 22,969.17 | 22,969.17  | 26,410.07  | 25,715.79  | 35,073.31  |

#### **Table 1.** Amount of tax revenue collected by the member countries of the Pacific Alliance

*Note:* Local currency to dollar exchange rates in 1990, 2000, 2010, 2015, 2021, and 2021 were, respectively: Chile (Chilean peso) USD 336, USD 572.68, USD 468.37, USD 707.34, USD 711.24 and USD 850.25; Colombia (Colombian peso) USD 507.33, USD 2,229.18, USD 1913.18, USD 3,149.47, USD 3,432.50 and USD 3,981.16; Mexico (Mexican peso) USD 2.94, USD 9.60, USD 12.38, USD 17.33, USD 19.93, USD 20.51; Peru (Peruvian sol) USD 0.50, USD 0.28, USD 0.35, USD 0.29, USD 0.27, USD 0.25.

**Table 2.** Calculation of the subnational tax dependency ratio of the member countries of the Pacific

 Alliance

| Country  | 1990   | 2000   | 2010   | 2015   | 2020   | 2021   |
|----------|--------|--------|--------|--------|--------|--------|
| Chile    | 0.0722 | 0.0896 | 0.0846 | 0.0944 | 0.0935 | 0.0888 |
| Colombia | 0.1788 | 0.1707 | 0.1764 | 0.1782 | 0.1672 | 0.1672 |
| Mexico   | 0.0495 | 0.0496 | 0.0448 | 0.0551 | 0.0604 | 0.0611 |
| Peru     | 0.0578 | 0.0501 | 0.0528 | 0.0545 | 0.0540 | 0.0551 |

*Note:* The subnational collection percentage of every country was: Chile 10.60%, Colombia 19.80%, Mexico 7.40%, and Peru 6.20%.

study to understand the behavior of these Latin American tax systems. Table 1 shows the collection levels each country has contributed to the Alliance, while Mexico maintains a high tendency in comparison to the rest of the countries.

Table 2 shows that Colombia has a higher average ratio than the other countries (0.1735) compared to Chile (0.09), Mexico (0.05), and Peru (0.05). These results helped to verify the importance of the tax structure of each national context exerting at the subnational level as part of their economies.

However, the degree of participation that each country can reach should strengthen the collaborative ties that, as a Latin American alliance, must prevail, where the tax aspect and the strengthening of its subnational treasuries must be known to take strategic actions for the benefit of the Pacific Alliance and its collaboration ties in its markets.

Source: Compiled by the authors using OECD et al. (2022) data.

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Nonetheless, Mexico has managed to maintain a high tendency to collect subnational tax revenues, which can be justified by its territorial extension and distribution structure, with the distribution

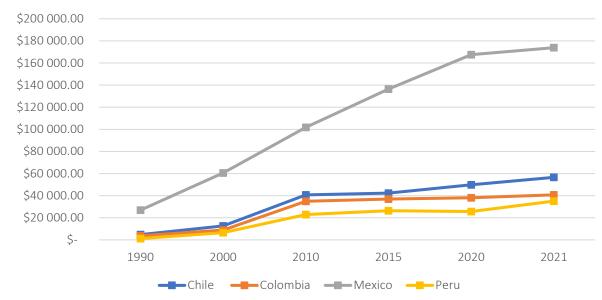


Figure 1. Trend of tax revenue collection by the member countries of the Pacific Alliance

| Factor    | Df | Sum Sq  | Mean Seq F | Value | p-value    |
|-----------|----|---------|------------|-------|------------|
| Country   | 3  | 0.05757 | 0.019189   | 548.6 | < 2e-16*** |
| Residuals | 20 | 0.00070 | 0.000035   | -     | -          |

#### Table 3. Determination of statistical p-value of analyzed data

*Note:* The difference in means (diff) marked with an asterisk (\*) indicates statistical significance at the 95% confidence level (p < 0.05, p < 0.05) after adjustment for multiple comparisons (p adj).

#### Table 4. ANOVA analysis

| Country         | diff          | lwr          | upr         | p adj    |
|-----------------|---------------|--------------|-------------|----------|
| Colombia-Chile  | 0.0863166667* | 0.076759952  | 0.09587338  | 0.000000 |
| Mexico-Chile    | -0.0337666667 | -0.043323382 | -0.02420995 | 0.000000 |
| Peru-Chile      | -0.0331333333 | -0.042690048 | -0.02357662 | 0.000000 |
| Mexico-Colombia | -0.1200833333 | -0.129640048 | -0.11052662 | 0.000000 |
| Peru-Colombia   | -0.1194500000 | -0.129006715 | -0.10989328 | 0.000000 |
| Peru-Mexico     | 0.0006333333* | -0.008923382 | -0.01019005 | 0.997658 |

*Note:* The difference in means (diff) marked with an asterisk (\*) indicates statistical significance at the 95% confidence level (p < 0.05; p < 0.05) after adjustment for multiple comparisons (p adj).

of its tax revenues being at the federal, state, and municipal levels. But even though Mexico has similarities in the way it distributes its tax revenues at subnational levels, Chile in regions, provinces, and communes, and Peru in regions, municipalities, and parishes, these last countries show a distribution behavior similar to the Colombian context, as can be seen in Figure 1:

However, to understand the evolution and tax strength that each country exercises in the Pacific Alliance, the main premise was that there are significant differences between these four countries regarding the distribution of tax revenues at subnational levels. To verify this, the use of exploratory statistical techniques resulted in a *p*-value lower than the Alpha of 0.05, thus confirming the aforementioned premise. The levels of probability of error in accepting the non-existence of differences between the collection levels required to obtain a *p*-value greater than the limit of 0.05, an aspect verified in Table 3, opens the chance to analyze the behavior of their variances by country and verify how subnational incomes contribute to strengthening the Pacific Alliance.

Next, a multifactorial analysis of variance (ANOVA) was carried out, identifying two homogeneous groups that explain an almost similar subnational collection and distribution behavior despite the distribution levels of each country. Thus, two groups were identified: Colombia with

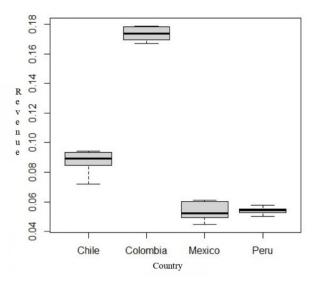


Figure 2. Analysis of collection trends of the Pacific Alliance countries

| Group | Group | Test        | Crit     | Se          | df       |
|-------|-------|-------------|----------|-------------|----------|
| 1     | 2     | 22.5904420  | 3.663990 | 0.003744644 | 5.982317 |
| 1     | 3     | 8.2383433   | 3.769562 | 0.004306084 | 5.549610 |
| 1     | 4     | 13.1527555  | 4.811599 | 0.002662940 | 3.415410 |
| 2     | 3     | 27.3345060  | 3.734009 | 0.004393714 | 5.688167 |
| 2     | 4     | 42.6950972* | 4.849662 | 0.002802430 | 3.372921 |
| 3     | 4     | 0.1279276   | 4.983095 | 0.003517614 | 3.231974 |

Table 5. Welch test analysis

*Note:* The difference in means (diff) marked with an asterisk (\*) indicates statistical significance at the 95% confidence level (p < 0.05; p < 0.05) after adjustment for multiple comparisons (p adj).

Chile (group 1) and Peru with Mexico (group 2), due to a positive load according to the technique and giving evidence of a similar collection tendency between these different Latin American countries.

Finally, a Welch test was used as an advanced nonparametric technique. The results explain that of the two groups identified, only group 2 (Mexico and Peru) reflects similar behavior during the period studied. The connection counts with a result of 42.69, which implies recognizing that the participation of these two countries is parallel and contributing to the strengthening of subnational tax systems as part of a common development interest in several senses.

In general, in the Pacific Alliance operation, the importance that tax systems exert in terms of subnational distribution, Mexico and Peru are the nations strengthening their subnational distribution capacities despite having different situations as sisters' nations, whose degree of incidence and coordinated efforts can become a key element to strengthen the functioning and operability of the Pacific Alliance.

### 4. DISCUSSION

A country's economic effort must contribute to generating significant international bonds that determine the impact of a region and promote collaborative work. In this sense, as a commercial strategy, the Pacific Alliance requires implementing a series of measures allowing establishing more precise actions to consolidate an important economic bloc in Latin America in the medium and long term, starting from different dimensions and with taxation being an element to take into consideration as an aspect that promotes sustained development.

The results show that Chile and Colombia possessed completely different behavior during the analyzed period, with Chile far below the subnational collection level. Part of this must be because Chile only has two levels of subnational tax collection (national and municipal), while Colombia has three (national, departmental, and municipal); therefore, this has an impact on its local finances.

The division of these countries into two groups based on their behavior of subnational tax capacities raises the question that the tax structuring of the countries could be a limitation to defining a symmetry as an economic bloc. Possibly, in the medium or short term, several actions or strategies can be implemented that may be affected by the tax aspects, such as public policies, international transaction mechanisms, identification of circulating capital, and collaborative activities. In general, different areas or bases of incorporation are a powerful tool to establish lines of action according to each topic and thus develop measures to strengthen and consolidate over time, in which taxation determines the expected scope in every sense.

In this sense, an important condition is that the government agencies responsible for subnational tax administration must be seen as efficient and integral structures (Kaldor, 2021). At the same time, they must be properly coordinated and harmonized in work ties with other countries in the search for balanced work. Derived from this, the subnational tax competition between Mexico and Peru reflects a subnational tax collection pattern that, if it is not equal, is at least as similar as possible despite its economic, demographic, and political conditions. Such results show that although Peru only has a national and municipal tax structure, its collaborative efforts based on its tax capacities have a considerable impact even though Mexico has an additional level (federal level), showing similar behaviors in comparison with the other two member countries.

Without a doubt, the strengthening of public treasuries at the highest level of government must trigger every country's economic and tax activity, along with the acquired commitment as part of the strategies implemented as a commercial bloc, such as the Pacific Alliance.

Likewise, it is important to conclude studies regarding the various opportunities available to create valuable worldwide bonds among the members of the Alliance and between these and other countries. As this happens, when the products and services of the Alliance enter into other markets – of greater added value and therefore, more competitive – a better position in the international market will be achieved (Novak & Namihas, 2018).

As previously mentioned, this paper represents an important opportunity to strengthen the bloc by considering an aspect that conditions and determines the positioning in the international market based on the taxation of each member country, viewing an administrative perspective such as the tax capacity at the subnational level as the main agent for tax collection.

Muller Duran (2022) expressed that the effectiveness of policies may differ between countries depending greatly on the phase of economic development they are in. Carrying out analysis such as this one between these four countries assembling an economic bloc is useful as a guide to understanding not only the individual functioning of each country but also to envisage the possible impact that national taxation could have in the short and medium term from the frequent changes that the capacity, autonomy and financial dependence of the subnational levels may undergo.

The Pacific Alliance as an economic strategy must be analyzed through its strengths and weaknesses that may arise over time. The taxation of the member countries is a contingency factor that deserves to be thoroughly analyzed to define collaborative ties more oriented to strengthening both their own economies and that of the bloc. It must be recognized that there are different levels of analysis within this that must be addressed in order to consolidate the Pacific Alliance and contribute to generating potentiality in Latin America that should be worth recognizing as such.

### CONCLUSION

The purpose of this study was to analyze the subnational tax capacity of the Pacific Alliance member countries (Chile, Colombia, Mexico, and Peru) to identify similarities in their tax behaviors and assess the impact on regional collaboration.

The results demonstrate significant differences in the subnational tax behaviors of the member countries. Mexico and Peru exhibit similar trends in subnational tax collection, while Chile and Colombia show distinct behaviors.

The findings indicate that it is essential to promote sustainable development and deeper economic integration in the region. Limited subnational tax autonomy in Latin America affects revenue generation and the efficiency of public service delivery. Second, the Pacific Alliance must implement actions to harmonize subnational tax capacities, contributing to more balanced and sustainable regional economic growth. Third, strengthening subnational tax autonomy is crucial for improving the efficiency of public service provision and promoting more balanced and sustainable development in the region. Finally, differences in the tax structures of the countries may limit the effectiveness of the Pacific Alliance as an economic bloc. Understanding and addressing these differences is crucial to strengthen regional collaboration and development.

### AUTHOR CONTRIBUTIONS

Conceptualization: César Vega Zárate, Leticia Murcia López. Formal analysis: César Vega Zárate, Leticia Murcia López. Investigation: César Vega Zárate, Leticia Murcia López. Methodology: César Vega Zárate, Leticia Murcia López. Validation: César Vega Zárate, Leticia Murcia López. Writing – original draft: César Vega Zárate, Leticia Murcia López. Writing – review & editing: César Vega Zárate, Leticia Murcia López.

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# **APPENDIX A**

### Table A1. Tax levels of Latin American countries

| Source: Compiled by the authors using the information from the Inter-American Center of Tax Admini | strations. |
|--|------------|
|--|------------|

| Country            | Subnational tax distribution          |  |  |
|--------------------|---------------------------------------|--|--|
| Argentina          | National, provincial, and municipal   |  |  |
| Belize             | National and local                    |  |  |
| Bolivia            | National, departmental, and municipal |  |  |
| Brazil             | Federal, state, and municipal         |  |  |
| Chile              | National and municipal                |  |  |
| Colombia           | National, departmental, and municipal |  |  |
| Costa Rica         | National and local                    |  |  |
| Cuba               | National and local                    |  |  |
| Ecuador            | National and local                    |  |  |
| El Salvador        | National and local                    |  |  |
| Guatemala          | National and municipal                |  |  |
| Haiti              | National and local                    |  |  |
| Honduras           | National and municipal                |  |  |
| Jamaica            | National and municipal                |  |  |
| Mexico             | Federal, state, and municipal         |  |  |
| Nicaragua          | National and municipal                |  |  |
| Panama             | National and municipal                |  |  |
| Paraguay           | National and municipal                |  |  |
| Peru               | National and municipal                |  |  |
| Dominican Republic | National and municipal                |  |  |
| Trinidad & Tobago  | National and municipal                |  |  |
| Uruguay            | National and municipal                |  |  |
| Venezuela          | National and municipal                |  |  |

### Table A2. Tax considerations of the members of the Pacific Alliance

| Member country | Important tax considerations  |
|----------------|---|
| Chile          | A unitary state with three levels of government, 16 regions are divided into 56 provinces, which in turn are divided into 346 communes; the Regional Development National Fund (RDNF) was designated to direct resources toward the most populated and poorest regions (ECLAC, 2022). Through the Treasury Department, the state has the mission to direct public finances (MinHaciendaCl, 2020). The mission of the Treasury Department is to efficiently manage public resources through a modern state at the service of citizens, creating stability, transparency, and competitiveness in an internationally integrated economy that promotes sustainable and inclusive growth. The objectives of the institution include conducting tax policy, reducing the volatility of the economy, increasing potential growth through public and private investment, ensuring a competitive, efficient, stable, transparent and inclusive financial system, bringing the economy closer to people and with this promote an efficient, transparent, inclusive management of the resources from the public sector (MinHaciendaCl, 2020).  |
| Colombia       | The Political Constitution of the Republic of Colombia describes the country as a "unitary and decentralized republic, with autonomy regarding its territorial organization" (CPRC, 1991).<br>It is characterized for being one of the most decentralized countries at a regional level, and its levels of government include 32 departments and the Capital District (intermediate level) and 1100 municipalities, 9 special districts, 19 non-municipalized areas (municipal level) (ECLAC, 2022).<br>In 2001, the General System of Participations of Departments, Districts, and Municipalities (GSP) was consolidated to rationalize transfers, separate them from the central government's current income, and regulate decentralization.<br>The organization in charge of carrying out Colombia's economic policies is the Treasury Department and Public Credit (MinHaciendaCo, 2019). Its main objective is to define, formulate, and execute general plans, programs, and projects related to the country's economic policy; furthermore, it regulates fiscal, tax, customs, public credit, budget, treasury, cooperative, financial, exchange, monetary, and credit matters. |
| Mexico         | The United Mexican States is a democratic republic, which consists of 32 federative entities (intermediate level)<br>or states and 2470 municipalities (municipal level). It has a collection at the federal level, with the control of<br>85% of the income from the public sector (ECLAC, 2022).<br>The organization in charge of the public finances of the nation is the Treasury Department and Public Credit<br>(SHCP, 2023). Its mission is to propose, direct, and control the politics of the Federal Government in financial,<br>fiscal, expenditure, income, and public debt matters, consolidate a country that shows signs of optimal,<br>equitable, inclusive, and sustainable economic growth, which improves the wellbeing of every Mexican.  |

| Table A2 (cont.). | Tax considerations of the members of the Pacific Alliance |
|-------------------|---|
|-------------------|---|

| Member country | Important tax considerations  |
|----------------|---|
| Peru           | It is constituted as a unitary, representative, and decentralized republic. The government is divided into the intermediate level (26 regions or departments), municipal level (1874 municipalities, districts, and provinces), and parish level (816). It currently has the competitive fund (Fund for the Promotion of Regional and Local Public Investment (FONIPREL)) and the Program of Incentives for the Improvement of Municipal Management (PI) to manage public investment projects (ECLAC, 2022). The Ministry of Economy and Finance from Peru (MEFP, 2023) is responsible for "harmonizing the economic and financial policies, through transparency and fiscal responsibility, contributing to the sustained economic growth of the country." The objectives that stand out are consolidating fiscal balance and sustainability, increasing the coverage and efficiency of the financial markets, and improving the stability level of public revenues. |