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Abstract

A current problem with Latin American economies is the lack of long-run official statistical data for income shares. Nevertheless, several proposals attempt to present estimations to proxy the evolutionary patterns of income distribution in different countries of the region. This study focuses on the factor income distribution for the Peruvian economy. It aims to show time series for the wage, profit, and mixed-income shares for the period 1942-2019 as reconstructed in Castillo (2015). I also present a brief history of the Peruvian macroeconomic regimes. Hence, the evolution of the wage and profits shares relate to the structural transformations of the Peruvian economy and the impact of economic policy in the distributive cycles. The paper ends with the estimation of a Kaleckian model and evaluates the economic growth regime for different time periods. While the whole 1940-2019 is a wage-led growth regime, economic growth in the Neoliberal era 1990-2019 is profit-led because of Peruvian structural changes and 1990s adjustment policies.

1 Introduction

The question of income distribution has got back to the economic debate. Following the publication of *Capital in the 21st Century* [Piketty (2014)], several researchers have taken up some questions about the effects of income distribution patterns on economic growth.Jones (2015) discusses the notions of within-inequality and between-inequality, and Jonathan D Ostry, Loungani, and Berg (2019) study the consequences of macroeconomic policies and structural reforms on income inequality. Post-Keynesian authors focus on the concept of economic growth regime for its relationship with the functional income distribution and its relevance when evaluating the performance of political economies: Stockhammer and Ederer (2007), Lavoie and Stockhammer (2013), and Palley (2014). Comparative political economists evaluate institutional conditions and growth models to classify varieties of capitalism in Baccaro and Pontusson (2016), and Behringer and Treeck (2021) or to understand contemporary capitalism around the world in Milanovic (2019). Others emphasize the necessity of recasting the study of factor distribution to understand the behavior of the economic structure and the capitalist macrodynamics [Giovannoni (2014)]. Likewise, institutions such as the IMF or the OECD have explored the relationship between income distribution and growth. For example, Jonathan David Ostry, Berg, and Tsangarides (2014) research the distribution and redistribution of income and its effects on economic growth. On the other hand, Cingano (2014) points out that the concentration of income is the cause for the inequality to decrease slowly during economic booms.

The concern on income distribution was a relevant issue for classical economists who pointed out the existence of relationships between aggregate demand, product growth, and the saving-investment process. In the last decades of the 20th century, economists prioritize analyzing the personal distribution of income. However, they neglected that the position of actors in the productive process (owner, rentier, salaried or independent worker) is what mainly determines the distributive outcomes. Post-Keynesian and the heterodox institutionalism update and deepen the perspective of the classical economists by pointing out that the structure of the factor or functional distribution of income affects the growth possibilities of any economy. Other authors point out that high inequality affects the socio-political environment [Figueroa (2010)] and weakens democratic

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politics [Seery and Arendar (2014),Figueroa (1995)].

This paper aims to analyze the evolution in the functional income distribution and its interactions with the dynamics of economic growth in Peru between 1940 and 2019. In the first section, I document the factor income distribution series that Castillo (2015) reconstructs. The obtained time series are the output of the process of merging and overlapping the national accounts created by the Central Reserve Bank of Peru (BCRP), the National Institute of Statistics and Informatics (INEI) and the Ministry of Economics and Finance (formerly named Ministry of Finance and Trade). This section shows the evolution of the wage, profits, and mixed-income shares. Such an empirical outcome contributes to the analysis of economic regimes and makes it possible to determine growth patterns for the Peruvian economy in the last century. In the second section, I sketch a brief history of the macroeconomic policies in Peru. I follow the narrative of **pease** to understand the political character of each government, classify the economic policy orientation, and describe the relations of the State with the business elite.

The third section shows the accounting decomposition of the wage share and the profits share. The accounting decomposition of the wage share produces the average cost of labor, the average productivity of the workforce, and the rate of salaried employment. For decomposing profits share, I correlate such series with the terms of trade index, and the average index for the returns on Equity (ROE). The last section exposes a Post-Keynesian model for classifying the economic growth regime based on the proposal of Naastepad and Storm (2006) and a variation developed by Germán Alarco (2016) and Germán Alarco and Castillo Garcıa (2019). It is a macroeconomic model in which the wage and the profits share are the determinants of the aggregate demand: investment, consumption, savings, and exports. The proxy for the relationship between wage shares and economic growth is an elasticity whose components are the parameters of aggregate demand functions and the propensities to consumption of workers and capitalists for the equation of system representing the aggregate demand [Kaldor (1955), Pasinetti (1962)]. I consider two cases: the long-run period (1942-2019) and two sub-periods cases (1942-1990 and 1990-2019). I use a 3SLS estimation to get the coefficients for the simultaneous equations. Yet, time series for the national accounts are cointegrated. Hence, I also present the results for the GDP to wages elasticity based on the cointegration coefficients for each individual equation to catch up the long-run relationships.

2 Functional income distribution in Peru: basic statistics and the historical process of a political economy

Currently, the National Institute of Statistics and Informatics (INEI) is the institution responsible for publishing the statistics of the functional income distribution of the Peruvian economy. However, the time availability of these time series is constrained to the period 1994-2020. The INEI has not reconstructed any provisional series for intending long-run analyses of the wage, profits, and mixed-income shares. Therefore, the Peruvian studies about income inequality mainly focus on the personal income distribution obtained from the National Household Surveys (ENAHO) that only cover the period 2004-2021. For analyzing economic growth regimes, it is necessary to reconstruct the macroeconomic income data. In that sense, Castillo (2015) provides long-run time series for the factor income shares since 1942. He follows the previous works about the reconstruction of the Peruvian national accounts as Seminario (2015).

Firstly, Castillo (2015) surveys the National Account reports published by the Central Reserve Bank of Peru (BCRP), the Ministry of Economics and Finance (MEF), and the INEI in different periods. Table 1 summarizes the reports and periods that these institutions cover. The main problem to merge this data is the differences on the time series levels because of the different input-output matrices they are based on. Hence, it is necessary to overlap them following the criteria suggested in Pedagua (2009). As a result, Castillo (2015) gets a merged series for the nominal GDP by the income approach. For the wage share, he overlaps and merges the time series for different periods to obtain a long-run series for 1942-2019. The profits share account is a residual after reconstructing the mixed-income share, the fixed capital consumption, and the net income taxes account (aggregate fiscal income minus subsidies). Many difficulties appear regarding the reconstruction of the mixed-income share. For doing this, Castillo (2015) starts by creating the agriculture component of this account. However, that requires correcting the data for the beginning of the forties because agriculture industry accounts were affected by commodity boom

cycles during WWII. Thus, he uses a value-added index for the agriculture industry proposed by Seminario (2015) to correct those observations. Next, the author estimates the non-agriculture component of the mixed-income share. However, there is a lack of time series for this account for 1990-2000. For that reason, he replicates the movements of the urban self-employment income share published by Garcıa (2013).

Figure 1 shows the evolution of the wage share and its tendency as calculated with a Hodrick-Prescott filter. The level of wage share in the Peruvian economy has never overcome the 42% of GDP. The largest share of wages in GDP in the fifties and sixties represents the gains from international economic growth during the Fordist era. During this time, the demand for raw materials expanded and generated economic benefits for the dependent Peruvian economic structure. In the forties, Peru experienced a constrained process of modernization that began in the late thirties: the rural population migrated to the cities, so there was an urbanization boom, it required the improvement of the social security system and working conditions, and the middle class grew. In contrast, losses of wage share occurred as a result of adjustment policies and periods of crisis.

Source	Wage share	Profits share	Mixed-income share
Cuentas Nacionales del Perú 1950-1965, 1950-1967, 1960-1969,1960-1973,1960-1974	1950-1974	1950-1974	1950-1974
Renta Nacional del Perú (1951, 1961)	1942-1961	1942-1961	1942-1961
BCRP Yearly Reports (1983, 1986, 1989, 1990)	1974-1990	1974-1990	1974-1990
Cuentas Nacionales INE (1981)	1970-1981	1970-1981	
Oferta y demanda global 2012 INEI (2013)	1991-2006	1991-2006	
Norberto García (2013)	1990-2010	1990-2010	1990-2010
INEI National Accounts Report (2013-2021)	1990-2019	1990-2019	1990-2019

Table 1: Availability of functional income time series.
Source: BCRP (1951), BCRP (1952), BCRP (1959), BCRP (1962), BCRP (1966), BCRP (1968), BCRP (1970), BCRP (1974), BCRP (1976), BCRP (1984), BCRP (1987), BCRP (1990), BCRP (1991), Garcıa (2013), INE (1980), INE (1981), INE (1990), INEI (2013), INEI (2021), Ministerio de Hacienda y Comercio (1951), Ministerio de Hacienda y Comercio (1959), Ministerio de Hacienda y Comercio (1969).

The first significant fall of the wage share occurred in the 1970s. This down is the consequence of macroeconomic adjustments and the deterioration of the terms of trade. The turning point happened in 1975 when the second phase of the military government applied conservative economic policies. Another relevant drop in the wage share occurred in the latter part of the 1980s when the macroeconomic adjustments that staved off the Latin American debt crisis in Peru happened. In 1987 and 1988, the Peruvian economy faced severe fiscal and monetary imbalances. The situation got worse because of the effects of terrorism and the deterioration of the international economic order. At the beginning of the 1990s, wage share experienced its steepest drop when the government of Fujimori applied the neoliberal policies aiming the adjustment and stabilization of the macroeconomic imbalances. At the end of that decade, the wage share recovered, but it did not reach the highest levels of previous years.

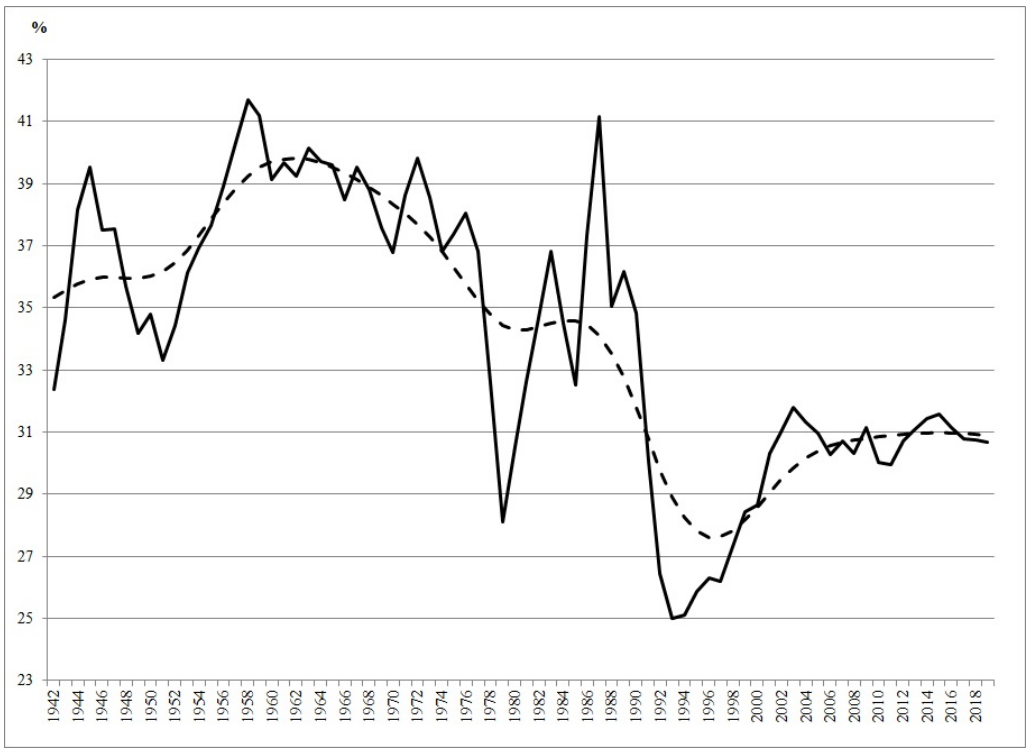

Figure 1: Wage share and Hodrick-Prescott trend (1942-2019)
Source: Central Reserve Bank of Peru (BCRP); National Institute of Statistics and Informatics (INEI); National Institute of Statistics (INE); Economic Commission for Latin America and the Caribbean (ECLAC); and Ministry of Finance and Commerce.

As a result of the increase of urban population in a non-industrialized economy, self-employment income became a significant component of the national product. Nevertheless, the share of mixed-income diminishes among the fifties and sixties because the performance of the agriculture industry deteriorates. In Figure 2, the trend of this income moves from 35% to 20%. The mixed-income share stabilized after 1974 and oscillates around 20% and 25%. The causes for that drastic fall include the migration process from rural areas, the urbanization process, the growth of tertiary sectors, and the deterioration of the terms of trade that negatively affected agriculture.

In Figure 3, the trend of the agriculture share of the mixed-income moves downward until 1972. The non-agriculture component remains constant as the urban self-employment share in GDP does the same (micro-business owners and the informal workers). In contrast, Figure 4 shows that profits share has been trending upwards. From 1944 to 1979, the profits share increased by 24%. During the eighties, gross profits showed a diminishing pattern as a result of the accumulated effect of the Oil Crisis (1979), the Peruvian Debt crisis, the climate effects of El Niño (1983), and the Hyper-inflation crisis (1988). Profits recovered their positive pattern after the economic reforms of the nineties. However, profits share has maintained at under the 40%. Profits share cycles also reflect the improvement and deterioration of the external terms of trade. Commodity prices booms and busts determined the evolution of the profits share. Most Peruvian capital has concentrated in the extractive sector (mining and hydrocarbons). Profits also improve during export booms like the one in 2000-2012.

3 A brief history of the Peruvian macroeconomic policies (1942-2019)

For a general view on the evolution of the factor income distribution, it is necessary to identify the way the economic policy of successive Peruvian governments was oriented. That also requires to grasp the character of the socio-political relations between the State and the business elite. I take both the periodization and characterization of the State established by Pease and Romero (2013)

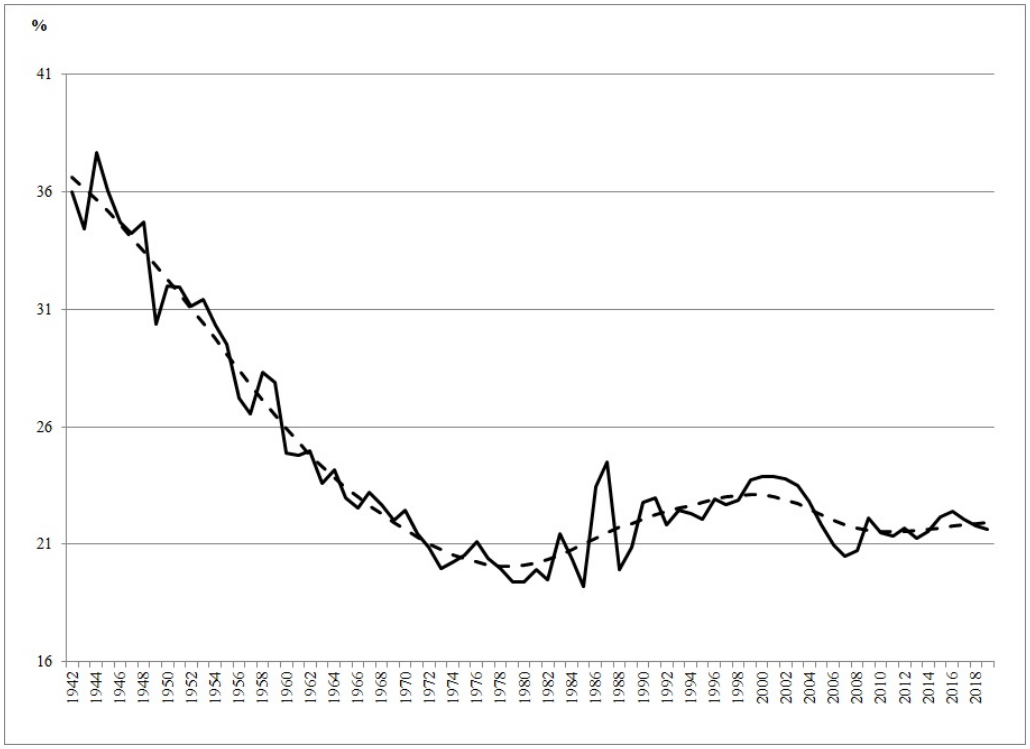

Figure 2: Mixed-income share and Hodrick-Prescott trend (1942-2019)
Source: Central Reserve Bank of Peru (BCRP); National Institute of Statistics and Informatics (INEI); National Institute of Statistics (INE); Economic Commission for Latin America and the Caribbean (ECLAC); Garcıa (2013); and Ministry of Finance and Commerce.

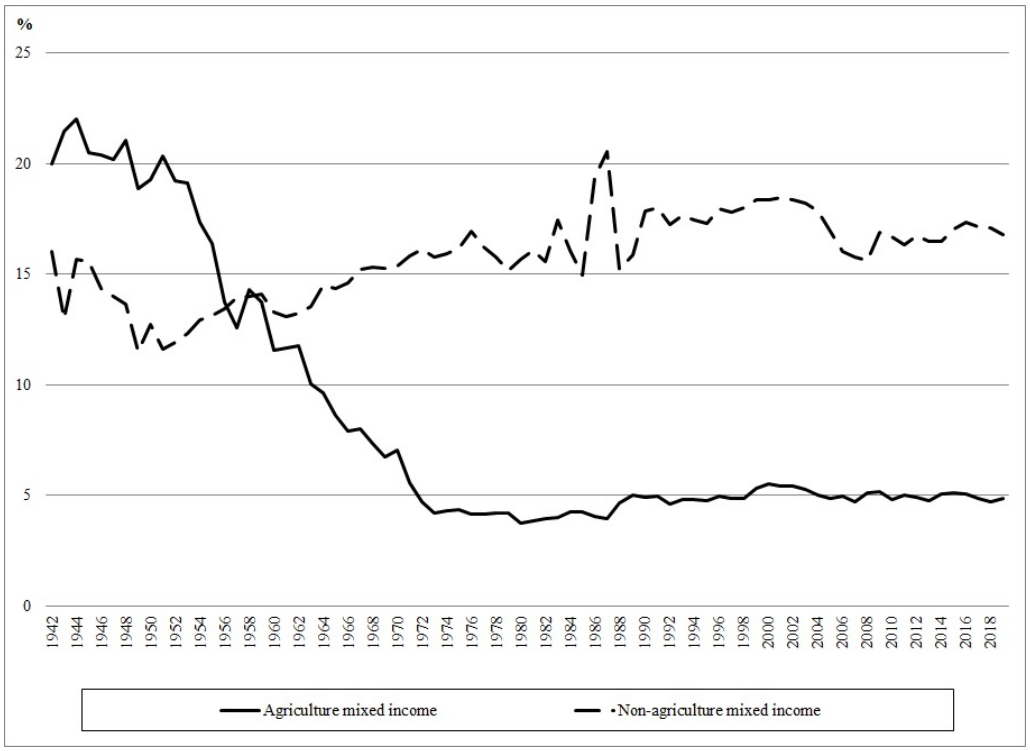

Figure 3: Agriculture and non-agriculture mixed income shares (1942-2019)
Source: Central Reserve Bank of Peru (BCRP); National Institute of Statistics and Informatics (INEI); National Institute of Statistics (INE); Economic Commission for Latin America and the Caribbean (ECLAC); Garcıa (2013); and Ministry of Finance and Commerce.

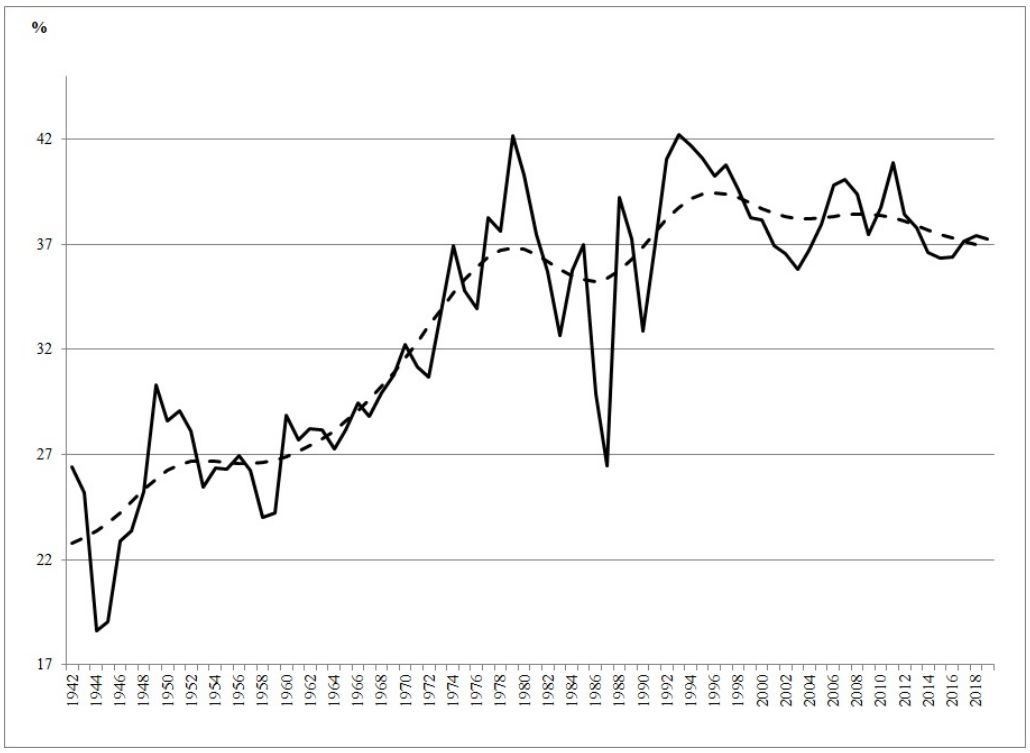

Figure 4: Profits share and Hodrick-Prescott trend (1942-2019)
Source: Central Reserve Bank of Peru (BCRP); National Institute of Statistics and Informatics (INEI); National Institute of Statistics (INE); Economic Commission for Latin America and the Caribbean (ECLAC); and Ministry of Finance and Commerce.

to construct such a table. Figure 5 is a summary of the distributive effects of the policies and structural changes mentioned in the narrative narrative. Figure 6 overlaps the distributive cycles and the periodization of global capitalism.

In this narrative, the characterization of economic policies is based on Lavoie and Stockhammer (2013). They define the distributive policies as the set of measures related to the determinants of the income distribution. Pro-capital policies group the flexibilization of wages in the labor market, the weakening of the institutions that mediate collective labor negotiations (such as unions), or the reduction of labor protection regulations. Pro-labor policies group measures such as the strengthening or foundation of a welfare state, the creation of new institutions that govern the labor market, the creation of unions, or the expansion of collective bargaining frameworks between workers and companies. Both types of policy are complemented or limited by other measures that influence structural factors. Some of them advocate technological change, in such a way that both the levels of labor productivity and the forms of accumulation in a given economy are modified.

The years 1942-1956 constitute the age of the Oligarchic State. It starts with the conservative government of Manuel Prado Ugarteche (1939-1946), which maintained good relationships with the firms owned by the "big families" integrating the oligarchy as Durand (2003) states. This business structure includes the haciendas (big agriculture property), whose production was channeled towards external demand. Prado Ugarteche's government initiated the first industrialization policies and the constitution of the Mining Bank to channel financial aid to the mining industry. During this period, relations with the government of the United States were also strengthened. As a result, most of the private initiative was financed by American capital inflows. The Peruvian government financed the public investment with foreign debt issued by the US government.

The reformist economic policy begins during the Government of José Luis Bustamente and Rivero (1946-1948). One of his reforms was to raise tax rates for financing the growing expenditure and deficits generated by Prado Ugarteche's management, apply credit controls in foreign currency, and constrain the convertibility by fixing the exchange rate to maintain the external balance. The relationship with the workers was softened by the interference of APRA, a party that supported Bustamante y Rivero's government and led some workers' unions of that time (es-

pecially, the Central Workers of Peru). Relations with the oligarchy exploded because the credit and exchange controls reduce the available liquidity for agriculture exporters and the industrial policy affected their interests. However, profits show a boom due to the increase in commodity prices after WWII. Such a phenomenon continued until the peak of the terms of trade in 1949 when the rise of profits share ended [Seminario (2015), Thorp and Bertram (1978)].

Towards the middle of 1948, Bustamente and Rivero yield before the coup d'etat authored by general Manuel A. Odría, with support of the oligarchy. During the period of 1948-1956, economic policy resumed the conservative path set aside by Bustamente and Rivero. Odría emphasized economic liberalization, through the technical support provided by the Klein mission as it is mentioned Sheahan (2001), which meant the elimination of exchange controls and attracting foreign capital inflows towards the mining industry as was studied by Anaya Franco (1975). As a result, the government policies assured the strengthening dependency of the Peruvian economy from foreign capital. The benefits recovered by the agro-exporters of the oligarchy were threatened during the last years of the fifties. Odría financed a great part of public spending for popular classes, from the export earnings (45%) the government retained in the Central Reserve Bank. While employers disapproved of Odría's economic criteria, the government gained the acceptance of the working class as the public investment in infrastructure create more employment and the average wage increases.

Pease and Romero (2013) call the next period the Crisis of the Oligarchic State. During this time, the economic importance of the rural areas diminished and urban capitalism grew. That is a consequence of the fall of the production regimen in the agro-export haciendas as mentioned by Cotler (2005). At the same time, this stage is marked by a stable evolution of commodities, with the exception of the international deceleration of the periods 1957-1959 and 1966-1967, in which the surplus of exploitation falls [Thorp and Bertram (1978)]. The presidency of Manuel Prado Ugarteche (1956-1962) has supposed the suspension of the support of the old oligarchy. The stabilization policies were imposed in order to reduce the fiscal deficit and the inflationary crisis inherited from the Odría government. The representation of the business elite was guaranteed by the participation of Pedro Beltrán Espantoso as Minister of Finance. Peru became an important ally of the USA after the Alliance for Progress begins. Such an agreement strengthened the dynamics of dependence on foreign investment from that country [Anaya Franco (1975)]. Subsequent elections meant a triumph for APRA, which was thwarted by the Military Junta of Pérez Godoy (1962-1963). During this year, a limited agrarian reform was applied (a requirement stated by the Alliance for Progress) and the National Planning Agency was founded by the Junta.

With the call for new elections, the architect Fernando Belaunde Terry (1963-1968) governed under a reformist pattern. This period was characterized by greater public investment and reduced protectionism for the benefit of a nascent industrial bourgeoisie. At the same time, Belaunde was concerned about benefiting the middle and popular classes. Hence, he considered implementing developmental policies. However, the failed attempts to propose an agrarian reform and the political-economic scandals concerning the foreign capital led the military to attempt a coup d'état. The army aimed to reestablish national sovereignty after Belaunde's government failed to solve the contract with the American International Petroleum Company. General Juan Velasco Alvarado commanded a new Junta and started the phase of the Interventionist State.

During the first part of the Revolutionary Government of the Armed Forces of Peru (1968-1975), the government raised many progressive policies. Those ended up breaking the beneficial political order of the oligarchy and caused strangeness to the left parties of the time, which used to think of Velasco's Junta as an instrument of the ruling class. Even though Velasco's regime was authoritarian, the State intervened in the economic structure to implement distributive policies and increase its participation in production. For instance, Velasco nationalized the industries and especially the extractive ones. He creates government enterprises as Centromin, PescaPerú, among others. Velasco also attempted to apply import substitution industrialization policies (ISI) to reduce Peru's economic dependence. That led to implementing exchange controls, the managed allocation of foreign currency through mechanisms as the Certex, among others.

Velasco tried to solve the social demands that dated back to the second presidency of Prado Ugarteche. Three were its most important distributive policies. The creation of the industrial community (like the Yugoslavian social-owned enterprises). Then, the achievement of the agrarian reform of 1972 (which directly affected the interests of agro-exporters). Finally, Velasco created socially owned companies with a self-managed structure (the cooperatives). According to Webb

and Figueroa (1975) and Cabieses (1976), these policies did not affect the economic situation of the majority of citizens of the late seventies. However, these represented a source of tension between the State and the business elite, especially the traditional one (since some non-traditional exporters and many industrialists benefited from some of Velasco's reforms).

Due to growing tensions, the crisis of 1972-1973 that affected the world economy [Frieden (2007)], and the excesses of Velasco's fiscal policy, General Francisco Morales Bermúdez attempted a coup d'état. The new phase of the Junta partially reversed many of the Velasquista reforms. Yet, he maintained state ownership and high levels of protectionism. On the other hand, Moral Bermúdez reestablished good relations with the national and foreign business elites. One distributive effect of this phase was that the real minimum wage (RMV) decreased (1973-1978). The average real wage fell until the end of the Junta. Towards 1979, increases in oil prices due to OPEC influence generate a reversal in the evolution of profits [Frieden (2007), Glyn et al. (1990)].

With the restitution of the democratic order and the 1979 Constituent Assembly, Belaunde Terry became president of Peru. In his second term (1980-1985), he followed a more conservative path for economic policies. Belaunde's developmental policies and neoliberalism run together. The Peruvian State faced the consequences of the Mexican crisis and the dramatic effects of El Niño over agriculture during 1983. The economic crisis hit Peru and weakened the businessmen's participation in the design of the macro policy. Deindustrialization began to be the apple of the discord between the business elite and the State. While the Ministry of Economy and Finance and the Chamber of Commerce of Lima (CCL) promoted such reform, the industrial bourgeoisie that Velasco stabilized resisted the deindustrialization process. However, the profit pattern is affected by the rise in the international real interest rate during 1982-1983.

The first government of Alan García Pérez (1985-1990) culminates with the end of the Interventionist State. The large fiscal deficit and the policy of exchange controls gave rise to hyperinflation. The State considered alternative "heterodox" policies for confronting the crisis, but these alternatives did not relieve the national economic problem. At the same time, the shortage of general liquidity and the reduction of international financial flows, as a consequence of the increase in the real interest rate in the United States (1987-1988), led to the nationalization of the banking system. At the same time, Peru neglected to pay the debt as it got into default before the international financial system. The latter fueled a confrontation between the government and the economic elite commanded by the business groups of the finance industry.

When Alberto Fujimori became president of Peru in 1990, the stage of the Neoliberal State began. The cabinet declared a set of shock policies for August 8, 1990, which involved lifting control prices set during the seventies and eighties. The State privatized state enterprises, with which public employment decreased rapidly. The civil service reduced to 18,600 at the end of 1998 from 139,000 workers in 1990. At the same time, the privatizations attempted by Fujimori's government meant a transfer of resources to the State that fastly decreased because of the large deficits incurred by the government since 1998 Diez Canseco et al. (2002). The new monetary policy was based on the new 1993 Constitution that restricted any possibility for fiscal dominance. While the government accomplished Central Bank independence, the new monetary policy lifted foreign exchange controls and stated inflation targeting as the main goal.

The relations between the State and the capitalist class significantly improved during this decade. The recurrent privatizations, the implementation of the Public-Private Partnerships (PPP) [Germán Alarco (2014)], and the flexibilization of labor legislation increased the opportunities for making profits and reduced labor costs for Peruvian firms. The latter implied unjust measures against the workers as the weakening of unions and the rise of precarity in the formal sector. Although the real minimum wage recovered in 1996, it remains below the levels of previous periods. Similarly, the evolution of earnings began to exceed wages within the beginning of the commodity prices boom cycle in 1994 [Erten and Ocampo (2012)].

When Fujimori's dictatorship ended, the new president Alejandro Toledo (2001-2006) implemented a new reformist program but stood on the previous conservative macroeconomic policy: the macroeconomic regime mainly focused on inflation targeting and the prevention of current account imbalances. The Peruvian government created the Private Investment Promotion Agency (ProInversión) through Supreme Decree No. 027-2002-PCM, based on the Special Committees for the Promotion of Private and Public Investment (created by Supreme Resolution No. 444-2001-

EF). That was a clear example of Toledo's commitment to supporting the private initiative based on the dictatorship's institutional design.

After that period, the second government of Alan García Pérez (2006-2011) followed the same path for the macroeconomic policy. The economic management sought to maintain fiscal stability, although it faced the effects of the international financial crisis through an Economic Stimulus Plan that increased public spending [Cruzado and Sotelo (2011)]. The relations with capitalists remained on good terms due to the pro-business discourse of the government and the commitment to private investment. The extractive industries gained significant importance, yet they faced the price of metals bust cycle by the end of 2010 [Erten and Ocampo (2012)]. Such a policy regime continued during the next governments of Ollanta Humala (2011-2016) and Pedro Pablo Kuczynski/Martín Vizcarra (2016-2019). Even though there were attempts to modernize the economic structure, these two presidential periods prioritized private investment supporting. So-called reformist measures as the productive diversification plan were limited to only diversifying the extractive exportation basket. Attempts to increase public investment got unsuccessful because of PPPs.

4 Decomposing wage and profits shares: accounting and correlation analysis

In this section, I attempt to decompose both wage and profits share. For the wage share, I follow Graña and Kennedy (2008) to get three components: the real average wage or the average labor cost (alc), the average labor productivity (q), and the salaried employment rate (l_{sal}) (measured as the relationship between salaried employment and total employment). These authors' formulation explains the wage share as the GDP share of the product of the real wage rate (w) times the number of salaried employees ($AP_{salaried}$) (see Equation 1). In the Equation 2, I show a reformulation to use when decomposing the Peruvian wage share:

$$\frac{W}{Y} = \frac{w * AP_{salaried}}{Y} \cdots (1)$$

$$\frac{W}{Y} = \frac{\frac{w}{deflator} * AP_{salaried}}{\frac{GDP}{deflator}} * \frac{AP_{employed}}{AP_{employed}}$$

$$\frac{W}{Y} = \frac{w}{deflator} * \frac{1}{\frac{GDP}{deflator * AP_{employed}}} * \frac{AP_{salaried}}{AP_{employed}}$$

$$\frac{W}{Y} = alc * \frac{1}{q} * l_{sal} \cdots (2)$$

The decomposition of the wage share requires to include the deflator and the amount of the employed population[1]. These components appear in both the numerator and denominator of the wage share. As a result, the wage share becomes the quotient between the nominal average wage and the GDP deflator, the inverse of the quotient between the GDP and the product of that deflator and the employed population account, and the ratio between salaried employees and total employment. Such a decomposition is useful to analyze the impacts of distributive policies and economic processes over labor market indicators for the Peruvian economy.

In Figure 7, the average labor cost decreased in the seventies. That is a consequence of diminishing average and minimum wages after 1972 (see Figure 5). Even though average labor cost rose as the 1980s started, it suddenly fell until the nineties. The causes were the constant shocks experienced during the Debt and Hyperinflation crisis. At the beginning of the 1990s, the adjustment policies pushed down the real wage rate. As of 1993, there is an increasing trend. In the nineties, the average labor cost has stabilized at higher levels than in the 1980s. Yet, these higher levels are still lower than those at the beginning of the seventies. The highest levels came after 2005 because of the stable economic growth of the first decade of the 21st century.

On the other hand, the average labor productivity (q) appears in Figure 8. Until 1993, this variable shows descending dynamics. q annually decreased 4.8% on average during the 1980s. After

[1]The accounts for the employed and active population for 1970-2006 appear in Castillo (2015). Data for the years 2007-2019 appear in the INEI statistic reports

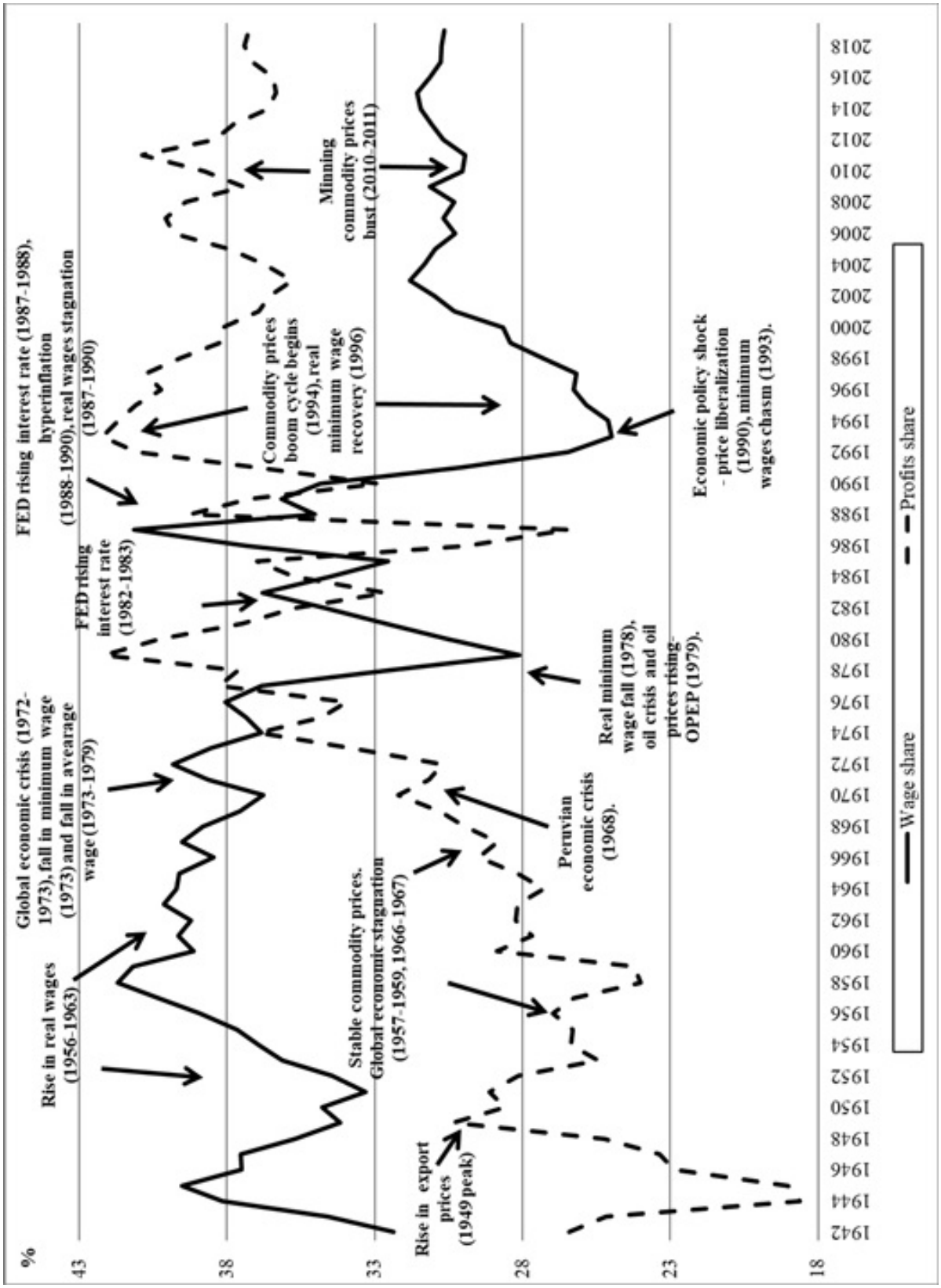

Figure 5: Economic policy and its effects on functional income distribution
Source: Central Reserve Bank of Peru (BCRP); National Institute of Statistics and Informatics (INEI); National Institute of Statistics (INE); Economic Commission for Latin America and the Caribbean (ECLAC); and Ministry of Finance and Commerce.

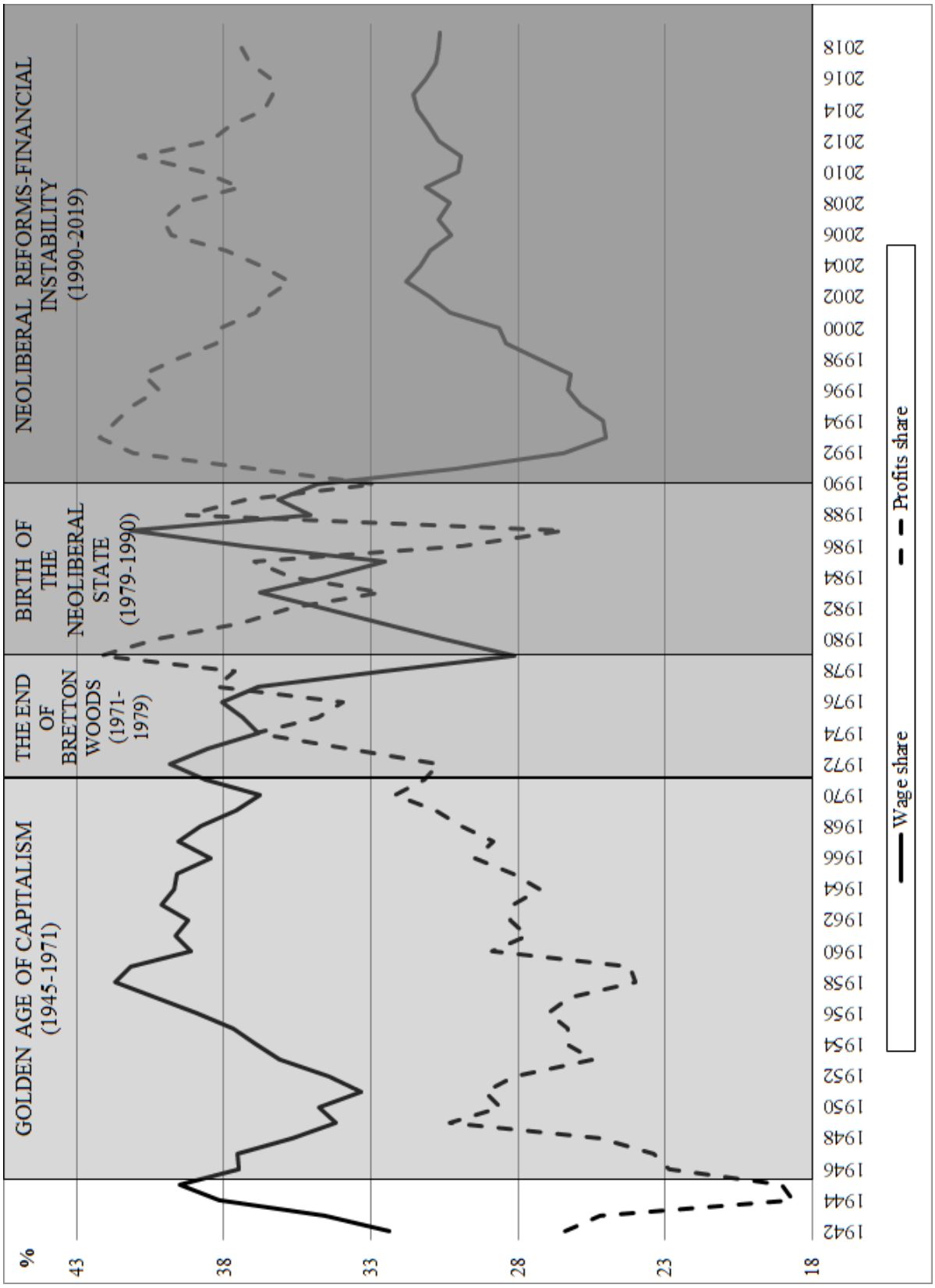

Figure 6: Functional income distribution and world capitalism phases (1950-2019)

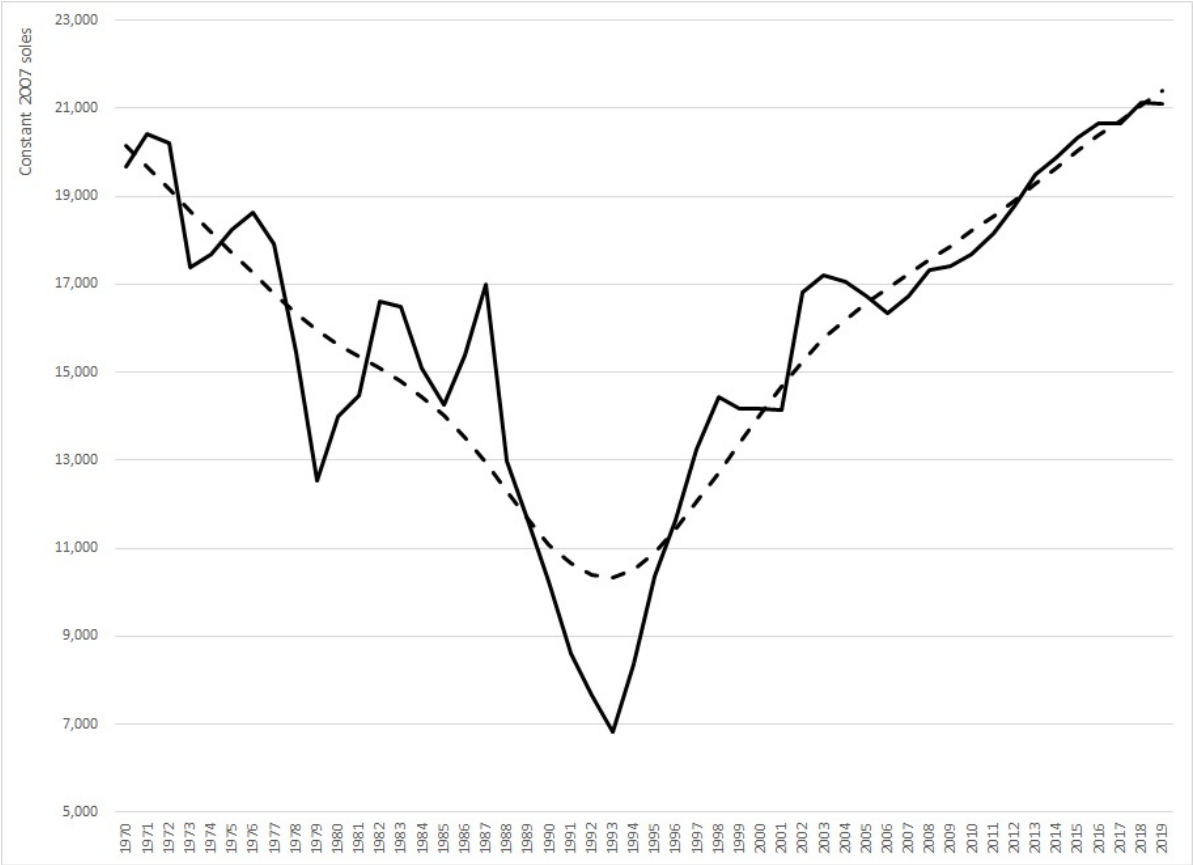

Figure 7: Average labor cost and Hodrick-Prescott trend (1970-2019)

1993, the recovery of q was based on the increase of capital accumulation and the greater production capacity. Figure 8 also compares this series with the average cost of labor. It shows a divergence between both series since 1972. The greatest disparities occur in the following periods: 1978-1981, after the fall of Morales Bermúdez's Junta; 1992-1997, during the decade of the structural reforms of the Fujimori government; 2006-2019, corresponding to the second period of Alan García and the last two governments. This latter period shows a more increasing gap than previous years. This widening of gaps reflects the alignment of distributive and economic policies towards a pro-capital scheme feeding the accumulation of profits.

The salaried employment rate appears in Figure 9 and explains the pace at which the economic system allocates the reserve army of labor to formal jobs. This variable shows levels below 50%. Even though the system generates new job positions, the economy does not develop a sound dependent sector. New jobs tended to concentrate in the independent employment sector, which has the characteristic of being, in most cases, informal labor. The relative fall on salaried employment may explain the mixed-income share remaining stable. The years with the highest levels for the salaried employment rate are 1973, 1981, and 1993. The tendency for this rate to increase starts in 2003. However, the rate remained stagnated since 2015.

For understanding the dynamics of profits share in Peru, I use the terms of trade series. The index mirrors the evolution of the prices of commodities, which are the main outputs of the extractive industries. [Seminario (2015), Erten and Ocampo (2012)]. Such a variable fits profits because of the relevance of agriculture, mining, and fishing in the Peruvian economic system. This also explains the exacerbated degree of dependence of the Peruvian economy from the external boom and bust cycles. In Figure 9, I compare a gross rate of profit (r) with the basic commodity prices. In Equation 3, $\frac{R}{Y}$ represents profits share, Y is the GDP in constant 2007 soles, and K is the capital stock in constant 2007 soles. The peaks in the evolution of profits coincide with the peaks in the terms of the trade index. The diminishing of profits in 1995-2003 is different because of the structural reforms which countered the negative effect of terms of trade. However, the improvement of terms of trade experienced after 2002 coincidence with the stability of the profit share. The fall of the terms of trade index coincided with a diminishing in profit share after 2010.

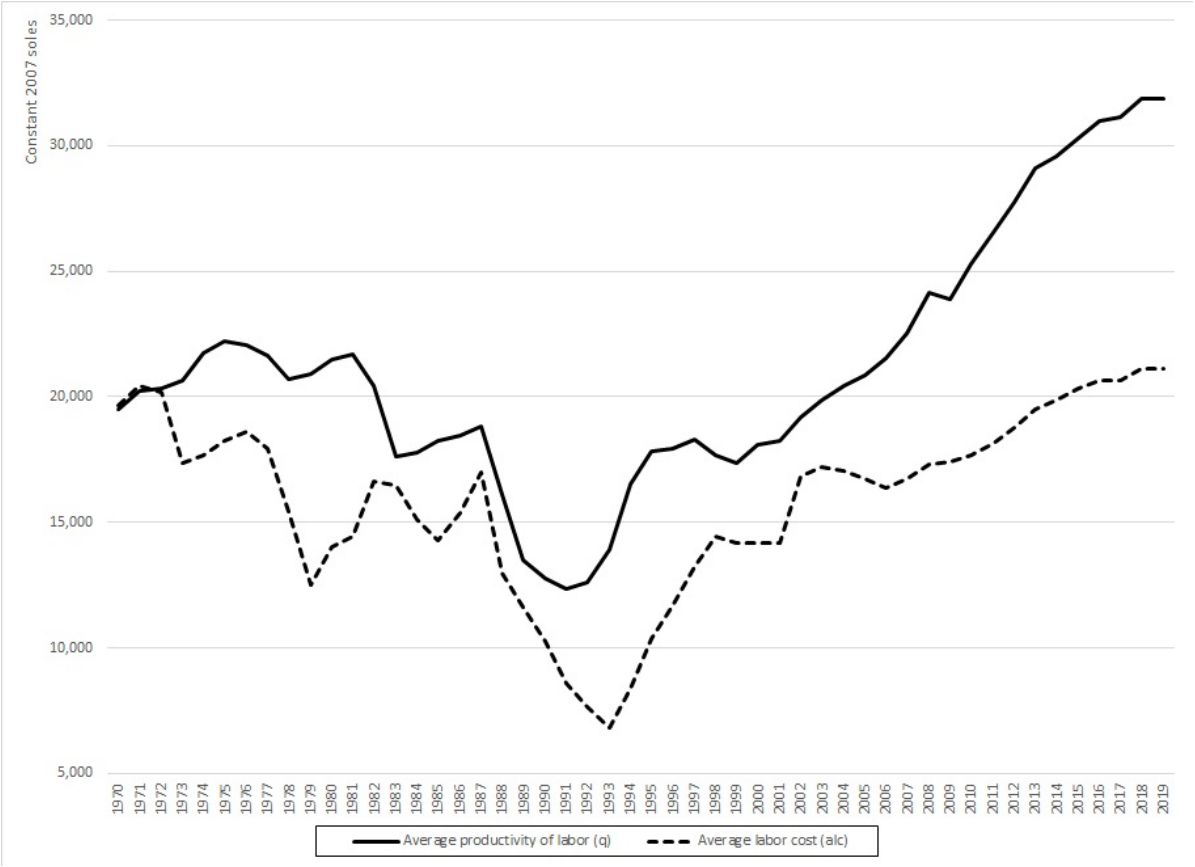

Figure 8: Average labor cost and average productivity of labor (1970-2019)

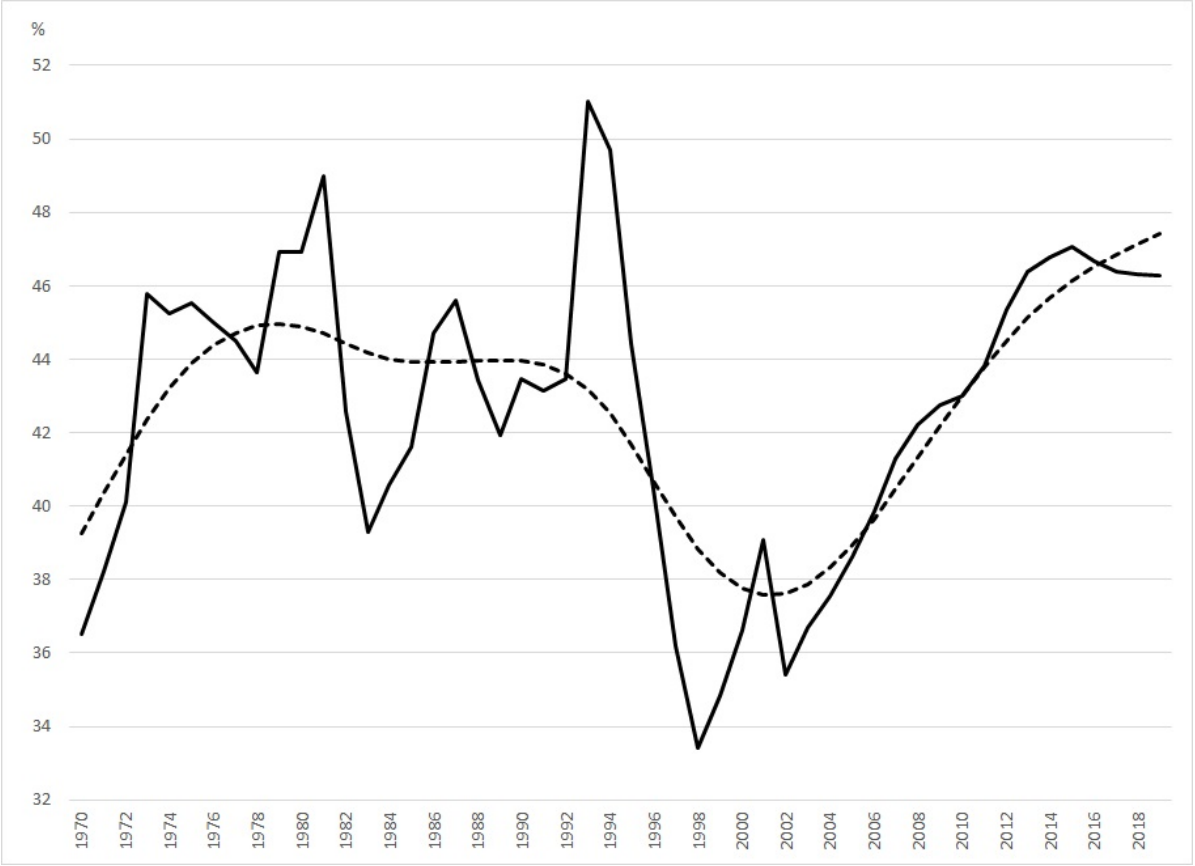

Figure 9: Salaried employment rate and Hodrick-Prescott trend (1970-2019)

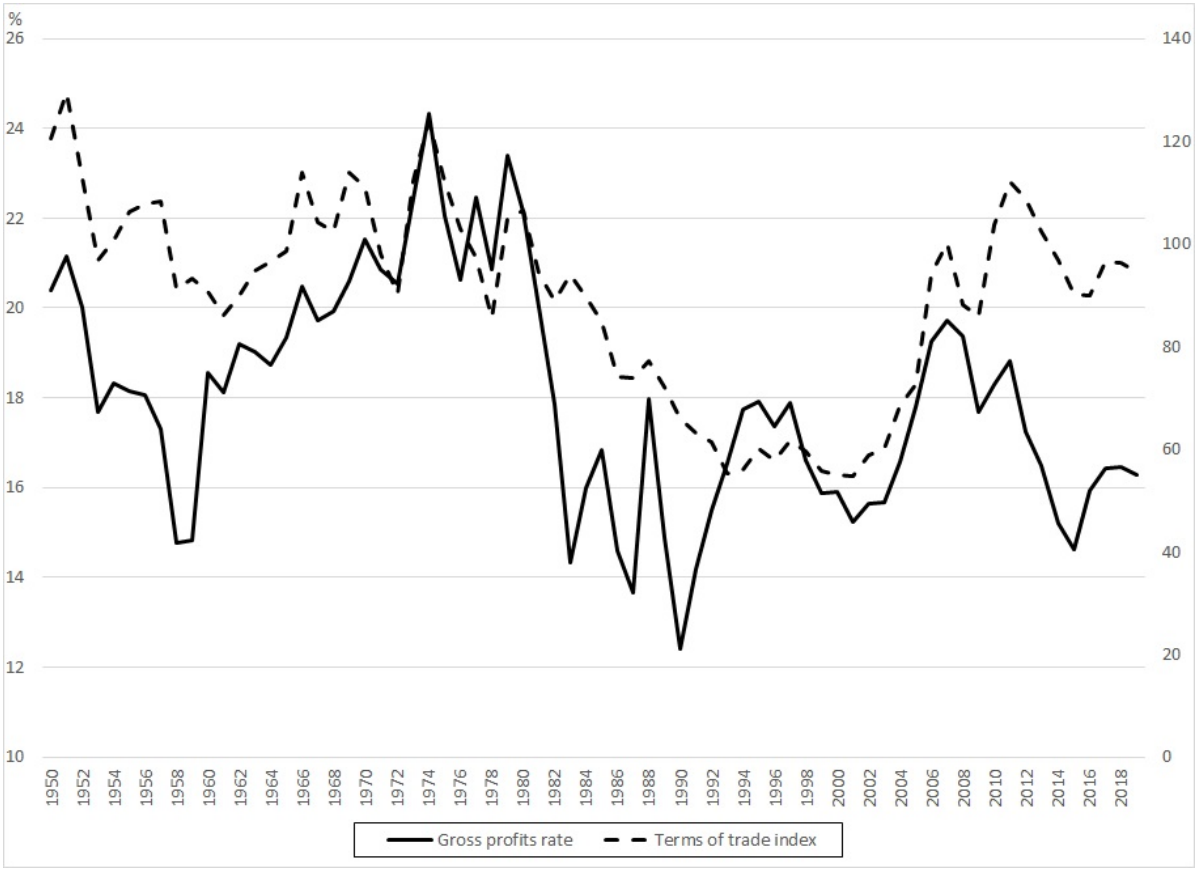

Figure 10: Gross profits rate (left axis) and terms of trade index (2007=100) (right axis) (1950-2019).
Source: Central Reserve Bank of Peru (BCRP); National Institute of Statistics and Informatics (INEI); National Institute of Statistics (INE); Economic Commission for Latin America and the Caribbean (ECLAC); and Ministry of Finance and Commerce.

$$r = \frac{R}{Y} * \frac{Y}{K} \cdots (3)$$

Another strategy for analyzing the profits share implies using other proxies for the profits rates. It is possible to construct those if we get the countable benefits data registered in the balance sheet of Peruvian firms. The relevant sources for these data are the Vademecum of the Investor (Vademécum del Inversionista) and the Vademecum of Lima Stock Exchange (Vademécum bursátil). Sets of firms considered in both reports are companies listed in the Lima Stock Exchange, but there are not the same. For this reason, the information of these independent reports is not comparable. Although, it is necessary to construct an average ROE (returns on equity) ratio for each year based on the data in both reports[2].

As the information is different in both reports, we consider a differentiated procedure for each. For analyzing the Vademecum of the Investor, I take the data of countable capital and reserves for firms during the period 1940-1959 as the proxy of equity. The net benefits are the total summing of profits for the firms taken in the report. On the other hand, the Vademecum of the Lima Stock Exchange reports data of equity registered for several years since 1974. The same occurs for the data on countable net benefits. Hence, there are two ROE indices for both different periods:

$$ROE_{1940-1959} = \frac{Net\ Benefits}{Capital + Reserves}$$

$$ROE_{1974-2016} = \frac{NetBenefits}{Equity}$$

[2]There is a critique of this procedure in Shaikh, Tonak, et al. (1997)

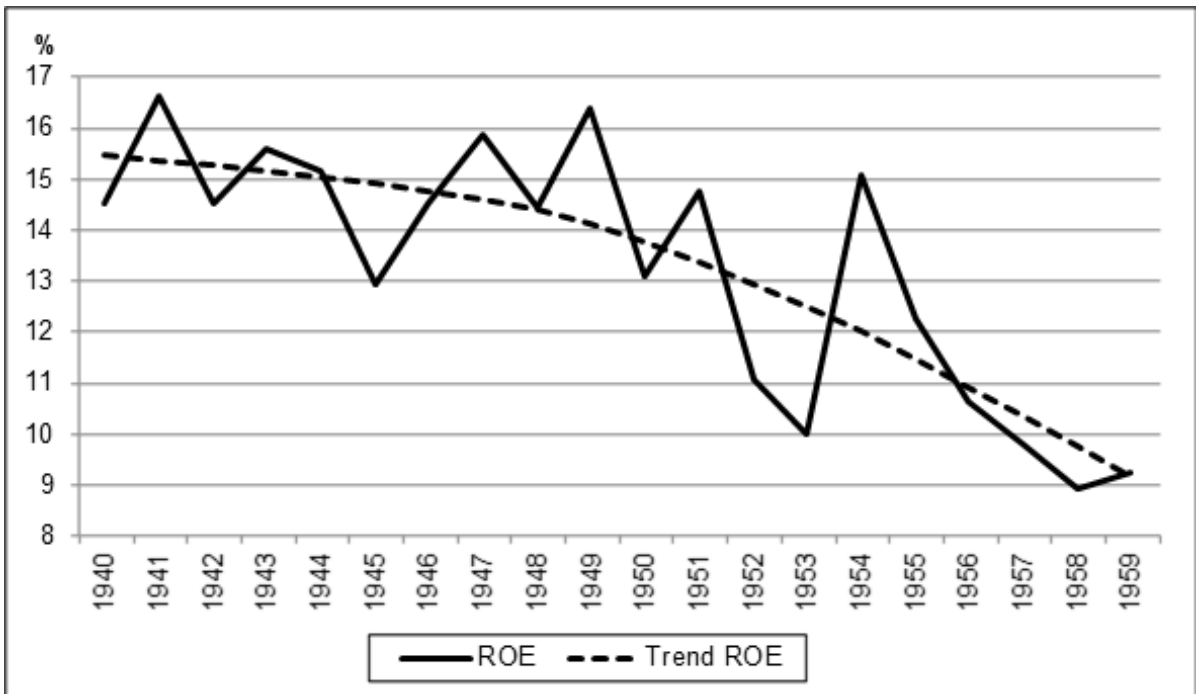

Figure 11: Average ROE for the main companies in the Lima Stock Exchange (1940-1959)
Source: Vademecum del Inversionista (many years).

Figure 11 shows the pattern of ROE among the forties and sixties. The results present a decline in the index for the enterprises considered in the sample. During 1942-1950, profits share had a positive evolution because of the external effects of the Postwar period. However, the profits share diminished in the fifties as the ROE shows a negative pattern until 1959.

In Figure 12, the ROE is based on the data of companies listed in the Lima Stock Exchange shows declining in the years of the economic crisis for the Peruvian economy. This fact coincides with the diminishing of profit shares: 1976, 1983, 1988, and 1990 show a correlation between the negative pattern of both ROE and profits share. The Nineties decade shows a downward pattern for ROE and profits share: the acceleration of the Peruvian economy contrasts with a deterioration in gross benefits. In the same way, the increase of ROE during 2001-2006 represented an increase in profits shares on GDP as terms of trade rose. Finally, the decline in commodity prices implies a reduction of profits shares for the last decade considered. A partial explication of this assumes the participation of the mining industry, which is influenced by the evolution of terms of trade, increases the weakness of total profit share n front of external agents.

5 A model for the evaluation of Peruvian economic regime

The works of Bhaduri and Marglin (1990), Hein and Vogel (2008), Lavoie and Stockhammer (2013), Nikiforos (2014) and Nikiforos (2016) introduce the concept of the economic regime as the set of effects generated on the economy due to changes in the factor income distribution. Any regime is defined from the structural conditions of the economy as the propensity to consume of employees, the sensitivity of employers to changes in sales or profit margins, the sensitivity of exporters and importers to changes in costs, the exchange rate, international demand, the size of the components of aggregate demand. Structural factors can also be social, political or historical, and have an effect on the economic system through the institutions they establish.

These economic regimes can be based on profits (profit-led) or wages and salaries (wage-led). If the change in the factor income distribution is in favor of profits and has positive results in the economy, the regime is considered a profit-led type. Otherwise, if the increase in the share of earnings in income does not generate acceptable results, the regime is likely to be wage-led. A favorable result could be an improvement in short-term aggregate demand, an increase in the rate of growth of aggregate demand in the long term, and improvements in the rate of growth of labor productiv-

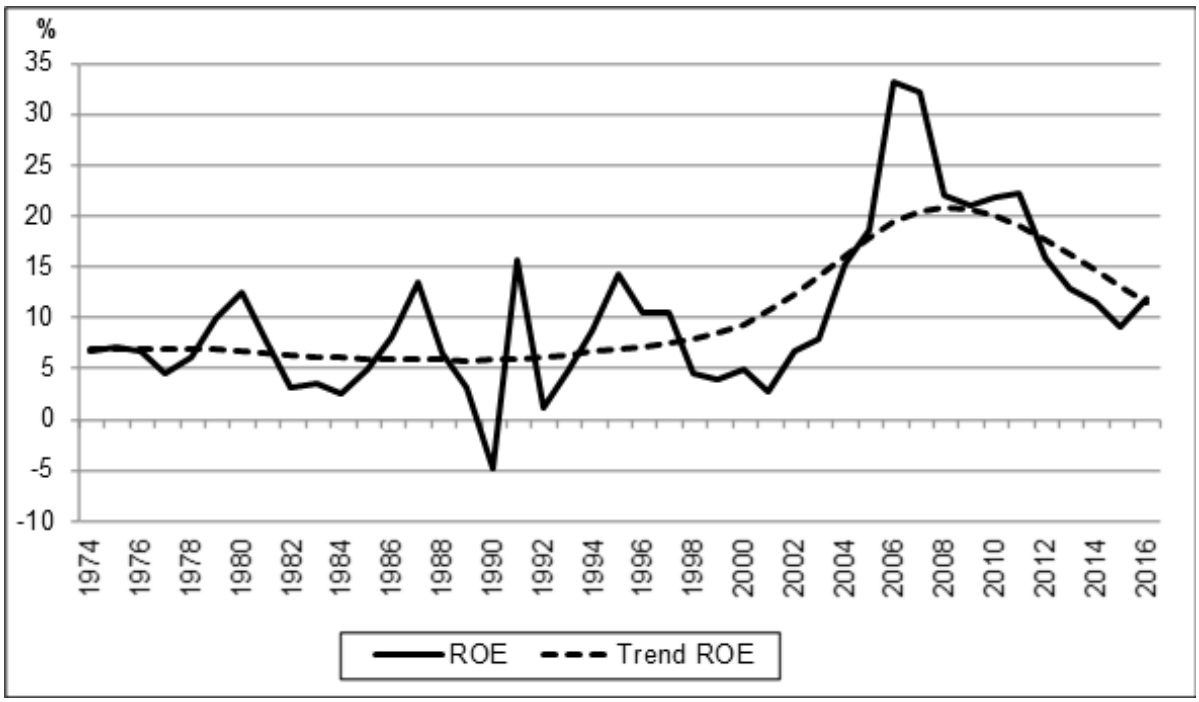

Figure 12: Average ROE for the main companies in the Lima Stock Exchange (1974-2016) Source: Vademecum Bursátil-Lima Stock Exchange (many years).

ity. Finally, Lavoie and Stockhammer (2013) states that the interaction between economic regimes and distributive policies allows us to classify the different economic growth strategies that can be applied to particular economies. They provide four ideal types that appear in Table 2. When the economic regime is profit-led and the set of policies strengthens the position of capitalist, the authors identify the so-called neoliberalism in theory. Growth create prosperity of all classes but it is necessary to aid the capital for increasing accumulation and leading such a growth. If the policies goes to provide better benefits for workers, the result would be a situation of doomed social reforms. Instead of creating prosperity, economic policies diminish national economic performance. When the economic regime is wage-led but the government applies pro-capital policies, the result shows the actual way in which neoliberalism works: creating high inequality that dooms the economic growth. Finally, social keynesianism attempts to use a set of pro-labor policies in a set up of wage-led structural conditions.

Economic regime	Pro-capital	Pro-labor
Profit-led	Neoliberalism in theory	Doomed social reforms
Wage-led	Neoliberalism in practice	Social Keynesianism

Table 2: Growth strategies-economic regimes / distributive policies.

The evaluation of the economic regime for the Peruvian economy during the period 1942-2019 follows Naastepad and Storm (2006) that use a Post-Keynesian growth model to assess the impact of the real wage increase in eight countries of the OECD group. A modification of that model appears in Germán Alarco (2016) and Germán Alarco and Castillo Garcıa (2019). In these articles, the main objective is to estimate the elasticity of the gross domestic product regarding the wage share. Thus, the modified model includes the following equations:

$$Y = C + I + G + X - M \cdots (4)$$

$$V = \frac{W}{P}(\gamma^{-1}) = w\gamma^{-1} \cdots (5)$$

$$\Pi = 1 - w\gamma^{-1} = 1 - V \cdots (6)$$

$$C = [(\delta_w V + \delta_\pi \Pi)Y]$$
$$C = [(\delta_w V + \delta_\pi (1 - V))Y] \cdots (7)$$
$$M = a_0 + a_1 Y \cdots (8)$$
$$I = f(\pi, Y) = A_I + \theta_0 \pi + \theta_1 Y \cdots (9)$$
$$X = g(Z, \pi) = A_X + \epsilon_0 Z + \epsilon_1 \pi \cdots (10)$$

In this case, the equation system assumes an open economy because the external sector is a relevant source of growth for the Peruvian economy. Equation (4) represents a Keynesian expenditure function in which GDP (Y) depends on consumption (C), investment (I), exports (X), imports (M), and government spending (G) as an exogenous variable. On the other hand, equations (5) and (6) represent the factor income distribution in both of its components: the wage share (V) and the share of profits (Π). In this case, γ is the inverse of the labor productivity and its inverse multiplies the real wage rate (w) to get V. I incorporate the mixed income share as part of the wage share in (6)[3]. Thus, equations (7), (8), (9), and (10) define the form that each endogenous variable of expenditure has.

Consumption equals the sum of the consumption for each class, which depend on their respective propensities to consume (δ_w, δ_π). Equation (9) represents investment depending on the share of profits and the product. The elasticity of investment regarding the profits share (θ_0) and the elasticity to GDP (θ_1) would be positive. In (10), exports are explained as a function of world demand (Z) and the profit share. The elasticity ϵ_0 is positive as same as the elasticity ϵ_1. Finally, equation (8) represents imports as a function of GDP, in which α_1 is the propensity to import. The system allows us to calculate the elasticity of the GDP regarding the wage share in (11). Such a component is equal to the sum of the elasticities of the endogenous variables of the expenditure equation.

$$E_{YV} = \frac{C}{Y} E_{CV} + \frac{I}{Y} E_{IV} + \frac{X}{Y} E_{XV} - \alpha_1 E_{YV} \cdots (11)$$

The latter's components are the products of each elasticity by its share in GDP. The consumption elasticity is a function of the consumption elasticities, the wage share, and the elasticity of GDP regarding the wage share. Investment's elasticity includes the elasticities concerning profit share and the GDP, the wage share, and the elasticity of GDP regarding the wage income. The elasticity of exports to the wage share is a function of the correspondent elasticities and the wage share. Finally, the elasticity of imports is the product of the propensity of imports and the elasticity of GDP to wages. The final form of GDP elasticity is obtained by passing E_{YV} to the left side:

$$\frac{C}{Y} E_{CV} = (\delta_w + \delta_\pi) \frac{W}{Y} + \delta_\pi E_{YV}$$
$$\frac{I}{Y} E_{IV} = (\theta_0 + \theta_1) E_{YV} - \theta_0 \frac{W}{Y}$$
$$\frac{X}{Y} E_{XV} = \epsilon_1 E_{YV} - \epsilon_1 \frac{W}{Y}$$
$$\frac{M}{Y} E_{MV} = \alpha_1 E_{YV}$$
$$E_{YV} = \left(\frac{1}{1 - \delta_\pi - (\theta_0 + \theta_1) - \epsilon_1 + \alpha_1}\right)[(\delta_w - \delta_\pi) - \theta_0 - \epsilon_1] \frac{W}{Y} \cdots (11')$$

Equation (11') shows a variation of the Keynesian multiplier dependent on the propensity of consumption of capitalists, investment elasticities, the elasticity of exportation with respect to wage share, and the propensity to import. The other component is the expansive effect of the wage-earners consumption measured by the propensity of consumption for workers minus capitalist's propensity. The effects of the profit share diminish the elasticity because of the indirect

[3]Nevertheless, it is possible to use a procedure to split the mixed-income share into two components regarding both the labor and the capital income sources. See Abeles, Amarante, and Vega (2014)

relationship between the latter and the wage share.

The table 3 summarizes the main statistics included in the equation of the elasticity of the GDP to wage share and the other elasticities. For the total period 1942-2019 the highest shares on GDP are those of the private consumption (65.55%) and the exports of goods and services (23.14%). The share of private investment in the GDP is lower than the consumption's share (14.91%). The ratio of non-traditional exports over the traditional ones indicate the level of industrial diversification. The statistical classifications in Peru group in the non-traditional basket both raw materials and more value-added commodities with a highest degree of competitiveness. Nevertheless, the ratio is below the 50% for the full period. The latter suggests the limited innovation and diversification of the exportable basket of Peruvian goods. Another important fact is that profits share is higher than the wage share for the full period, yet the difference between both income components is almost 4%.

Table 3 also classifies the descriptive statistics for the subperiods studied in section 3. Consumption share over the different periods is the highest GDP share. However, the lower level of aggregate consumption appears in the period of the Neoliberal State. The highest levels for private consumption appear during the period of The Oligarchic State and its crisis . In the Neoliberal period, non-traditional exports almost represent 37% of the traditional ones, yet it is still as lower as the level considered for the average full-period. Also, during the period of the Neoliberal State the share of total exports is the biggest and amounts a little bit more than 26%. However, the level of imports shows a weight bigger than 22%. Even though trade liberalization policies applied had the objective to improve exports performance, the increase in net external supply for the period 1990-2019 has limited the capacity of Peru to improves the trade balance. Even though the industrialization policies applied during the Interventionist State era looked for improving the trade position of the country, the net exports represented less than 4% of total GDP during that sub-period.

Main relations	Full period 1942-2019	Oligarchic State 1942-1956	Crisis of the Oligarchic State 1956-1968	Interventionist State 1968-1990	Neoliberal State 1990-2019
Consumption (% GDP)	65.55%	71.84%	69.92%	67.62%	64.04%
Exports (% GDP)	23.14%	14.90%	18.43%	16.95%	26.37%
Non-traditional /traditional exports (%)	31.33%	20.63%	8.81%	22.49%	36.52%
Imports (% GDP)	19.70%	10.25%	14.46%	13.97%	22.88%
Private investment (% GDP)	14.91%	7.64%	11.54%	10.54%	17.28%
Wage share (% GDP)	32.33%	36.07%	44.13%	36.79%	32.70%
Profits share (% GDP)	36.16%	25.75%	31.01%	35.78%	41.40%

Table 3: Summary statistics: aggregate demand components, income shares (1942-2019).
Source: World Bank; Central Reserve Bank of Peru (BCRP); National Institute of Statistics and Informatics (INEI); National Institute of Statistics (INE); and Ministry of Finance and Commerce.

By taking this information, it is possible to calculate the elasticity components for equation (11'). Equations (7)-(10) binds in simultaneous, so it is necessary to use a method to get the coefficients of the four equations. I choose three stages least squares in the spirit of Alarco (2016) and Alarco and Castillo (2018). We follow the critics of Nikiforos (2014) on the effects of the turning points when estimating the effects on economic growth regimes. Hence, the model is estimated for different data cohorts. Because of the relevant changes experimented in the Peruvian economic structure after 1990, that year is selected as a break point in the economic regime. Therefore, three different periods are considered for estimating the model: 1942-2019, 1942-1990, and 1990-2019. For the econometric estimation, I also add the total share of mixed-income to the wage share. The

results obtained for the different equations and the parameters appear in Table 4. The econometrics especification uses the data in levels, expressed in constant 2007 nuevos soles. The variable world demand (Z) is the only one written in constant 2007 US$.

In the 3SLS equation system the signs are the same as they are conceived in the model. However, the effect of profits share on private investment is not significant for the three periods measured in the econometric specification. The calculation of equation (11') excludes such effects in Table 5. To estimate the accelerator effect on private investment (θ_1), I include a one year lag for the GDP in the private investment equations for the periods 1942-1990 and 1990-2019. For the full period, the GDP accelerator effect is estimated by using a two-periods lag GDP time series. For the full period, the goodness of fit of the four equations fluctuates between 0.91 and 0.99. While for the period 1942-1990, R^2 fluctuates between 0.83 and 0.99, for the next sub-period the estimator has values situated between 0.94 and 0.98. The equation for the aggregate consumption remains with the better fitting for all the time-cohorts

	1942-2019				1942-1990				1990-2019			
	C	Ipriv	X	M	C	Ipriv	X	M	C	Ipriv	X	M
Wages	0.9997** (19.48576)				0.9380** (39.99824)				0.8151** (9.83257)			
Π	0.4545** (4.966540)	0.0760 (1.36769)	0.4614** (5.4027)		0.4974** (10.00208)	0.0418 (0.75390)	0.2497** (4.63026)		0.6929** (4.82434)	0.0599 (1.08038)	0.1623** (2.46896)	
GDP		0.1954** (9.87032)		0.2679** (44.12716)		0.0892** (5.00236)		0.1440** (18.43513)		0.2299** (12.63941)		0.3059** (38.42915)
Z			0.0009** (5.51813)				0.0005** (5.28304)				0.0024** (13.55337)	
constant		-9.68E+09** (-6.07183)	-1.11E+10** (-5.78043)	-1.29E+10** (-9.35366)		-1.24E+09** (1.68024)	1.65E+9 (1.88111)	-8.05E+08 (-0.99981)		-2.04E+10** (-5.56336)	-6.81E+10** (-16.10389)	-2.39E+10** (-8.94039)
R^2	0.9925	0.9194	0.9423	0.9620	0.9934	0.8261	0.9011	0.8740	0.9864	0.9424	0.9898	0.9797
N	78	78	78	78	49	49	49	49	30	30	30	30

Note: * $p < 0.05$; ** $p < 0.01$

Table 4: 3SLS estimations for three different time periods.

The difference between the propensity of consumption of adjusted wage share and the propensity of consumption of profits share is positive. This is coherent with the Kaleckian hypothesis about the bigger consumption of wage-earners. Table 5 shows the results for the elasticities in the three sub-periods. GDP elasticity is positive for the full period with a value of 0.1730%, but for the period 1942-1990 the value of such elasticity is 0.2267%. The result for the period 1990-2019 is a negative elasticity of -0.0548%. This means that the economic regime is wage-led for the full period and for the sub-period 1942-1990. That relates to the higher share of the wages before the Neoliberal State sub-period. However, 1990-2016 is a profit-led economic regime. For this period, an increase in wage-share supposes deterioration for the exports component. The main reasons for explaining such an outcome are the application of adjustment policies, the structural transformation of the Peruvian economy after the privatization process in the nineties, and the enhancing of the dependence path.

Elasticity	Full period 1942-2019	Cohort I 1942-1990	Cohort II 1990-2019
E_{YV}	0.1730	0.2267	-0.0548
$\frac{C}{Y}E_{CV}$	0.2549	0.2738	-0.0012
$\frac{I}{Y}E_{IV}$	0.0338	0.0202	-0.0126
$\frac{X}{Y}E_{XV}$	-0.0694	-0.0347	-0.0578
$\frac{M}{Y}E_{MV}$	0.0463	0.0327	-0.0168
Multiplier	6.3883	3.2500	4.5296

Table 5: Evaluation of economic growth regimes.

Further econometric evaluations show that these results could flaw because of the presence of unit roots in time series data. Stationarity is a necessary condition to get non-spurious effects between variables for the long-run period 1942-2019. In table 6, I present the results for the Augmented Dickey-Fuller test applied to the components of the equation system. The results for the test show that the national account series are integrated time series ($I(1)$). Therefore, it is performed cointegration analysis to obtain non-spurious relationships for the equation system (7)-(11). Table 7 shows the Johansen cointegration test results when evaluating the system of equations. The aggregate demand equation system allows no more than one cointegration relation.

Variables	Test statistics	Test Critical Value at 5%	P value*	Unit Root Test
GDP	0.5494	-3.4700	0.9993	Non-stationary
ΔGDP	-5.3212	-3.4700	0.0002	Stationary
C	1.252460	-3.4709	1.000	Non-stationary
ΔC	-5.4648	-3.4709	0.0001	Stationary
Ipriv	-0.8880	-3.4700	0.9516	Non-stationary
ΔIpriv	-6.3078	-3.4700	0.0000	Stationary
X	1.1695	-3.4692	0.9999	Non-stationary
ΔX	-7.0648	-3.4700	0.0000	Stationary
M	-0.0902	-3.4692	0.9942	Non-stationary
ΔM	-8.5704	-3.4700	0.0000	Stationary
Z	0.7241	-3.4692	0.9996	Non-stationary
ΔZ	-7.2432	-3.4700	0.0000	Stationary
W	0.7506	-3.4709	0.9997	Non-stationary
ΔW	-6.7680	-3.4709	0.0000	Stationary
Π	-0.8879	-3.46924	0.9517	Non-stationary
ΔΠ	-4.2205	-3.4717	0.0068	Stationary

Table 6: Augmented Dickey-Fuller test results.

Equation	Type	Statistic	Hypothetized No. of CEs	Critical value 0.05	P value*
C_{priv}	Trace	42.9132	1	29.7971	0.0009
	Max-Eigen	29.58420	1	21.13162	0.0026
Ipriv	Trace	25.7024	1	24.2760	0.0328
	Max-Eigen	17.13022	0	17.7973	0.0627
X	Trace	28.4337	1	24.2760	0.0141
	Max-Eigen	11.3407	2	11.2248	0.0477
M	Trace	16.3494	1	15.4947	0.0371
	Max-Eigen	14.0806	0	14.2646	0.0534

Table 7: Augmented Dickey-Fuller test results.

Therefore, in table 8 the cointegration coefficients are shown and the results for the elasticity appear in table 9. For the equation I_{priv}, the cointegration equation considers the two-periods lagged GDP and one-period lagged gross profits time series. For the equation of exports, the time series of Z is lagged twice. In this case, the economic growth regime for 1942-2019 remains wage-led but the elasticity now is lower: 0.093%. The effect of an increasing of the wage-share on private investment now is negative, which means that in the correct specification the distributive effects are bigger than the accelerator effect on GDP (-0.011). Finally, the multiplier diminishes to 3.28 because of the same negative effects on the private investment and the reduction of the imports elasticity to 0.019.

Equation	*Constant*	W	Π	GDP	Z
C_{priv}		0.9807	0.5760		
I_{priv}			0.0514	0.0042	
X			0.2656		0.0060
M	-1.29E+09			0.2026	

Table 8: Cointegration coefficients.

E_{YV}	$\frac{C}{Y}E_{CV}$	$\frac{I}{Y}E_{IV}$	$\frac{X}{Y}E_{XV}$	$\frac{M}{Y}E_{MV}$	Multiplier
0.0929	0.1844	-0.0114	-0.0612	0.0188	3.2755

Table 9: Economic growth regime (1942-1990) based on CEs.

6 Conclusions

In the present work, the importance of the factor income distribution concerning economic growth in Peru was evaluated. The post-Keynesian approach to the literature of economic regimes appears as the pillar for a more transparent analysis of the Peruvian economy between 1940 and 2016. This paper has taken Lavoie and Stockhammer (2013) when proposing an alternative theoretical framework to understand the interaction between distributional policies and the growth regime. It is useful to understand the dynamics between the characteristics of the aggregate demand of an economy and how economic policies that redistribute income between workers and owners (capitalists) behave. As Glyn (2009) and Atkinson (2009) state, factor income distribution is relevant for the empirical analysis of macro dynamics because it allows for building a link between income at the macroeconomic level (national accounts) and income at the household level (microeconomic level).

For the Peruvian case, the wage share shows a downward trend since 1962 and experienced a recovery in the year 1993. Wage share time-series stabilized since 2003 but diminishes after 2010 because of the economic bust cycle. However, the gap between the wage share and the profits share reverse since 1990. The mixed-income share decreased from 1942 to 1978. However, its level augmented during the short period 1982-2000 and stabilizes itself at 20%. This is a result of the structural transformation in Peruvian society. The agricultural component which represents the dynamics of the rural economy diminished until 1972. After that period, this element stabilizes its share of GDP at 5%. The non-agricultural component moves between 11% and 20%.

At the same time, the profits share evolves in an ascending way from the fifties until the arrival of the 1980s. Afterwards, it experienced a pronounced fall until the nineties, to decrease again towards the year 1994. In 2003, this component experienced a significant increase and continues like this until the year 2011. After that, the profits share trend slows down. Whereas before the nineties the wage share was higher than the participation of the surplus, during the nineties this last component surpasses the first and the gap between the two is becoming wider. These changes in the factor income distribution are the result of the historical process experienced, which implies variations in the economic policy adopted by the different political regimes during the period 1940-2016.

The decomposition of the wage participation based on the methodology of Graña and Kennedy (2008) shows that the average cost of labor fell flatly during the period 1970-1990. Since the last decade, this average cost has been growing, but it remains at levels well below those experienced in the first period. This shows that labor costs have been decreasing over time. Likewise, there is an increasing gap between the average productivity of labor and the average cost of salaried labor. For this reason, the is evidence for telling that the average remuneration of workers has been deteriorating. This would explain in part the change in the dynamics of the factor income distribution. Finally, the rate of salaried employment has never overcome the 50%. Yet, it shows an increasing trend for the period 2002-2019.

The evolution of the terms of the trade index is related to the development of profit shares in Peru. There is a coincidence between the cycles of the gross profit rate and such an index. The improvement of terms of trade experimented in the latter years of the full-period 1942-2012 coincide with the increase in profits share as well. At the same time, the construction of the average ROE (returns on equity) of the listed firms in the Lima Stock Exchange shows that during the forties and fifties there is a negative relationship between returns on countable capital and profits in the former decade but it changes during the latter decade mentioned. During the period 1974-2016, the average ROE of the Peruvian economy shows declines in coincidence with the years of economic crisis. At the same time, the diminishing of countable capital return's proxy corresponds to a downward pattern of profits share during the nineties. After 2000, there is a coincidence in the evolution of the terms of trade index, the average ROE, and the gross profit share.

The analysis of the relationship between factor income distribution and the growth regime in Peru is made using a modification of the Naastepad and Storm (2007) model as it is shown in Germán Alarco (2016) and Germán Alarco and Castillo Garcıa (2019). The model is estimated using the series of wage share merging the mixed-income share. The coefficients obtained from the regression are reasonable and suitable to the equations system specified. The application of the model for the full period 1942-2019 indicates that the growth regime is wage-led. This means that the positive impacts of the increase in the wage share on consumption predominate over the

negative effects that are generated on investment and exports. If correcting the presence of unit roots in the time series, the elasticity shows the same result. Yet, the result now is 0.08% less than the initial 3SLS estimation. The paper identifies year 1990 as turning point in the trends of the factor income distribution, so the full period is split to assess the criticisms of Nikiforos (2014) on economic growth regimes estimations. Thus, between 1942 and 1990, there was a wage-led economic regime mainly because of the relevance of the wage and mixed-income shares for the Peruvian economy. However, between 1990 and 2019 the growth regime is based on profits. It is a result of the application of neoliberal policies and the structural transformation of the Peruvian economy after the privatization process during the nineties.

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