Factor income distribution and growth regimes in Latin America, 1950–2012

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Abstract. *After a comprehensive review of the literature on economic growth regimes, the author develops an econometric model to determine the type of growth regime prevailing in 16 Latin American countries over the period 1950–2012, using statistical data on the respective wage share and profit share of GDP. After analysing the evolution of factor income distribution in relation to economic growth during the period in question, the author concludes that most Latin American economies have a wage-led growth regime, and that redistribution policies targeted at wages are therefore conducive to economic growth.*

The issue of income distribution has recently returned to the top of the global agenda following the work of Piketty (2014), who provides systematic long-term statistical data on the concentration of wealth and income growth in the major world economies. While it was not his explicit intention, Piketty has opened up debate on the third of the three basic economic questions – what to produce, how to produce, and for whom to produce? – in the classical and post-Keynesian tradition. For Piketty, high levels of wealth and income inequality represent a threat to democracy; he does not, however, explore the ways in which this inequality also contributes to crises, economic downturns and social disorder.

In recent decades, the issue of income distribution has also received renewed attention on the research agenda in Latin America. Emphasis is placed on personal income distribution, however, rather than on factor or functional income distribution, on which less work has been carried out.[1] The latter

[1] Work that has been carried out includes Abeles, Amarante and Vega (2014), Alarco (2014a), ILO (2012), ECLAC and ILO (2012), Neira Barría (2010), Lindenboim (2008), Frankema (2009), Bértola et al. (2008) and Fitzgerald (2009).

approach poses a number of problems, such as the fact that in most Latin American economies mixed income or self-employed income is included in the gross operating surplus, resulting in corresponding adjustments and estimates being made in some studies.

Analysing personal income distribution is not straightforward either, however, since the household surveys on which such studies are based underestimate the highest income strata, and there are mismatches when these results are extrapolated from national accounts. In addition, statistics on the subject are hard to come by in Latin American countries; in most of them, access to data based on income tax returns is not possible, and the absence of inheritance tax makes it impossible to collect statistical data on the evolution of wealth accumulation of the kind compiled by Piketty (2014).

Since Kalecki (1954), factor income distribution has been a central element in explaining the level and evolution of GDP. Post-Keynesians have explored this relationship in depth, including researchers investigating growth regimes, who analyse the various ways in which the wage share of GDP influences private consumption, private investment, exports and productivity, seeking to establish whether an increased wage share contributes to an increase in economic activity, or not. If so, we could say that the growth regime is wage-led; if not, that the growth regime is profit-led.

This article aims to review the evolution of the wage share and profit share of GDP (specifically, the share of wages and salaries and the gross operating surplus, respectively) in Latin America, for the period 1950–2012, and to determine whether the 16 economies analysed were wage-led or profit-led. This article builds on an earlier study (Alarco, 2014a) on the wage share. The main questions addressed are: What does the literature on the relationship between income distribution and economic growth regimes tell us? What is the distribution pattern of the wage share and profit share in Latin America? Are there common distribution patterns for the entire region, or are some features specific to particular groups of countries? How has the wage share evolved compared to economic growth in the long run? In the different economies of Latin America, is the growth regime wage-led or profit-led?

The remainder of the article is organized into five sections. The first section reviews the literature on the relationship between income distribution and growth regimes. The second describes the model used to determine the type of economic growth regime, and the data sources used. The third section describes the basic statistical data on the evolution of the wage share and profit share, common distribution patterns, and the correlation between wage share and economic growth in Latin America as a whole. In the fourth section the selected model is applied and the results presented, thereby identifying what economic growth regime prevailed during the period under review in the countries studied. The last section presents a number of conclusions and policy recommendations.

With regard to the article's scope and limitations, in line with our macroeconomic perspective we omit structural and socio-political factors specific

to each economy. The work is of a preliminary nature, and would benefit from being followed up in more detail for each country. The same basic econometric tools were used for all the economies analysed. We do not estimate the income of urban or rural self-employed workers, since their situation could be similar in practice to that of wage earners. Nor do our policy recommendations extend to the issue of improving income distribution and economic growth.

Literature on distribution and economic growth regimes

Conceptual framework

The French school of regulation theory reopened the debate on economic growth regimes. While their theories are inspired by the ideas of Karl Marx, Regulationists deny that the capitalist mode of production is comprehensible in terms of a single set of laws that remain unchanged from its inception until its eventual suppression (Brenner and Glick, 1991). For Boyer (1988 and 2007) an "accumulation regime" is the body of "regularities"[2] that ensure a comprehensive and relatively consistent progression of the accumulation of capital, in that these regularities absorb or spread over time distortions and imbalances that constantly arise from the process itself.[3]

More specifically, Bowles and Boyer (1988) developed the argument that the level of employment may respond either positively or negatively to changes in the wage rate, giving rise to an employment regime that is wage-led or profit-led, respectively. Establishing at the outset that the neoclassical theory of employment and output is characterized by the acceptance of Say's law (according to which all supply creates its own demand) and that labour is a commodity like any other, they integrated the two absences in the neoclassical theory: the Keynes-inspired analysis of aggregate demand and the Marx-inspired analysis of the problem of wage setting labour discipline.

Within the post-Keynesian school, Bhaduri and Marglin (1990) made an important contribution to the theoretical framework that underpinned work on evaluation of growth regimes. Their objective was to develop a macroeconomic framework for analysing the relationship between wages and unemployment, based on the two basic schools of thought concerning the real wage: one that sees real wages as a production cost (neoclassical school) and one that sees real wages in terms of workers' purchasing power – i.e. in terms of stimulating demand. To this end, the authors designed a model that reformulated the traditional investment/saving (IS) curve and simulated exogenous changes in

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[2] The term "regularities" denotes the set of processes and behaviour, whether individual or collective, that reproduce fundamental social relationships, sustain and guide the "accumulation regime" in force, and ensure the dynamic compatibility of a set of decentralized decisions without it being necessary for economic actors to interiorize the principles of system adjustment (Boyer, 2007).

[3] While Aglietta and Lipietz are closer to Marx, Boyer is a critic of Marxist orthodoxy and creates a new theoretical framework that incorporates the arguments of Keynes and Kalecki.

real wages. In a closed economy, a rise in real wages is positive for consumption, but may not be positive for investment. In a profit-led economic growth regime (i.e. "exhilarationist" as opposed to "stagnationist"), a fall in real wages, which reduces private consumption, is compensated for by increased investment. This validates the "underconsumptionist" view. When an open economy with high dependence on foreign trade is analysed, it is observed that low wages can contribute to economic growth.

Stockhammer (2011a) adopts the Regulationist view, defining economic regimes as actual economic structures and institutions, including social security provisions, the financial system in place and the degree of openness of the economy. For this author, the key factor in determining whether economic growth is wage-led or profit-led is to evaluate the effects of changes in the wage share on supply and demand. With regard to demand, it is likely that consumer spending will be directly correlated with the wage share. Generally, higher real wages lead to higher consumer spending levels, since the propensity to consume out of wage income is higher than out of profit income. Second, there is the possibility that investment responds negatively to an increase in the wage share (brought about by a fall in the profit share or in company profit margins). Third, there is the probability that net exports respond negatively to increases in the wage share since, for a specific exchange rate, profitability decreases or exports become less competitive, although these effects will depend on the degree of openness of the economy and on the types of products that are exported and imported.

In this regard, one cannot know *ex ante* what the net effect of an increase in the wage share on demand will be. If the effect on consumption is greater than on net exports and investment, the overall result will be positive and the economy can be said to be a wage-led demand regime. Conversely, if the effect is greater for investments and net exports, the net effect of an increase in the wage share on demand will be negative, and the regime will be profit-led. Regarding supply, the key issue is how changes in the wage share, or in real wages, affect productivity growth (or technological progress, from a broader perspective). The contribution is considered to be positive, according to Kaldor-Verdoorn's Law, but neutral, or negative, according to orthodox economists.

Empirical research

Numerous empirical studies can be found on growth regimes. Stockhammer and Ederer (2008) identified two groups of papers, each of which used a different estimation strategy; however, there are now three groups.

The first group of papers tries to estimate the full model, i.e. a goods market equilibrium relation and a distribution function, and involves estimation of a structural VAR model. This approach has the advantage of incorporating interactions between the different variables; the disadvantage, however, is that this makes it difficult to identify the effects of individual

variables. The second group of papers focuses on the goods market and estimates consumption, investment and net export equations, without using state-of-the-art econometrics and ignoring the issue of unit roots; for this reason, methods of error correction are not used. The estimated models tend to be limited to specified theoretical models. The third group of papers builds on the second, but makes more use of econometrics, expanding the control variables and incorporating other elements, such as evaluating the impact of globalization and financialization.

As part of the first group, Stockhammer and Onaran (2004) analysed the relationship between effective demand, income distribution and unemployment for the United States, France and the United Kingdom using a structural VAR model, following in the tradition of Kalecki and Kaldor. The dependent variables of this model are capital accumulation, capacity utilization, the profit share of GDP, productivity growth and unemployment. The Keynesian narrative is confirmed, in that there is weak evidence of the neoclassical hypothesis that a rise in real wages results in an increase in unemployment. In addition, the substitution of labour by capital in response to higher real wages is not confirmed empirically. Productivity growth plays an important role. Because of the model specification the authors have few policy recommendations to propose; however, they make it clear that policies of real wage constraint are ineffective in reducing the level of unemployment.

The second group of papers focuses on estimating the effects of changes in real wages, or in the wage share, on private consumption, private investment and net exports. Among the first to focus on this area, Naastepad and Storm (2007) studied a number of OECD demand regimes for the period 1960–2000, using a general Keynesian growth model, allowing demand growth to be wage-led or profit-led. They found that demand was wage-led in Germany, France, Spain, Italy, Netherlands and the United Kingdom, and profit-led in the United States and Japan. For these authors it is clear that the neoclassical recommendation of real wage growth restraint was not conducive to economic growth in six of the eight countries studied. On the other hand, in the case of profit-led economies, they found that the decline in world trade growth was the dominant cause of sluggish growth in all economies, including profit-led Japan and the United States.

On the basis of a solid econometric methodology, Stockhammer and Ederer (2008) found that, in Austria, domestic demand is wage-led. However, if world trade is included, the demand regime becomes profit-led, since foreign trade is important for this small open economy. Also, the international demand component increased over time, reflecting the increasing international division of labour in the context of globalization. However, given that wage shares had fallen sharply all over Europe – i.e. Austria's main trading partners – Austria's wage moderation did not fully translate into increased competitiveness.

Subsequently, Stockhammer, Onaran and Ederer (2009) studied factor income distribution and aggregate demand in 12 European economies, with mixed results. Analysing the specific case of Germany, Stockhammer, Hein and

Grafl (2011) found that a decline in the wage share typically has a contractionary effect on demand, but an expansionary effect on net exports, depending on the degree of openness of the economy. In this way, globalization can change a wage-led regime into a profit-led regime. Several factors play a role in this process: for example, imports and exports grow faster than GDP; price elasticities with respect to real wage rises increase over time; a substantial share of international trade consists of intermediate goods rather than final goods, meaning that effects on exports must be adjusted; and finally, capital mobility has increased.

Onaran, Stockhammer and Grafl (2009 and 2011) introduce the issue of financialization of an open economy, analysing the situation in the United States. Financialization is understood to comprise many phenomena, including deregulation of the financial system, the proliferation of new financial instruments, increased household debt, the new role of banks, the presence of global institutional investors, the formation of bubbles in the housing and financial market, the tremendous growth of the financial sector and the new shareholder value orientation in non-financial companies. The study concludes, essentially, that private consumption is driven by wages, while investment is driven by non-rentier profits (rentier profits having a negative effect on investment); if international trade is taken into account, however, the influence of profit dominates marginally.

In a study of the G-20 economies, including Argentina, Canada, China, India, Mexico, Republic of Korea, Turkey and South Africa, Onaran and Galanis (2012) obtained some interesting results. The analysis period was 1960–2007 for developed economies, and 1970–2007 for developing countries. In addition, data from developing economies included the mixed income of self-employed workers in total wages and salaries. The results highlighted that Germany, the United States, France, Italy, Japan, the United Kingdom, the Republic of Korea and Turkey have wage-led growth regimes. However, Argentina, Australia, Canada, China, India, Mexico and South Africa have profit-led growth regimes, mainly because of the sensitivity of net exports to the profit share of GDP, particularly in the case of China.

At a more conceptual level, Lavoie and Stockhammer (2012) suggest that the polarization in income distribution and the fall of the share of wages in GDP play an important role in generating unbalanced and unequally distributed economic growth. Along similar lines, various authors in the *International Journal of Labour Research* (ILO, 2011) make the argument for sustainable wage-led growth policies. Stockhammer (2011b) recommends combining labour market policies with social distribution policies in favour of workers, and greater regulation of the financial sector.

Problems with the growth-regime approach

Nikiforos (2014) asserts that an economy cannot be permanently wage-led or profit-led, arguing that all economies change from one growth regime to another, since income distribution is fundamentally unstable: changes con-

stantly occur in the propensity to invest and save that necessarily bring about a change in the growth regime. A number of institutional, social and political factors also come into play. Thus, the common practice of using long time series to determine the type of economic growth regime is misguided, and should be reconsidered.

Palley (2014) points out that it is not possible to classify an economy as being one kind of growth regime or another, as the nature of the regime depends on the policies implemented. Theoretical analysis considers the type of economy to be a natural characteristic, which it is not. Standard econometric studies, which estimate stable parameters over time to establish the nature of growth regimes, are not appropriate, since in reality parameters are unstable and may change, for example, with changes in economic policy, fiscal policies, changes in ownership structure and financialization, among other things. Palley cites several cases where econometric results that fail to take a sufficiently long-term horizon may be misleading. One example is when consumption is slow to respond to increases in the wage share because of lags in household recognition of changes in permanent income, making the economy look profit-led when it may actually be wage-led. Another case is where workers, in the same way as capitalists, have a positive propensity to save so that they own part of the capital stock (wealth) and therefore receive a share of the profits; this can lead one to conclude that the regime is profit-led when in fact it is wage-led. Changes in fiscal policy (for example, an increase in taxation) can also bring about a change from one growth regime to another. Palley concluded that policy recommendations based on this conventional neoclassical approach are misguided and can be problematic.

Similarly, one can criticize the excessive determinism of the traditional approach regarding growth regimes. In this regard, Lavoie and Stockhammer (2012) note that when distributional policies and economic structures are not consistent – i.e. if pro-capital distributional policies are pursued in a wage-led economy or, especially, if pro-wage distributional policies are pursued in a profit-led economy – this will result in stagnation and unstable growth. However, it should be borne in mind that institutional structures are not permanent, and that distributional policies respond to situations in which investments and exports had previously declined. The central question is whether the new circumstances change the way entrepreneurs behave, or whether exports and imports become less sensitive to increases in real wages.[4]

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[4] In their conclusion, these two authors hint at two ways to change an economy operating under the conditions of a profit-led regime, such as China, into one that is wage-led. On the export front, they say, the range of products being offered for exports should be switched for products that are less sensitive to pricing competition and, on the domestic front, the social security system should be improved in order to induce income recipients – and in particular wage earners – to reduce their precautionary savings, thus leading to a reduction in the propensity to consume out of wages and hence helping to create the structural conditions required for a wage-led regime. However, these responses are exogenous (i.e. theoretical and external) and not endogenous (i.e. generated from within the Chinese system).

Methodology and data

Methodology

The basic structural model used here to determine the type of growth regime is a variant of the model developed by Naastepad and Storm (2007). The aim is to assess the effect on GDP (X) of a change in the wage share. Equation (1) describes GDP as the sum of the components usually considered under the expenditure method of calculation: private consumption (C), private investment (I), government consumption and investment (G), exports of goods and services (E) minus imports (M). All variables are measured at constant prices.

$$X = C + I + G + E - M \tag{1}$$

Equation (2) defines the real labour cost per unit of output (V), or the real wage share, as the nominal wage (W) over price level (P) – or the real wage (w) – multiplied by labour productivity (γ).

$$V = \left(\tfrac{W}{P}\right)\gamma^{-1} = w\gamma^{-1} \tag{2}$$

Equation (3) shows the profit share of GDP (π as being equal to 1 minus the real wage share, or 1 minus the real labour cost per unit of output:

$$\pi = 1 - w\gamma^{-1} = 1 - V \tag{3}$$

Equation (4) shows private consumption (C) as the product of the propensity to consume of wage earners (δ_w) and the wage share, plus the product of the propensity to consume of recipients of capital income (δ_π) and the profit share, which is then multiplied by GDP.

$$C = [(\delta_w w\gamma^{-1} + \delta_\pi \pi)X] = [(\delta_w V + \delta_\pi(1 - V))X] \tag{4}$$

In this simplified model, it is assumed in equation (5) that imports (M) are a linear function of the import propensity (α) multiplied by GDP (X). Equation (6) shows private investment (I) as a direct function of the profit share and GDP, where Θ_0 and Θ_1 are the investment elasticities with respect to the profit share and GDP ("investment accelerator"), respectively, both elasticities are greater than zero, and parameter A_I is a constant used to define the autonomous level of investment. Exports (E), as shown in equation (7), are defined as a direct function of world demand (Z) and labour cost per unit of output, with a parameter that is traditionally less than zero.

$$M = \alpha X, \tag{5}$$
$$I = f(\pi, X) = A_I \pi^{\Theta_0} X^{\Theta_1}, \tag{6}$$
$$E = g(Z, V) = A_E Z^{\varepsilon_0} V^{\varepsilon_1}. \tag{7}$$

Based on these equations, we now evaluate the effect on GDP of a change in the wage share. Equation (8) shows the elasticity of GDP with respect to the wage share (E_{XV}). Equation (5) is substituted into equation (1); the product is derived with respect to the wage share; it is assumed that government spending (current spending and government investment) is insensitive to changes in the wage share; and the following elasticities are defined: private

consumption with respect to the wage share (E_{CV}); private investment with respect to the wage share (E_{IV}) and exports with respect to the wage share (E_{EV}).

$$E_{XV} = \frac{C}{X} E_{CV} + \frac{I}{X} E_{IV} + \frac{E}{X} E_{EV} - \alpha E_{XV} \tag{8}$$

Equations (9), (10) and (11) show the respective elasticities E_{CV}, E_{IV}, E_{EV} obtained by deriving equations (4), (6) and (7) with respect to a change in the wage share, and solving equation (3):

$$E_{CV} = \frac{V(\delta_w - \delta_\pi)}{\delta_w V + \delta_\pi (1-V)} + E_{XV} \tag{9}$$

$$E_{IV} = -\frac{\Theta_0 V}{1-V} + \Theta_1 E_{XV} \tag{10}$$

$$E_{EV} = \varepsilon_1 \tag{11}$$

Equation (12) shows the final result of the elasticity of GDP with respect to a change in the wage share, on the basis of equations (8), (9), (10) and (11). This reduced form takes account of the expenditure multiplier, which includes the share of consumption in GDP, the propensity to import, the investment accelerator parameter and the share of private investment in GDP. The numerator contains the respective consumption, private investment and exports elasticities with respect to the wage share, and the share of these variables in GDP. If the final result is $E_{XV} > 0$, we conclude that during the period under review the main growth regime is wage-led, whereas $E_{XV} < 0$ indicates that the growth regime is profit-led.

$$E_{XV} = \left(\frac{1}{1 - \frac{C}{X} + \alpha - \Theta_1 \frac{I}{X}} \right) \left[\frac{C}{X} \frac{V(\delta_w - \delta_\pi)}{\delta_w V + \delta_\pi (1-V)} - \frac{I}{X} \Theta_0 \frac{V}{1-V} + \varepsilon_1 \frac{E}{X} \right] \tag{12}$$

Data

The two basic variables in our study are the share of wages and salaries in GDP (i.e. the wage share) and the gross operating surplus in GDP (i.e. the profit share), for 16 Latin American economies. We also take into account macroeconomic variables and global GDP as a proxy for world demand. The 16 economies analysed are Argentina (1950–2012), Plurinational State of Bolivia (hereinafter Bolivia) (1960–2012), Brazil (1950–2012), Chile (1950–2012), Colombia (1950–2012), Costa Rica (1953–2012), Ecuador (1953–2012), El Salvador (1960–2012), Honduras (1950–2012), Mexico (1950–2012), Nicaragua (1960–2012), Panama (1950–2012), Paraguay (1962–2012), Peru (1950–2012), Uruguay (1955–2012) and the Bolivarian Republic of Venezuela (hereinafter Venezuela) (1957–2012). We do not include Guatemala and the Dominican Republic, because of insufficient data.[5]

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[5] Eighteen Latin American economies were considered, but only 16 were ultimately included, because of a lack of data in intermediate periods. Similarly, we tried to extend the period of analysis up to 2013, although we later had to shorten it to 2012. Both the detailed methodology and the comprehensive data on factor income distribution are available from the author on request. See also Alarco (2014a), which covers 15 Latin American economies from 1950 to 2010/11.

The additional data used to determine the growth regime reflect the various components of GDP used in the expenditure method of calculation: private consumption, government consumption, gross capital formation, exports and imports of goods and services. These data were obtained from the World Bank database on national accounts, which covers the period 1960–2012; data are expressed in millions of US dollars in 2005. For additional data on GDP and corresponding expenditure for the period 1950–60, we used data on national accounts taken from the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) data series,[6] and those of CEPALSTAT, for the reference year 1970. We adjusted the series to the new reference years in two stages, first 1980 and then 2005, using data from the period 1990–2013. We were then able to use, through back calculation, the observations of the World Bank database as far back as 1950.

It should be noted that there are information gaps for specific countries. Also, in order to distinguish between private and government gross capital formation we use data from national sources, in particular central banks, national statistical offices and research centres in each country. It was assumed that the gross fixed capital formation of each institutional sector had the same deflator as the total gross fixed capital formation. We were therefore able to calculate the government and private share of gross capital formation in both nominal and in real terms.

Basic statistics and trends

Table 1 shows the wage share for the 16 Latin American economies analysed. The economies with the highest wage share are Panama, Costa Rica, Honduras, Brazil and Argentina; those with the lowest are Ecuador, El Salvador, Paraguay, Bolivia and Peru; and Chile, Colombia, Mexico, Nicaragua, Uruguay and Venezuela have an intermediate-sized wage share. Countries with the highest variation coefficient are Nicaragua, Paraguay, El Salvador, Bolivia and Venezuela; those with the lowest coefficient are Brazil, Honduras, Chile, Colombia, Mexico and Argentina; Costa Rica, Ecuador, Panama, Peru and Uruguay have an intermediate-sized variation coefficient.

Using a moving average indicator (ϕ) we compare the average of the last ten observations and the average of the first ten, to determine whether the trend is positive (result > 1), negative (result < 1) or constant (approximately 1).[7] In this regard, El Salvador, Honduras and Ecuador have a clear positive trend, while Chile and Costa Rica have a slightly positive trend. Those with a markedly negative trend are Panama, Peru, Nicaragua, Venezuela and Bolivia. As for Argentina, Brazil, Colombia, Mexico, Paraguay and Uruguay, these countries have a slightly negative trend. The last column of table 1 shows

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[6] *América Latina y el Caribe: Series históricas de estadísticas económicas, 1950-2008*, available at: http://www.cepal.org/deype/cuaderno37/esp/index.htm [in Spanish, accessed 19 February 2016].

[7] The formula is $\phi = \Sigma_{n-9}^{n} X_i / \Sigma_{1}^{10} X_i$.

Table 1. Wage share in Latin America

|	Period	Average	Variation coefficient	Maximum value	Year max. value	Minimum value	Year min. value	Moving average indicator (ϕ)	No. of complete cycles
Argentina	1950–2012	39.61	0.14	48.79	1974	28.06	1989	0.82	2
Bolivia	1960–2012	28.44	0.46	43.12	1984	24.13	1986	0.76	1
Brazil	1950–2012	43.19	0.06	48.59	2012	39.31	2004	0.94	2
Chile	1950–2012	38.17	0.10	52.19	1972	30.88	1988	1.01	2
Colombia	1950–2012	36.66	0.09	44.07	1993	31.36	2011	0.94	1
Costa Rica	1953–2012	44.85	0.23	51.33	2012	39.10	1982	1.03	2
Ecuador	1953–2012	25.41	0.33	37.95	2007	15.80	1999	1.12	2
El Salvador	1960–2012	25.77	0.50	41.91	1981	11.51	1960	1.46	2
Honduras	1950–2012	43.41	0.08	50.36	1986	35.04	1953	1.16	2
Mexico	1950–2012	32.49	0.11	40.26	1976	26.84	1987	0.94	2
Nicaragua	1960–2012	36.17	0.53	57.24	1985	19.24	1988	0.66	2
Panama	1950–2012	50.43	0.23	67.41	1969	30.32	2012	0.52	2
Paraguay	1962–2012	27.17	0.50	38.73	2000	24.34	1990	0.90	2
Peru	1950–2012	31.43	0.21	41.15	1958	20.91	2008	0.60	1
Uruguay	1955–2012	36.59	0.33	50.43	1963	27.75	1984	0.81	2
Venezuela	1957–2012	33.04	0.39	46.90	1960	25.52	1996	0.71	2

Source: Author's own calculations, based on data from World Bank (2014), ECLAC (2013), ILO (2013) and various national sources.

the number of complete peak-and-trough cycles observed over the period 1950–2012.

Figure 1 shows the wage share and profit share for the Latin American countries studied (weighted by GDP in constant 2005 dollars), for the period 1950–2012. Both the original data, and the data corrected using the Hodrick-Prescott filter are shown, to indicate the non-linear trend. It can be seen that the wage share is highest in the 1960s, particularly 1967 for the original data, and 1964–66 for the corrected data. From then on we observe a moderately decreasing trend, with sharp declines in 1985, 1996 and 2004–06, for both the original and corrected data. From 2005 there is a return to a moderate upward trend, with values approaching those of the 1980s. The profit share is highest in 1951, after which point it starts to decrease, reaching its lowest point in 1967 for the original data, and 1969 for the corrected data. From this point the trend is basically positive up to 2006. From then on there is a slightly negative trend, as a result of the increased wage share. These aggregate results are explained primarily by the greater weight of Brazil, Mexico and Argentina in the region, followed by small-and medium-sized economies.

It is important to analyse whether this general trend in the evolution of the wage share and the profit share applies to all – or only some – economies in the region, and to what extent local specificities play a part. To this end, we estimate correlation coefficients between the respective wage shares of all the

Figure 1. Wage share and profit share in Latin America, 1950–2012 (percentages)
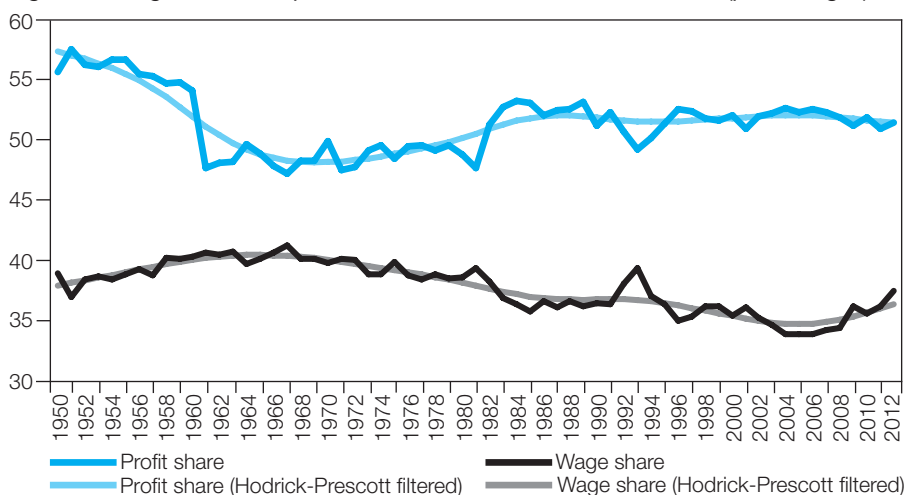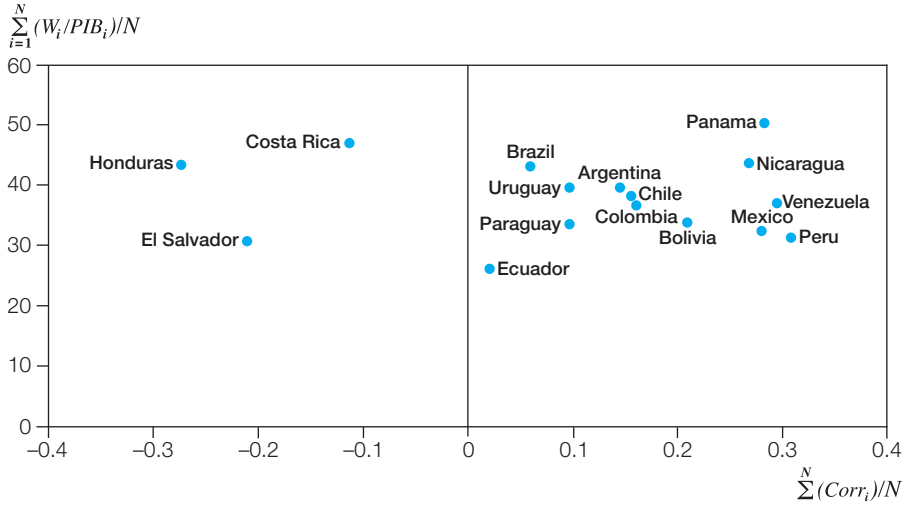

Source: Author's own calculations, based on data from World Bank (2014), ECLAC (2013), ILO (2013) and various national sources.

countries studied, drawing up a correlation matrix showing the correlations between countries. The values are: 1 when there is a positive or direct correlation, –1 if there is a negative or inverse correlation and 0 when there is no correlation. A matrix of 128 results is obtained.

Figure 2 shows the aggregated data obtained using this correlation matrix, with regard to the wage share. The vertical axis shows the average wage share of the different countries, over the entire period 1950–2012. The horizontal axis shows the simple average of the wage share correlations between economies. The distance between one economy and another is measured by the difference between average wage share values and the difference between average correlations. Costa Rica, El Salvador and Honduras have, like other countries, an average wage share, but are more distant from other economies in terms of their wage share correlations. A core group of economies have more similar distributions: Argentina, Bolivia, Brazil, Chile, Colombia, Venezuela, Mexico, Nicaragua, Paraguay, Peru and Uruguay (Argentina, Chile and Colombia are very close to each other); these countries probably have the same distribution narrative. The last group of countries, Ecuador and Panama, are the furthest from this core group.

Figure 3 shows the five-year trend in the correlation between the wage share and economic growth in Latin America, in five-year sub-periods, for the period 1950–2012. These results are obtained using the regional average (corrected using the Hodrick-Prescott filter) and the geometric mean of GDP growth. The figure provides a useful overview of the situation in the region: the situation improves when an increase in the wage share coincides with economic growth, and worsens when both variables have lower values or when there is a

Figure 2. Distribution of the average wage share (vertical axis, percentages) and the average correlation between Latin American economies (horizontal axis), 1950–2012

$$\sum_{i=1}^{N}(W_i/PIB_i)/N$$

$$\sum^{N}(Corr_i)/N$$

Source: Author's own calculations, based on data from World Bank (2014), ECLAC (2013), ILO (2013) and various national sources.

Figure 3. Relationship between wage share and economic growth in Latin America, in five-year periods, 1950–2012
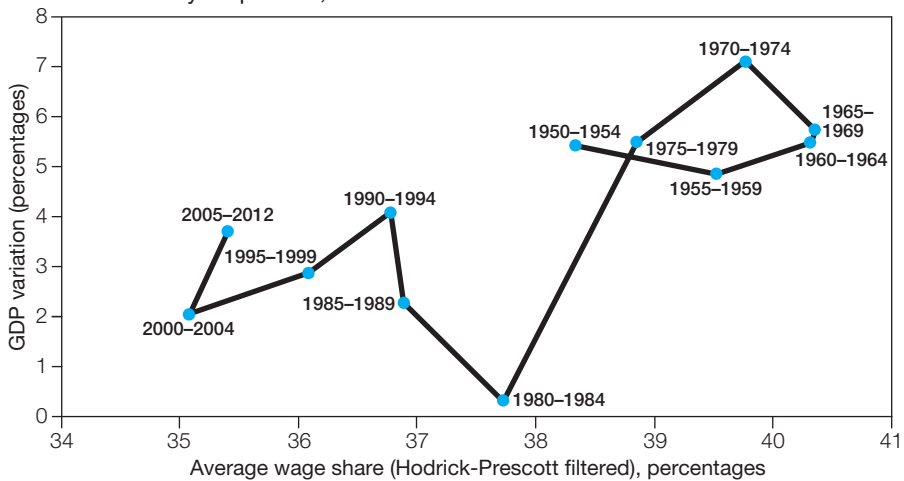
Source: Author's own calculations, based on data from World Bank (2014), ECLAC (2013), ILO (2013) and various national sources.

trade-off represented by lower economic growth and a higher wage share. More-over, the figure also serves to graphically show the periods in which the Latin American economy is wage-led, i.e. when the correlation is direct or positive, and the periods when the economy is profit-led, i.e. when the correlation is negative.

Figure 3 shows that, in general, the period 1950–79 was better than 1980–2012, since the correlation between wage share and GDP growth in Latin America has higher values in the first period than in the second, as was the case internationally. Other sub-periods can be identified, where both variables increased, such as 1960–64, 1990–94[8] and 2005–12. The periods marked by a trade-off between wage share and economic growth were limited, occurring mainly in the 1980s, the second half of the 1950s and the first half of the 1970s. It is clear that for most of the time a wage-led economic growth regime prevailed not only in boom times – i.e. from the second half of the 1950s to the first half of the 1960s, and between 2000–04 and 2005–12 – but also when economic growth declined, from the 1970s to the first half of the 1980s and in the 1990s up to the first half of the 2000s. In the other periods (from the second half of the 1960s to the first half of the 1970s and the first half of the 1980s to the first half of the 1990s, the economy grew as the result of the other components of (internal and external) demand, even though the wage share decreased.

Results: Wage-led growth and profit-led growth

In this section, the model described in the methodology section is applied, to assess the type of economic growth regime in the Latin American economies studied, using all the data available for 1950–2012. This analysis gives an overall view, without going into the specifics of each economy or sub-period. However, as seen in figure 3, sub-periods can be identified during which a wage-led growth regime changes to a profit-led regime, or vice versa.

The process consists of three stages. First, the private consumption, private investment and exports functions are estimated for the different economies (equations (4), (6) and (7)). Second, the private consumption, private investment and exports elasticities with respect to the wage share, E_{CV}, E_{IV}, E_{EV} respectively, are calculated (equations (9), (10) and (11)). Third, these results are substituted into equation (12) for calculating the elasticity of GDP with respect to the wage share (E_{XV}). If $E_{XV} > 0$, the economic growth regime is wage-led, and if $E_{XV} < 0$, it is profit-led.

Table 2 shows the results of the (real) private consumption function estimates, where the main variables are the relationship between the consumption propensity of wage earners and the wage share and the relationship between the consumption propensity of capital income recipients and the profit share, both during the same period and with a time lag of one or two years.[9] These parameters have the expected sign, and acceptable values, showing that wage earners' consumption propensity is higher than that of capital income

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[8] An improvement can be seen from the second half of the 1980s to the first half of the 1990s with the original data, but not when the data are corrected with the Hodrick-Prescott filter, as shown in figure 3.

[9] The correlation is sought first in the same period of time and then, for econometric reasons, with a time lag of one (–1) and two (–2) years, respectively.

Table 2. Private consumption functions (C/X)

Country	Constant	w	π	w−1	π−1	w−2	π−2	AR(1)	AR(2)	R^2	F	DW	Period
Argentina				0.8180 (15.0395)*	0.6340 (14.5569)*			0.5942 (5.3900)*		0.6027	43.9947	1.9994	1950–2012
Bolivia						0.7779 (10.4348)*	0.7582 (15.1196)*	1.1657 (9.0753)*	−0.3543 (−2.8508)*	0.8056	62.1633	2.2491	1960–2012
Brazil		1.0709 (11.5382)*	0.2928 (3.3980)*					0.8168 (10.8143)*		0.4153	20.9507	1.8390	1950–2012
Chile		0.9075 (8.7365)*	0.5947 (6.4306)*					0.8019 (11.1782)*		0.5979	43.8557	2.3664	1950–2012
Colombia[a]		0.9744 (9.3895)*	0.6376 (8.5808)*						0.7715 (27.5739)*	0.8132	82.7016	1.7378	1950–2012
Costa Rica				1.0038 (8.7493)*	0.5846 (4.9186)*			0.8878 (13.5940)*		0.7349	76.2254	2.1518	1953–2012
Ecuador[b]	0.5680 (13.6096)*	0.1525 (2.7666)*			0.1211 (2.0652)*			0.4898 (4.0438)*		0.4311	10.0396	1.9768	1953–2012
El Salvador[c]		0.9948 (6.0225)*			0.6759 (8.0443)*			0.5142 (3.8059)*		0.4659	13.6651	1.9236	1960–2012
Honduras				0.9602 (11.3920)*	0.7998 (8.7672)*			0.7214 (7.5188)*		0.4539	24.1059	2.1016	1950–2012
Mexico				0.7794 (5.2333)*	0.5853 (6.4990)*			0.9465 (21.7734)*		0.8592	177.0332	2.0652	1950–2012
Nicaragua[d]				0.9306 (8.9719)*	0.8485 (8.9269)*			0.8960 (13.9704)*		0.7879	58.2031	1.8404	1960–2012
Panama		0.5769 (5.9267)*	0.5246 (5.7230)*					0.9225 (18.6119)*		0.8419	157.0931	2.2382	1950–2012
Paraguay[e]				1.3216 (10.3747)*	0.6162 (7.1724)*					0.7449	45.7549	1.4660	1962–2012
Peru				0.9674 (7.9334)*	0.7027 (9.4545)*			0.9239 (15.6898)*		0.7336	52.3160	1.9593	1950–2012
Uruguay		1.0382 (11.4823)*	0.7120 (8.4409)*					0.6290 (5.8648)*		0.5332	30.8464	2.3249	1955–2012
Venezuela				0.5621 (3.0384)*	0.5499 (3.7566)*			0.9799 (47.3028)*		0.9768	1071.8406	1.1046	1957–2012

* Different from 0, significant at the 5 per cent level.

[a] We include a component variable MA(1) that has an estimated coefficient of 0.999222 (t-stat = 27.5739).   [b] We include a dummy variable that takes the value 1 in the period 1980–91 and 0 in other periods, and has an estimated coefficient of 0.023711 (t-stat = 2.4134).   [c] We include a dummy variable that takes the value 1 in the period 1992–2012 (i.e. following the civil war) and 0 in other periods, and has an estimated coefficient of 0.159748 (t-stat = 4.7096).   [d] We include a dummy variable that takes the value 1 in 1988 (when inflation ranged from 2 to 36 per cent) and 0 in other periods, and has an estimated coefficient of 0.144767 (t-stat = 5.0833).   [e] We include a trend variable that has an estimated coefficient of -0.004362 (t-stat = -6.7098), and a component variable MA(1) that has an estimated coefficient of 0.963558 (t-stat = 5.2712).

Source: Author's own calculations, based on data from World Bank (2014), ECLAC (2013), ILO (2013) and various national sources.

recipients, and that in all cases the values are significantly different from zero. In some countries with a greater inflationary tradition, or that had significant inflationary episodes in the period under review, the propensity to consume may be greater than 1.[10] In all regressions, autoregression vectors AR (1) were included, with AR (2) vectors used for Bolivia and Colombia to correct problems of error autocorrelation. For five countries, dummy variables were used, as explained in the notes to the table. The regressions' goodness of fit (R^2) is acceptable, although not analysed in detail for each economy. A t-test is carried out (corresponding values indicated in brackets), and the F test (F), for the entire set of parameters, thereby demonstrating the quality of the results. As shown by the values of the Durbin-Watson (DW) test, there are no problems of error autocorrelation.

Table 3 shows the results of the (real) private investment function estimates. The main variables are the relationship between private investment and the profit share and the relationship between private investment and GDP (private investment accelerator), both in the same period, and with a time lag of one or two years. Overall, both parameters were expected to be positive, although in the case of Ecuador, Mexico and Venezuela a negative correlation between the profit share and GDP was obtained. The private investment accelerator was always positive. As in the consumption function, vectors AR (1), AR (2) and MA (1) were included in some cases. Moreover, it is interesting to note that the goodness of fit (R^2) of these regressions was greater than that obtained for the private consumption functions. All the estimated parameters have a high level of significance (F test) and there are no problems of error autocorrelation (DW).

Table 4 shows the results of the real exports regressions. It can be seen that there are positive correlations between exports and world demand (ln Z), but negative correlations between exports and the wage share (ln w), both during the same period and with a one-year time lag. The vector AR (1) is incorporated, and in some cases AR (2), as well as dummy variables for exceptional periods. The goodness of fit (R^2) of the regressions was high. Overall, the parameters were significantly different from zero according to the F test, although not all the parameters of the exports/wage share function were significant – in these cases, real wages do not have a strong effect on exports.

Table 5 shows the results of equation (12), once the regression parameters shown in tables 2, 3 and 4 have been incorporated – this gives us the reduced form equation showing the elasticity of GDP with respect to changes in the wage share. The GDP components of private consumption, private investment and exports (including in each case the expenditure multiplier) are shown, together with the overall effect, which is the sum of these three components. The table also specifies whether the growth regime is wage-led or

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[10] In the case of Brazil, one omitted variable that is important for explaining levels of private consumption is that of household debt levels.

Table 3. Private investment functions (private investment ln)

Country	Constant	$\ln \pi$	$\ln X$	$\ln \pi_{-1}$	$\ln X_{-1}$	$\ln \pi_{-2}$	$\ln X_{-2}$	AR(1)	AR(2)	R^2	F	DW	Period
Argentina[a]	−284.1415 (−0.0110)	0.2594 (1.8439)	2.6543 (12.9549)*					0.9998 (68.0580)*		0.9792	672.1331	1.8467	1950–2012
Bolivia[b]		2.0492 (3.9612)*					0.8494 (17.8190)*	0.7871 (7.8818)*		0.8950	100.1484	1.7533	1960–2012
Brazil[c]	−1.2061 (−3.4227)*	0.4844 (3.0578)*	0.9880 (34.4622)*							0.9846	1 261.2156	1.4198	1950–2012
Chile	−8.6123 (−6.5757)*	0.9424 (2.7715)*	1.6648 (13.8045)*					0.6593 (6.9003)*		0.9630	502.5263	2.3153	1950–2012
Colombia		1.1114 (2.7885)*	0.8914 (39.4051)*					1.1779 (9.6703)*	−0.4125 (−3.2041)*	0.9741	713.8550	2.0621	1950–2012
Costa Rica[d]						1.2313 (3.9972)*	0.9190 (27.4359)*			0.9668	474.9391	1.5698	1960–2012
Ecuador[e]	−3.1778 (−7.4059)*	−0.7705 (−3.1269)*	1.0902 (27.7449)*							0.9698	598.8011	1.5829	1953–2012
El Salvador[f]	−9.0079 (−8.1482)*		1.7333 (14.4276)*	0.3795 (2.3587)*						0.9393	247.5827	1.5051	1960–2012
Honduras	−3.1733 (−3.5191)*	0.8279 (2.1929)*	1.2432 (11.9685)*					0.7575 (8.2122)*		0.9761	790.7112	1.5844	1950–2012
Mexico[g]	−7.8097 (−7.8808)*	−0.8012 (−2.6577)*	2.7304 (7.8782)*		1.4134 (18.8727)*			0.7789 (9.4300)*		0.9936	2 164.3103	1.7957	1950–2012
Nicaragua	−16.5806 (−5.5666)*			0.4136 (2.0752)*					0.7170 (8.6902)*	0.7742	52.5794	1.3423	1960–2012
Panama		0.6066 (3.0067)*	0.8360 (30.5322)*					0.8043 (9.5829)*		0.9583	677.3916	1.4032	1950–2012
Paraguay[h]				0.7258 (2.6455)*	0.8239 (43.0151)*					0.9538	485.3893	0.8749	1962–2012
Peru[i]	−11.3722 (−2.7186)*			0.4684 (0.9526)	1.8987 (5.0991)*			0.9250 (25.0012)*		0.9606	341.2218	1.7055	1950–2012
Uruguay[j]	−2.3373 (−1.3230)					0.6992 (2.2385)*	1.1053 (5.6919)*			0.9000	114.8010	1.8185	1955–2012
Venezuela[k]	−28.0990 (−4.5435)*			−1.0846 (−3.1477)*	3.0722 (6.1481)*			0.9432 (31.1838)*		0.8767	88.9092	1.5499	1957–2012

* Different from 0, significant at the 5 per cent level.

a We include a dummy variable that takes the value 1 in 1979 and 2002 (economic crises in Argentina) and 0 in other periods, and has an estimated coefficient of –0.1974 (t-stat = –0.0110). b We include a component variable MA(2) that has an estimated coefficient of 0.6332 (t-stat = 5.0108), and a dummy variable that takes the value 1 in 1982 (debt crisis in Bolivia) and 0 in other periods, and has an estimated coefficient of –0.6935 (t-stat = –4.4329). c We include a component variable MA(1) that has an estimated coefficient of 0.7506 (t-stat = 8.2078). d We include a component variable MA(1) that has an estimated coefficient of 0.9161 (t-stat = 7.3161), and a component variable MA(2) that has an estimated coefficient of 0.4898 (t-stat = 3.9214). e We include a component variable MA(1) that has an estimated coefficient of 0.5337 (t-stat = 4.7938). f We include a component variable MA(1) that has an estimated coefficient of –0.1963 (t-stat = –4.7624). g We include a dummy variable that takes the value 1 in 1983, 1995 and 2009 (corresponding to the debt crisis, the tequila crisis and the US financial crisis), and 0 in other periods, and has an estimated coefficient of 0.8292 (t-stat = 10.9401). h We include a component variable MA(1) that has an estimated coefficient of 0.9748 (t-stat = 80.0568). i We include a dummy variable that takes the value 1 in 1983, 1989 and 2009 (corresponding to a sharp fall in GDP as a result of the El Niño phenomenon during Fernando Belaúnde's Presidency, the most critical year of Alan García's Presidency and the world financial crisis, respectively), and 0 in other periods, and has an estimated coefficient of –0.3033 (t-stat = –4.4239). j We include a component variable MA(1) that has an estimated coefficient of 1.2487 (t-stat = 56.6811), and a component variable MA(2) that has an estimated coefficient of 0.9523 (t-stat = 55.9238). k We include a dummy variable that takes the value 1 in 1983 (corresponding to an inflation hike and a drop in oil exports) and 0 in other periods, and has an estimated coefficient of –0.7950 (t-stat = –5.6274).

Source: Author's own calculations, based on data from World Bank (2014), ECLAC (2013), ILO (2013) and various national sources.

Table 4. Selected exports functions (Exports ln)

Country	Constant	ln Z	ln w	ln Z-1	ln w-1	AR(1)	AR(2)	R²	F	DW	Period
Argentina	-39.0249 (-8.2901)*		-0.2913 (-2.0114)*	1.5679 (10.3277)*		0.8215 (11.2820)*		0.9863	1 372.5336	2.1108	1950–2012
Bolivia	-67.4564 (-2.3686)*	2.3755 (2.6982)*			-0.1605 (-1.1520)	0.9686 (48.7722)*		0.9803	780.2420	1.7925	1960–2012
Brazil	-59.7353 (-10.2920)*	2.2614 (12.1786)*	-0.1964 (-0.5208)			0.8637 (19.7661)*		0.9953	4 100.2774	2.3707	1950–2012
Chile[a]	-63.4145 (-9.1133)*	2.3391 (10.5399)*			-0.3518 (-2.0632)*	0.9101 (33.9792)*		0.9976	5 740.2129	1.8313	1950–2012
Colombia	-41.7652 (-5.5303)*			1.6455 (6.7575)*	-0.0651 (-0.3149)	0.9099 (20.1390)*		0.9941	3 210.6447	2.1314	1950–2012
Costa Rica	-64.6697 (-16.8997)*	2.3333 (19.0255)*	-0.3904 (-1.3653)			0.8224 (13.4393)*		0.9966	5 339.1574	1.5985	1960–2012
Ecuador	-48.7018 (-11.6110)*	1.8348 (13.4476)*	-0.1616 (-1.3551)			1.2594 (10.8369)*	-0.4727 (-4.1161)*	0.9885	1 140.6296	1.9032	1953–2012
El Salvador	-52.2898 (-1.8285)	1.9177 (2.1237)*	-0.0850 (-0.4879)			0.9424 (23.1173)*		0.9628	397.0193	1.8210	1960–2012
Honduras	-26.1697 (-8.7270)*	1.1016 (11.6123)*	-0.1395 (-0.4811)			0.7907 (9.8897)*		0.9842	1 201.6679	1.9609	1950–2012
Mexico	-66.7970 (-8.8270)*		-0.6106 (-2.0729)*	2.4864 (10.0750)*		0.9033 (18.6767)*		0.9964	5 241.2436	1.4797	1950–2012
Nicaragua[b]	-72.9026 (-1.9180)	2.5448 (2.1334)*			-0.0389 (-0.3890)	1.3091 (8.7851)*	-0.3397 (-2.2811)*	0.9723	308.5687	2.0646	1960–2012
Panama	-32.6409 (-6.5445)*	1.3408 (8.0986)*			-0.0759 (-0.2937)	0.8004 (8.9370)*		0.9834	1 127.0281	1.7449	1950–2012
Paraguay	-58.5927 (-7.7817)*			2.1229 (8.6666)*	-0.3085 (-0.7296)	0.7981 (8.2889)*		0.9818	807.7293	1.9722	1962–2012
Peru[c]		0.3511 (2.5644)*			-0.4296 (-2.4535)*	0.9877 (47.2276)*		0.9899	1 858.8415	1.5894	1950–2012
Uruguay	-40.2702 (-8.1529)*		-0.0505 (-0.2161)	1.5496 (9.7274)*		0.7996 (9.9333)*		0.9817	948.5698	2.3394	1955–2012
Venezuela		0.3472 (19.4728)*	-0.3047 (-0.6855)			1.2266 (9.2698)*	-0.3632 (-2.7215)*	0.7516	50.4232	1.8039	1957–2012

* Different from 0, significant at the 5 per cent level.

[a] We include a dummy variable that takes the value 1 in 1972 and 1973 and 0 in other periods, and has an estimated coefficient of -0.2227 (t-stat = -3.4921).   [b] We include a dummy variable that takes the value 1 in 1980 and 1984 and 0 in other periods, and has an estimated coefficient of -0.2213 (t-stat = -4.5157).   [c] We include a dummy variable that takes the value 1 in 1973 and 1980 and 0 in other periods, and has an estimated coefficient of -0.1177 (t-stat = -3.0403).

Source: Author's own calculations, based on data from World Bank (2014), ECLAC (2013), ILO (2013) and various national sources.

Table 5. Elasticity of GDP with respect to the wage share
and economic growth regimes

Country	Private consumption	Private investment	Exports	Total effect	Growth regime
Argentina	0.0727	–0.0369	–0.0357	0.0080	Wage-led
Bolivia	0.0066	–0.0888	0.0000	–0.1538	Profit-led
Brazil	0.3378	–0.0811	0.0000	0.8145	Wage-led
Chile	0.1183	–0.0960	–0.0760	–0.1337	Profit-led
Colombia	0.1279	–0.1154	0.0000	0.0474	Wage-led
Costa Rica	0.2133	–0.2010	0.0000	0.0267	Wage-led
Ecuador	0.0508	0.0547	0.0000	0.2839	Wage-led
El Salvador	0.1088	–0.0181	0.0000	0.3136	Wage-led
Honduras	0.0154	–0.1337	0.0000	–0.1613	Profit-led
Mexico	0.0612	0.0532	–0.0681	0.1228	Wage-led
Nicaragua	0.0368	–0.0525	0.0000	–0.0702	Profit-led
Panama	0.0257	–0.1029	0.0000	–0.0633	Profit-led
Paraguay	0.1653	–0.0614	0.0000	0.2025	Wage-led
Peru	0.0847	0.0000	–0.0693	0.0783	Wage-led
Uruguay	0.1287	–0.0910	0.0000	0.1187	Wage-led
Venezuela	0.0035	0.0750	0.0000	0.0706	Wage-led

Source: Author's own calculations, based on data from World Bank (2014), ECLAC (2013), ILO (2013) and various national sources.

profit-led. In this table, only those parameters that are significantly different from zero are considered; no distinction is made as to whether the correlation is for the same period or with a one-year or two-year time lag.

For all countries, an increase in the wage share results in a rise in private consumption, with the strongest effect found in those economies where the wage share is higher, such as Brazil and Costa Rica. In some countries, such as Ecuador and Mexico, an increase in the wage share had a positive effect on private investment, but in the other economies this relationship is negative. With regard to exports, there is mostly no effect, since many of the parameters are not significantly different from zero, although there are also some negative values. The overall effect in most countries is positive; i.e. an increase in the wage share results in a rise in demand and GDP. This is the case of Argentina (albeit with a low value), Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Paraguay, Peru, Uruguay and Venezuela, where the economic growth regime was wage-led.

In the case of Bolivia, Chile, Honduras, Nicaragua and Panama, however, the overall effect is negative, i.e. an increase in the wage share leads to a fall in demand and GDP. This means that the growth regime was profit-led, since the positive effect on private consumption is offset by the negative effect on private investment and exports. Interestingly, when parameters are considered during the same time period only, and not time-lagged, the negative effect of

the wage share on exports is eliminated for Chile, meaning that the growth regime changes from being profit-led to wage-led. Thus, only Bolivia (perhaps because of the weight of the self-employed income included in the gross operating surplus) and the small Central American economies of Honduras, Nicaragua and Panama have profit-led growth regimes; the larger economies have wage-led growth regimes.

It should be noted that, using econometric analysis to determine the type of economic growth regime has a number of limitations, and that a particular regime can be associated with a specific period only, and not the entire period (here 1950–2012). Furthermore, the parameters and observed correlations can be simply statistical and are not necessarily causal. This may be the case for Peru, where the correlation between exports and the wage share is negative when time-lagged, and significantly different from zero. Indeed, real exports grew while the wage share fell, but this does not necessarily mean that the latter explains the former, just that they are correlated variables. The wage share has a negative impact on non-traditional exports, while not affecting exports of mining and hydrocarbon products, which are equivalent to just under 80 per cent of total exports.

Conclusions

While the debate on economic growth regimes began with the French school of regulation theory, post-Keynesian economists developed the idea further, and carried out most of the empirical studies that exist on the subject. A high wage share has a positive effect on private consumption but may have a negative effect on private investment and exports; therefore, the total effect of a change in the wage share can be seen by looking at these three components of GDP. The international empirical evidence shows that most of the economies analysed have wage-led growth regimes, but that there are also countries and specific situations in which the regime is profit-led.

An increased wage share is conducive to economic growth. Thus, the neoclassical dilemma of a trade-off between efficiency and equity does not appear to be borne out in practice, since both factor income distribution and personal income distribution can apparently be improved at the same time. However, this does not mean that income redistribution in favour of workers can be a never-ending process: economic growth regimes respond to institutional factors that change over time. One must also take account of possible limitations arising from negative reactions from the business sector (less private investment and upward pressure on prices, thereby reducing the purchasing power of wages); also, the balance of payments is adversely affected by increased imports, lower exports and reduced capital inputs (or outputs), to the point of being unsustainable.[11] Econometrics is not the perfect tool for identifying

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[11] Alarco (2014b) carries out an analysis on the possibilities of increasing real wages in different Latin American economies without adversely affecting balance of payments.

economic growth regimes. However, it is clear that the way to make an economy competitive is not by depressing workers' wages and benefits. One must not forget that reducing the weight of the labour component of GDP leads to stagnation and global decline, for the overall international growth regime is wage-led (Capaldo and Izurieta, 2013).

The present study extends and supplements the statistical information on the wage share and profit share of GDP, for 16 Latin American economies, and for the region as a whole. The time when the wage share was the highest was in the mid-1960s. Since then, despite the wage share being lower, there was a slight increase in the mid-1990s, and from 2005 onwards. The correlation between the wage share and economic growth is mainly positive over the period 1950–2012, except during the 1950s, the mid-1960s to mid-1970s, and from1980 to the mid-1990s. However, while this global picture is valid for Latin American countries as a whole, certain situations and circumstances exist that are specific to individual countries.

Most Latin American economies have wage-led economic growth regimes; this is the case of Argentina, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Paraguay, Peru, Uruguay and Venezuela, and to some extent Chile. However, in Bolivia, Honduras, Nicaragua and Panama, the growth regime is driven by profit and/or self-employed-income. These results suggest that policies that increase the wage share will be conducive to economic growth, since the positive effect of income redistribution on private consumption will take precedence over the negative effects on private investment and exports. These findings are important and contradict the neoliberal argument that the only way to make an economy grow is to focus exclusively on profit-related considerations. In addition, the findings confirm the conclusion of a previous study (Alarco, 2014a) that increasing the wage share is positive for economic growth. It would be useful to carry out a more in-depth analysis of each Latin American economy. It would also be valuable to define what kind of labour, economic, financial and social policies should be implemented, along the lines of Stockhammer (2011b), Kumhof and Rancière (2010), Palley (2011), and others, in order to achieve the goals of income redistribution and growth.

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