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"Corporate tax collection in times of Covid-19 pandemic: An analysis of the Peruvian economy"

AUTHORS	Ana Leyla Yupanqui-Castillo (ib) Katarzyna Werner-Masters (ib) Franklin Cordova-Buiza (ib) R				
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Ana Leyla Yupanqui-Castillo, B.Sc., Business Faculty, Universidad Privada del Norte [Northern Private University], Peru.

Katarzyna Werner-Masters, Ph.D., Department of Finance and Economics, Manchester Metropolitan University, United Kingdom.

Franklin Cordova-Buiza, Ph.D., Department of Research, Innovation and Social Responsibility, Universidad Privada del Norte [Northern Private University], Peru. (Corresponding author)

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Ana Leyla Yupanqui-Castillo (Peru), Katarzyna Werner-Masters (United Kingdom), Franklin Cordova-Buiza (Peru)

CORPORATE TAX COLLECTION IN TIMES OF COVID-19 PANDEMIC: AN ANALYSIS OF THE PERUVIAN ECONOMY

Abstract

Tax collection is a source of financing expenses for governments, including the mitigation of the social and economic impacts of diverse disruptions. This applies to Peru, where the amount of corporate tax collected during the Covid-19 pandemic showed a notable variation. This study aims to analyze the impact of various tax management initiatives of the Peruvian government on tax collection during the pandemic from 2019 to 2021. The methodology employs a quantitative approach with a non-experimental research design and longitudinal measurement. Documentary analysis was applied to examine data composed of annual statistical reports relevant to the tax administration organization in Peru, videos, documentaries, conferences, and information related to tax collection. The findings clearly show a fiscal slowdown in 2020 as a consequence of the pandemic; however, considerable growth in tax revenues across different tax regimes, geographic areas of the country, economic sectors, and categories of different taxes collected were reported in 2021. This outcome results from the implementation of various fiscal tax relief measures in the early stages of the pandemic, with their effect being observed in 2021. Thus, it is argued that these measures contributed to the reactivation of the business economy in Peru, improving the country's economic situation.

Keywords Covid-19, fiscal policy, government, Peru, taxes

JEL Classification H25, H71

INTRODUCTION

The outbreak of the Covid-19 pandemic had a widespread economic and social impact. Among many aspects of governmental activities, it affected the collection of taxes in both developed and developing economies (Huaman-Ñope et al., 2023; Ballout et al., 2023; Gregory & Ndu, 2023). As a result, various countries around the world have introduced measures that would invigorate the economic activity put on halt by the sudden outbreak of the pandemic, including those that would prevent tax revenue from falling drastically (Arce-Cruz et al., 2023; Tang et al., 2023). This is important since taxes, and in particular business tax, is one of the main sources of financing government spending and debts (Mayuri-Ramos et al., 2023; Okunogbe & Santoro, 2023). The relevance of introducing the measures facilitating tax collection during the crisis was even greater for Latin American countries, where tax collection in normal circumstances has been reported as less effective compared to developed economies (Fenochietto & Pessino, 2010; Tulcanaza-Prieto & Morocho-Cayamcela, 2021). This is also the case because developing countries are usually more harmed by economic downturns struggling to sustain universal access to basic goods and services in their populations (Bergolo et al., 2023).

One of the countries that introduced specific fiscal measures in an attempt to maintain the level of tax collection, and thus to reduce its economy's vulnerability to Covid-19, is Peru. Specifically, the Peruvian government implemented different business tax management strategies leading to this country's highest tax-to-GDP ratio in 2022 (OECD, 2023).

1. LITERATURE REVIEW

A particular view of the process of tax collection is proposed by Altamirano (2012), who sees it as the contribution that society makes to the state in order to equip it with economic resources necessary to fulfill its intended purpose and meet its citizens' needs. Colao (2015) suggested a different outcome-driven definition of taxation: tax collection is a specific administrative task that equips the state with resources to fund its expenses. Similarly, Acosta (2020) and Caldeira et al. (2023) claimed that it is an exclusive power of the tax administration to collect taxes. This process might be voluntary and is governed by appropriate legislation. Indeed, Carbonara et al. (2024) and Ramirez and Nolazco (2020) support this view, maintaining that in almost all countries in the world, most of the money necessary to cover public spending is collected through the tax system. Accordingly, Hindriks and Myles (2012) and Dourado et al. (2024) note that public spending is a key element in a country's development and ensures the provision of the basic services that its citizens require.

However, the Organisation for Economic Cooperation and Development reports that tax collection in Latin American countries continues to be low and below the level corresponding to these countries' degree of economic development (OECD, 2022). This suggests low levels of tax effort (Fenochietto & Pessino, 2010). The main reason for the low tax effectiveness in Latin America is the limited capacity of the countries' tax administrations to generate income through tax collection driven by low institutional quality and a high level of informal economy and tax evasion (Mayoral & Uribe, 2010; Aizenman et al., 2019; Sepulveda & Martinez-Vazquez, 2012).

The director of the Inter-American Center for Tax Administration states that the current economic situation in Latin America is indeed very complicated due to a series of difficulties caused by political uncertainty and institutional inconsistency (Roca, 2008). Moreover, Savitska et al. (2022) and

Aqel et al. (2024) highlight the need for fiscal measures to support citizens with an intention to help countries recover their levels of economic activity as well as address the issues of high inflation and unemployment. Likewise, Celikay (2020) points to taxes as the most valuable resource of the state that can increase fiscal pressure by expanding the existing tax rates or establishing new levies. In contrast, Night and Bananuka (2020) claim that a nation's capacity for development is influenced by the citizens' voluntary compliance with fiscal obligations.

The latter suggestion seems to be contradicted by the evidence coming from Mexico, where the economic recovery rate is one of the lowest because the obligation to pay taxes is widely ignored by individuals and companies due to a widespread corruption in the allocation and application of financial resources (Delfin-Ortega et al., 2024; Flores-Guajardo et al., 2021).

Similarly, using observation and application of surveys, Castilla et al. (2021), focusing on the tax behavior of merchants in the Colombian public market sector, revealed that many of them evade taxes and employ various maneuvers to avoid tax payments. They generally do so because of the lack of appropriate tax culture and the ignorance of the benefits that can be acquired by paying taxes.

Estévez and Rocafuerte (2018) investigate the tax behavior in the province of Santa Elena in Ecuador for the period 2011–2015. They further support the importance of an adequate tax culture. Specifically, they indicate that appropriate community training focusing on tax issues helps increase tax awareness, leading to a higher amount of tax revenue collected. This is important since it enables the state to finance improvements in the provision of health and educational services, amongst other things. Indeed, Rodriguez et al. (2019) show that poor planning and low training, as well as the informality of business tax collection, lead to lower tax revenue, adversely affecting microenterprises in Manta, Ecuador.

Fernández et al. (2020) investigated why taxpayers in Ecuadorian cities fail to comply with the rules established by the tax administration, particularly by performing informal trade activities. Using a qualitative approach involving a large population of informal traders, they establish that the traders have limited information and knowledge about paying taxes and its benefits, and they generally lack the tax culture.

U. Urgilés and C. Urgilés (2017) go a step further and analyze the evolution of the growth of tax awareness and its link with economic growth and tax revenue in Ecuador. They find that tax collection decreases due to economic decline, poor management of taxes by the relevant administration, and the lack of tax reforms. This result, particularly the latter two points, emphasizes the importance of appropriate tax management strategies for tax collection and, in turn, a country's economic growth.

Various efforts to design appropriate tax collection strategies have been undertaken, recognizing that tax collection depends on an individual's understanding, response, and behavior with respect to their legal duties arising from the performance of income-generating activities (Ruiz, 2017). For instance, Varela et al. (2020) suggested a stochastic model that helps identify possible tax evaders of the value added tax (VAT) in Colombia. They stressed that the tax administrations of countries must identify alternative management strategies that can increase taxpayer compliance.

Gonzales (2018) researched tactics to increase tax revenues and taxpayers' willingness to pay in Peru. He emphasizes the need for increasing communication with and the awareness of tax amongst the public. Analogously, Ramos (2018) sought for strategies to improve the tax culture and reduce tax evasion of companies in Peru. Similar to other studies, he establishes that the benefits obtained by microenterprises at the time of paying taxes are tiny, which translates into a poor tax culture and a high rate of tax evasion.

Rosas and Castro (2016) and Kaldor (2021) have also studied the ways in which tax administration can overcome the negative outcomes of tax evasion. They observed that tax evasion adversely affects the state's ability to maintain a healthy and balanced budget. While Rosas and Castro (2016) propose and validate a special voluntary tax compliance training aimed at increasing taxpayers' awareness of their obligation in Ferreñafe, Peru, Kaldor (2021) calls for more educational initiatives informing citizens of different types of taxes and their benefits.

Lahura and Castillo (2018) acknowledge the positive relationship between taxes and economic growth. The study further identified that in Peru, the lack of commitment to tax collection is high, which leads to tax evasion and increased sanctioning of non-payers. Since, like in other Latin American countries (e.g., Ecuador, as claimed by Ibarra et al. (2022)), the Peruvian state's budget comes from tax collection (Barrutia et al., 2021), the pandemic generated one of the biggest crises and forced it to decree strategies for tax collection. This was undertaken in coordination with the Superintendencia Nacional de Administración Tributaria (SUNAT) in order to respond to the fiscal shortage imposed as a consequence of economic stagnation, mandatory isolation, and expenses induced by the pandemic. Although these measures were designed to maintain the usual tax collection rate, the pandemic inevitably led to a significant variation in the amount of tax revenue collected.

Following the literature review, this study aims to analyze the impact of various tax management initiatives of the Peruvian government on tax collection during the pandemic, from 2019 to 2021.

2. METHODS

The methodology employs a quantitative approach, non-experimental research design, and longitudinal measurement. The data were collected from statistical reports on the annual revenue published by SUNAT for 2019, 2020, and 2021, as well as from the Central Reserve Bank of Peru and the Economic Commission for Latin America and Caribbean, with a key variable being tax collection.

Documentary analysis was applied to verify the statistical reports issued by SUNAT. Once the verification of the data for the three different periods (2019, 2020, and 2021) was completed, the information obtained was filtered by identifying the most relevant data for each year that would permit

the analysis of the effect of the pandemic on the tax collection in Peru. Following this procedure, the relevant data were captured by tables, which facilitated the comparison of results across the sample period of 2019–2021. Appropriate graphs have also been constructed to highlight the potential variation in the annual results.

A rationale for the application of documentary analysis lies in its precision. This technique is favored by Córdova (2018), who explains that the synthesis of the data obtained from the review of various documents facilitates the understanding and processing of the analyzed variable, in this case tax collection.

Regarding the analysis of statistical data, a basic descriptive analysis was conducted in Excel, which helps compare the variation in tax collection in each period with reference to the four dimensions considered in this study, namely tax regimes, economic sectors, geographical areas, and main categories of taxes. Subsequently, the results have been presented using comparative tables and bar graphs to facilitate their interpretation.

The ethicality of the research has been considered, and care has been taken to ensure that its prerequisites have been met, starting with an appropriate acknowledgment of different contributions to the debate through correct referencing. Moreover, the confidentiality of the government information was respected, and only publicly available data were used. As such, the sources cited in the present study are official government websites, reports, as well as recognized and acclaimed magazines. Thus, the information and data shared as part of this study are reliable and authentic, with full consideration given to the ethical process of their analysis, interpretation, and presentation.

3. RESULTS

3.1. Collection of company taxes in different tax regimes

This study analyzed statistical data on the collection of corporate income tax corresponding to the pandemic period in the four tax regimes, as reported by SUNAT. The amount of corporate income tax collected in 2020 was lower than in 2019, at the beginning of the pandemic, for all tax regimes. On the contrary, in 2021, at the end of the pandemic, there was an upward trend in the amount of tax collected when the confinement measures were lifted, and the policy was active for more than one year. This result holds true despite the high level of variation in the total amount of tax collected in each regime.

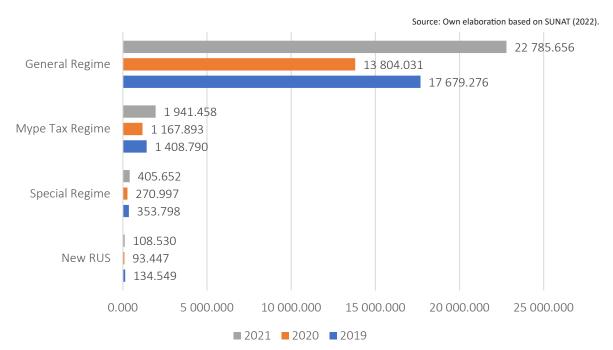


Figure 1. Tax collection in the different regimes

Figure 1 emphasizes these findings, contrasting the tax revenue in each regime for every year considered in the sample (2019, 2020, and 2021). All the numerical values are given in millions of soles.

It is evident that the tax revenue collected in 2020 is lower in each regime than its levels in 2021 or even 2019. The reason is the lag associated with the impact of the implementation of various fiscal measures by the Peruvian government in response to the outbreak of the pandemic. This can be particularly seen in 2021, which, being the last stage of the pandemic and the period when the policies have already been in place, shows a clear growth in the tax revenue compared to 2020.

In addition, the introduced policy measures led to a greater amount of tax collected in 2021 compared to 2019, where hardly any consequences of the pandemic have yet been observed. This is the case for all but the New Simplified Single Regime, for which the amount of tax collected in 2021 remains lower than in 2019.

Given this clear pattern, it is important to examine whether the variation in the amount of tax collected is purely driven by the specific year within a sample or it is due to different tax regimes. To answer this question, the study further analyzed the tax collection for the same sample period allowing for a variation in economic sectors, geographical areas of Peru, and the category of tax collected.

3.2. Variation in tax collection across different economic sectors

The paper discusses how the revenues from tax collection in the period of 2019–2021 change given different economic sectors. The sectors include agriculture, fishing, mining and hydrocarbons, manufacturing, construction, commerce, and other services.

A marginal growth in tax revenue from the agricultural sector was achieved in 2020, induced by an increase in the supply of essential products. The growth rate increases by 3.2% in 2021 through a further expansion in the agricultural and livestock subsectors that enable a further increase in production (INEI, 2022), thus promoting the recovery of the countryside and the supply of food to the markets.

In terms of the fishing sector, the amount of tax collected in 2019 is relatively high, mostly due to anchovy fishing. However, in 2020, this sector reported a major drop in tax revenue despite the expectation to increase in response to a higher charge for fishing rights imposed by the government for every ton of fish extracted from the Peruvian Sea. In contrast, the revenue increased in 2021, which could be explained by either

- (i) the availability of anchovy landings aimed at the increase of Indirect Human Consumption (IHC); or
- (ii) the increase in the value of the landing of resources destined for Direct Human Consumption (DHC), or a combination of these two effects.

Similarly, to the fishing sector, the mining and hydrocarbons sector reduces its tax contribution in 2020 due to internal and external factors, mainly the outbreak and spread of Covid-19. Nonetheless, the mining sector managed to quickly recover, which was facilitated by an increase in the international prices of metals, mainly copper, of which Peru is the second largest producer in the world. Subsequently, this also enables the Peruvian economy to surpass its record export in 2021, with a value of nearly USD 62 bln.

A similar trend is seen in the manufacturing sector, where the contribution to tax revenue drops in 2020, with the pandemic at its peak. This is generated by lower levels of activity in primary and non-primary sectors induced by restrictions put in place, in particular, the confinement measures. This situation improved in 2021 when an increase of 17.9% was recorded in tax revenue from manufacturing due to the good performance in the recovery of industrial exports. More importantly, the outcome of tax collection for 2021 exceeded the one for 2019.

The tax collection from the construction sector also dropped by 13.87% in 2020 due to the effects of the Covid-19 pandemic. Specifically, the restrictions imposed during the pandemic led to a suspension of many construction activities, which reduced the internal consumption of cement due to the negligent physical progress of public works.

This situation improved by the end of 2021 when an increase in the physical progress of public works culminated in a growth of 35% compared to 2020.

The trend is replicated in the commerce sector, with a fall of 15.98% in the tax revenue collected in 2020. Similarly, to other sectors, this fall is induced by lower activity in wholesale and retail trade affected by the pandemic. Indeed, conglomerates and shopping centers, such as Gamarra, report losses of more than S/3,000 million due to the economic crisis (IPE, 2020).

Finally, the tax collection from other services, including the generation of electrical energy and water, tourism and hoteling, transportation, telecommunications, financial intermediation, public administration, social security, education, and health, follows the identified trend. As previously noted, the extreme measures of total or partial confinement significantly affect the bulk of the services sector, leading to a deep crisis in 2020. In

2021, however, this sector of the Peruvian economy grew anew, mainly due to a greater economic activity reported for accommodation and restaurants, which benefit from the reduction of the curfew and the expansion of capacity, as reported by the Peruvian Central Reserve Bank (BCRP, 2022).

Overall, the collection of tax revenue across different economic sectors resembles that of tax collection across different tax regimes, with a drop in the amount collected in 2020 and a quick recovery in 2021, where higher levels of tax collection have been achieved not only compared to 2020, but also to 2019.

3.3. Tax collection by geographical areas

The study further analyzes how the tax collection varies by different geographical areas of Peru in the period of 2019–2021. All numerical figures corresponding to the amount of tax are expressed in the Peruvian currency, soles.

Table 1. Tax collection by geographical areas of Peru

Source: Own elaboration based on SUNAT (2022).

Geographical areas	Population	Year 2019	Population	Year 2020	Population	Year 2021
Amazonas	423,863	49,286,259	426,806	49,201,581	428,512	69,802,524
Ancash	1,169,522	472,805,747	1,180,638	437,394,174	1,188,391	565,677,477
Apurímac	429,587	113,013,961	430,736	100,195,432	430,609	172,012,989
Arequipa	1,464,638	2,531,313,792	1,497,438	2,190,677,013	1,526,669	4,357,839,857
Ayacucho	664,494	143,378,497	668,213	121,434,190	669,979	186,639,349
Cajamarca	1,447,891	348,550,623	1,453,711	279,856,060	1,455,245	447,972,699
Cusco	1,340,457	841,471,866	1,357,075	612,815,442	1,369,932	1,135,465,823
Huancavelica	371,260	40,566,792	365,317	39,989,854	358,356	57,244,408
Huánuco	759,851	131,719,737	760,267	103,809,242	758,416	155,236,681
lca	950,100	883,150,293	975,182	795,391,322	998,144	1,119,005,400
Junín	1,350,021	558,558,820	1,361,467	586,510,496	1,369,003	633,189,651
La Libertad	1,979,901	1,844,337,325	2,016,771	1,567,489,110	2,048,492	2,398,245,177
Lambayeque	1,292,105	601,047,510	1,310,785	528,126,818	1,325,912	753,596,980
Lima	11,521,651.00	86,300,915,792	11,758,324.00	73,067,304,453	11,965,930.00	102,436,158,460
Loreto	1,015,212	301,289,070	1,027,559	250,354,490	1,037,055	370,557,264
Madre de Dios	167,674	85,009,796	173,811	74,581,609	179,688	114,163,164
Moquegua	189,781	137,250,008	192,740	105,874,296	195,185	172,540,057
Pasco	272,157	97,387,393	271,904	75,185,664	270,842	116,751,823
Piura	2,013,517	1,318,667,490	2,047,954	1,105,327,459	2,077,039	1,632,979,126
Puno	1,239,022	316,261,991	1,237,997	238,358,029	1,233,277	365,947,560
San Martín	884,283	238,794,275	899,648	233,172,864	912,674	347,045,077
Tacna	363,205	206,066,694	370,974	165,972,637	377,842	227,094,317
Tumbes	246,699	77,347,659	251,521	62,610,248	255,712	80,305,966
Ucayali	574,509	664,199,259	589,110	624,037,386	602,400	859,829,071
Total	32,131,400	98,302,390,650	32,625,948	83,415,669,869	33,035,304	118,775,300,901

According to a report released by Perucámaras (2020), tax revenue collected in 2019 increases compared with the previous year by 8.1%. The majority of the income collected that year, specifically 86.9%, was collected in Lima, where most of the Peruvian companies are registered. The capital corresponding to these companies represents 45.7% of the national Gross Domestic Product (GDP) and constitutes more than a third of the total employed Economically Active Population (EAP).

At the regional level, Arequipa concentrates 3.6% of total tax revenue, with La Libertad (1.7%) and Piura (1.3%) in the second and third positions, respectively. In contrast, Huancavelica is the region with the least amount of tax revenue collected, which can be attributed to the informality that characterizes the economic activity in this region. The IPE estimates that 97.2% of the productive units in this region are informal (IPE, 2020). The regions of Amazonas and Tumbles are also displaying a low tax collection, an outcome induced by the fact that the majority of taxpayers in these regions are exempt from paying VAT.

As further shown in Table 1, the revenue from tax collection in 2020 decreases compared to 2019. Specifically, it falls by 1.4% in terms of GDP due to the implementation of temporary spending and income measures to mitigate the impact of Covid-19.

Consistent with the pattern shown for different sectors and tax regimes, income tax in 2021 increased compared to 2020, reaching 21.1% of GDP, with tax contributions equivalent to 16.5% and the remaining 4.6% attributed to non-tax contributions.

3.4. Tax collection according to main tax categories

The amount of income tax paid in 2020 falls compared with 2019. The 2020 tax collection can be mostly attributed to the income from businesses due to the monthly advance payments of the General Regime and MYPE Regime and the regularization components of the 2019 financial year (both paid in 2020). Consistently with the previously observed trend, the amount of income tax collected in 2021 increases compared to 2020 in line with the recovery of economic activity.

The collection of general sales tax exhibits a similar pattern to that of the income tax – it decreased in 2020 and rose in 2021. Indeed, in 2020 the economy shrank leading to the implementation of tax relief measures that subsequently led to a decrease in the amount of tax revenue from general sales. In contrast, the VAT collection increases considerably in 2021 mainly due to an increased volume of imports in that year.

Finally, the pandemic led to significantly lower tax revenue from excise tax collection in 2020. This negative effect of the pandemic disappeared in 2021 due to an increase in tax collection from beer, casinos, and the slot machine industry, for which demand rose following the economic recovery and the reopening of a wide variety of consumption activities. Consequently, the behavior of the tax revenue collected by the government from 2019 to 2021 for different types of taxes matches that observed for different tax regimes and economic sectors.

4. DISCUSSION

The study sought to describe the behavior of corporate tax collection according to four tax regimes, including New Simplified Sin gle Regime, Special Income Regime, MYPE Regime, and General Regime, for the period of 2019–2021 in Peru.

The New Simplified Single Regime shows the lowest figure whilst the other three regimes produce higher revenues and are characterized by some variations in tax revenues, still maintaining positive results in the last post-pandemic period (year 2021).

These findings are compatible with Romero et al. (2021), who emphasized that different tax regimes are created to reduce tax evasion, in a sense that each taxpayer can choose a regime depending on the type and size of their business, which, in turn, is associated with obtaining different benefits, such as credits, exemptions, deductions, deferrals, and refunds, among others. Todaro and Smith (2017) further argue that in order to have programs that encourage and allow the formalization of companies, various tax management strategies appropriate to different levels of business income must be used. Moreover, in the context of Latin American economies, Kaldor (2021) argues that the implementation

of educational initiatives that reinforce the national fiscal culture improves a tax system, increasing compliance with fiscal obligations and hence enhancing the country's economic development.

However, to understand the impact that different corporate tax management strategies might have on tax collection, it is noteworthy to distinguish different economic sectors in which the tax revenues are generated. Thus, the present examination also invokes an analysis of tax collection according to different economic sectors, such as agriculture, fishing, mining and hydrocarbons, manufacturing, construction, commerce, and other services. The analysis finds some variation in the tax revenue level across these sectors for the sample period 2019–2021. More importantly, the results for 2021 are positive for all sectors, as induced by various fiscal measures adopted during the pandemic crisis.

These results coincide with the findings of Barrutia et al. (2021) who emphasized that economic growth and tax revenues increase subject to good management of tax administration, which implements appropriate reforms. In addition, the increase in the tax collection for 2021 might be induced by a rise of companies undertaking formal activities, which in turn, has been encouraged by different tax regimes (Rodriguez et al., 2019).

When investigating the variation in tax collection across different geographical areas of Peru, not all regions contribute to tax collection equally, with some of them having marginal contributions. This suggests that in some regions, an impact achieved through an application of specific measures might have been greater than in others. For instance, in the cases of Lima, Arequipa, La Libertad, and Piura, a higher amount of tax revenue is collected compared to other regions, with different factors contributing to this result. Indeed, Rosas and Castro (2016) observe that the various measures provided by the administration, such as a program aimed at tax collection and voluntary tax compliance, frequently do not work as desired due to the lack of or limited tax education and the lack of taxpayers' commitment. This explains why the tax collection might vary between the regions and why some of them do not manage to reach a positive level of tax collection.

The present examination of management strategies for tax collection also entails the analysis of tax revenue generated through different types of main taxes, including the income tax, the general sales tax, and the excise tax. The results show that 2019 yields the lowest tax collection induced by a set of different factors, including the lack of commitment on the taxpayer's part, insufficient monitoring of the established standards, and limited tax education. This finding conforms to the research outcomes obtained in other countries, including Castilla et al. (2021) and Fernández et al. (2020), who identify that the level of tax culture amongst taxpayers is insufficient, leading to their unawareness of the duties and rights corresponding to paying taxes. This is further strengthened by the lack of education about the importance and benefits of tax regulations. This argument is also crucial for 2020, when the Covid-19 pandemic hit Peru the most, thus increasing the importance of tax collection given the numerous restrictions being imposed to control the spread of the virus. Precisely, the collection of tax in this period is crucial, having a significant impact on the economic growth of the country. This finding has been echoed in the study of Ibarra et al. (2022) in Ecuador, who emphasized that tax collection experienced a setback due to confinement and the paralysis of the productive apparatus, which generates the most wealth in a country.

Continuing with the analysis of main taxes, the highest collection in 2021 is restored with S/139,947 mln of the Net Tax Revenue of the Central Government (MEF, 2021). This result was achieved due to various factors. They include the improvement of local and global economic activity that is in line with the increased flexibility of sanitary measures in 2021, the external impulse from the high international prices of metals, and finally, through the actions of the tax administration itself, which controls and collects the payments in this crucial period. This supports the findings by Betts et al. (2021), which indicate that tax collection in 2021 in Peru amounted to almost S/140,000 mln, an amount equivalent to 16.1% of the country's GDP. This rate is the highest in the post-pandemic period. More importantly, this increase in tax revenue is instigated by an increase in domestic demand and the high international prices of metals, mainly copper, of which Peru is the world's second-largest producer.

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Overall, the analysis shows that the initial stage of the pandemic inevitably led to a reduction in business tax income in Peru due to the introduction of confinement measures. However, in its desire to counteract this development and to increase its tax revenue, the Peruvian government made various changes to tax

regulations that ultimately helped regain economic growth in subsequent years. In addition, efforts to address the challenges induced by the Covid-19 pandemic have been made to promote appropriate tax measures by the National Superintendency of Customs and Tax Administration (Huaman, 2021).

CONCLUSION

This study aims to analyze the impact of various tax management initiatives of the Peruvian government on tax collection during the pandemic from 2019 to 2021. The findings suggest that the different regimes introduced by the government had a positive impact on the economic growth of the country for the specified period. Specifically, the collection of tax revenues through different tax regimes and types of main taxes, as well as from different sectors and geographical regions of Peru, showed positive behavior aligned with the introduced fiscal relief measures that sought the reactivation of the business economy to mitigate the effects of the crisis on businesses, companies, and individuals. This is in spite of a dip in the amount of the tax revenue collected in 2020, which was associated with the delay in the effects of policies becoming noticeable. This undesirable outcome disappeared in 2021, when tax collection exceeded that at the beginning of the pandemic, fulfilling the goal of fiscal measures introduced in 2019.

This result is desirable by the Peruvian government, thus justifying the adoption of the various measures implemented to ensure the continuous growth of the economy. More importantly, these results show that adopting fiscal measures is crucial to achieve Peru's economic recovery.

Nonetheless, despite a solid economic growth and the implementation of tax policy reforms, tax collection in Peru remained below the average level of Latin American economies in the 2019–2021 period. This highlights the need for further research looking at the rationale for this outcome. Furthermore, it instigates an interest in the examination of alternative measures that could help Peru reduce the gap between its own tax collection and that of other Latin American economies.

AUTHOR CONTRIBUTIONS

Conceptualization: Ana Leyla Yupanqui-Castillo. Data curation: Ana Leyla Yupanqui-Castillo. Formal analysis: Katarzyna Werner-Masters. Funding acquisition: Franklin Cordova-Buiza.

Investigation: Ana Leyla Yupanqui-Castillo, Franklin Cordova-Buiza, Katarzyna Werner-Masters.

Methodology: Ana Leyla Yupanqui-Castillo. Project administration: Franklin Cordova-Buiza.

Resources: Katarzyna Werner-Masters. Software: Ana Leyla Yupanqui-Castillo. Supervision: Franklin Cordova-Buiza. Validation: Katarzyna Werner-Masters. Visualization: Katarzyna Werner-Masters.

Writing – original draft: Ana Leyla Yupanqui-Castillo, Franklin Cordova-Buiza. Writing – review & editing: Franklin Cordova-Buiza, Katarzyna Werner-Masters.

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