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Social and Structural Change in Growth and Distribution

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Abstract

There is an ongoing dialogue between post-Keynesian economists and scholars in comparative political economy about "models of growth" or "growth regimes." Most of this work has focused on core countries. This paper aims to expand this dialogue by discussing peripheral economies and incorporating analytical concepts from the Structuralist tradition. In peripheral economies, the pattern of specialization plays a central role in shaping the growth regime. We present a model in which the growth regime evolves as a result of the interaction between specialization and social capabilities—in particular, equality and human capabilities. Drawing on both post-Keynesian and Structuralist insights, we identify two polar scenarios: a Nordic Regime, in which the building of social capabilities goes hand in hand with export diversification and stronger non-price competitiveness, thereby creating a positive feedback loop between structural change and social change; and a Truncated Regime, characterized by limited and fragmented social and economic transformations, slower growth, and higher inequality. We illustrate these scenarios by comparing the experiences of Sweden and Uruguay during the First Globalization (1870–1914) and the subsequent globalization backlash (1914–1939).

1. Introduction

A conversation between post-Keynesian (PK) economists and scholars in comparative political economy started with the works of Baccaro and Pontusson (2016, 2022). These authors challenged the dominant framework used to identify and compare growth patterns across capitalist economies—the Varieties of Capitalism (VoC) approach. They argue that the VoC framework focuses solely on supply-side factors and overlooks the role that aggregate demand and its components play in shaping the growth dynamics. The incorporation of demand-side considerations allow these authors to identify different

"models of growth" or "growth regimes".[1] Moving beyond the canonical typology suggested by Bhaduri and Marglin (1990), Hein (2011, 2020) and Dünhaupt and Hein (2019) propose a typology based on the behavior of net exports and the capital account to address the impact of financialization on the growth regimes. In this paper, we build on the work of these authors and develop it in two directions, both related to international asymmetries in technological capabilities within a centre-periphery system. Firstly, we argue that their concern with the key role of the external sector is especially useful for the analysis of peripheral economies, where the external sector has constrained and conditioned the growth of aggregate demand well before the financialization era (Thirlwall, 2011; Bértola and Ocampo, 2012; Cimoli and Porcile, 2010). Secondly, following Hein et al. (2020), we stress the connection between socio-economic models and the socio-institutional responses to changing international conditions. We argue that equality and human capabilities are central to the evolution of the growth regime in the case of peripheral economies—not only through the expansion of aggregate demand, but also through technical change and international competitiveness.

In section I, we develop a model that integrates PK demand-led growth and the Structuralist concern with specialization. In the model, growth and income distribution are driven in the long run by the interaction between structural change and social change. While Hein et al (2020) stress the the type of welfare model that characterizes the economy as the main socio-institutional dimension of the growth regime, for the purpose of our work is more useful to employ Abramovitz's (1986) concept of social capabilities, which has been very influential in the study of catching up in the international economy. The social capabilities that will be stressed in our work are equality and human capabilities. These dimensions are central to the ability of a society to absorb technology and change the pattern of specialization, i.e. they are preconditions for reaping the Gerschenkron's benefits of backwardness.[2] We will argue that the interaction between structural change and social capabilities may be one of mutual reinforcement or one in which negative feedback prevails. The intensity and direction of these interactions determine the emerging growth regime and its sustainability.

In section II, we offer a comparative analysis of the growth trajectories of Sweden and Uruguay between 1870 and 1939. We focus on the main variables included in the model: growth, structural change, equality and human capabilities. Regarding structural change, we discuss export dynamics, as well as changes in the productive structure and the pattern of specialization. Regarding social capabilities, we look at the evolution of income distribution, education, and human development in the two countries. In this way, we seek to consistently align the model's variables with the available historical evidence. In addition, we draw on the institutional and political insights of economic historians to shed light on the political economy underpinning the different growth regimes. This part of the paper builds on Alvarez et al. (2026), in which we discuss the contribution of the different components of aggregate

[1] Cf. Hein et al (2021), Hein (2022) and Sotckhammer and Onaran (2022). Among others, Schedelik et al (2021) Passos and Morlin (2022) and Pérez-Caldentey and Vernengo (2022) extend this approach to emergent economies.

[2] Fr the concept of social capabilities see Abramovitz (1986); about the advantages of "backwardness"', see Gerschenkron (1962).

demand to growth from a growth regime perspective. We significantly extend the analysis presented in that earlier work by incorporating social and productive indicators that were not previously examined, differences in the patterns of specialization, and a more detailed discussion of how these were shaped by the political economy of the two countries. We also place the historical analysis in dialogue with the formal model presented in Section 1.

The comparison of Sweden and Uruguay in the 1870-1939 period is revealing for several reasons. During this period, both countries occupied a peripheral position in the international economy. According to data from the Maddison Project, Uruguay's GDP per capita in 1900 was approximately equal to Sweden's when measured in purchasing power terms.[3] However, their development trajectories diverged markedly: Sweden succeeded in achieving structural and social transformations, whereas Uruguay failed to perpetuate these processes, and they became prematurely interrupted. Both nations experienced a drive toward democratization and industrialization, especially from the early twentieth century onwards, and sought to build more inclusive societies through progressive legislation and income redistribution. Yet while these processes gained momentum and political support in Sweden during the 1930s, they were halted in Uruguay by conservative resistance, culminating in 1933 in a coup d'état. We claim that this turning point had profound implications for the growth trajectory of the two countries after the 1930 crisis. Evidence from economic history allows us to identify the underlying (political) sources of transformation or stagnation.

A note of caution is necessary: the comparative analysis presented here is not intended to be a conventional empirical testing of a model. It instead suggests a dialogue between the model and the evidence provided by economic history. The model allows us to identify the key variables, parameters, and interactions that drive the growth path. Economic history helps understand the political and institutional forces that shaped those parameters and their evolution over time. We propose a conversation between formal models and history, rather than a one-way linear relationship in which models are "tested" against historical data. In this sense, while the model extensively uses the concept of equilibrium across different periods of "logical" time (defined by which set of variables is considered exogenous and which endogenous), equilibrium is always "conditional" or "provisional", as discussed by Gallo and Setterfield (2023). What we mean by equilibrium in the paper is a situation in which economic actors have reached a transitory stability in their relative power, rooted in the production structure and the institutions they have founded and configured over time.

2. Growth regimes: a Post-Keynesian Structuralist model

The discussion of PK economists over growth regimes has mainly focused on how a change in the wage share affects aggregate demand and economic growth, giving rise to "wage-led", "profit-led" or "conflictive" (wage-led demand and profit-led growth) regimes.[4] Hein (2011) and Dünhaupt and Hein (2019) offer a typology (hereafter DH, reproduced in

[3] Data from the Maddison Project, https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2020.

[4] See Marglin and Bhaduri (1988); Blecker (2002); Blecker and Setterfield (2019, p. 189); Palley (2013).

Table 1) based on the the current account and the capital account, which aims to consider the impact of globalization and financialization on the growth regime. This typology is especially useful for discussing centre-periphery dynamics, since it identifies patterns of disequilibrium in the international economy.[5] Countries in an export-led regime necessarily have, on the other side of the equation, countries in a debt-led regime. These regimes are rooted in differences in the pattern of specialization, since peripheral economies—whose exports are concentrated in commodities and are, therefore, more vulnerable to exchange rate crises and cycles of international liquidity than the centre economies—are more likely to fall into a debt-led regime (Botta et al, 2022).[6]

Table 1. A typology of growth regimes

Regime	*Net Exports*	*Finance*
Export-led mercantilism	• Positive balance of goods and services • Positive contribution of net exports to growth	Negative financial balance of the external sector
Weak export-led mercantilism	• Positive balance of goods and services • Negative growth contributions of net exports or • Negative but improving net exports • Positive growth contributions of net exports	Negative financial balances of the external sector or positive but declining financial balances of external sector
Domestic demand-led growth	• Growth is almost exclusively driven by domestic demand, around zero growth contribution of net exports.	Balanced or positive financial balances of the external sector
Debt-led private demand boom	• Significant growth contributions of domestic demand, and private consumption demand in particular • Negative growth contributions of net exports.	Positive financial balances of the external sector

Sources: Dünhaupt and Hein (2019, p. 458).

In the next subsections, we suggest a model which highlights the interactions between outcomes in the external sector, changes in the pattern of specialization, and social capabilities (equality and human capabilities). This model allows us to suggest a different typology which draws from several contributions of the PK and Structuralist

[5] The key role of specialization is highlighted by Passos and Morlin (2022) and Kohler and Stockhammer (2022). The classical center-periphery work is Prebisch (1949). See also Rodriguez (2007);

[6] This is not true for the case of the US, which enjoys the power of printing paper money globally accepted for international transactions.

traditions—especially the Nordic model discussed in Storm and Naastepad (2012, chapter 7); and the idea of "truncated industrialization" and segmented "social state" in the Latin American economies, suggested by Fajnzylber (1982) and Filgueira (2005). As in open-economy PK models, growth is assumed to be balance-of-payments constrained, and income distribution is determined by conflicting claims between labor and capital. As in the Structuralist tradition, the model incorporates a center–periphery framework in which peripheral economies specialize in low-tech commodities.

The DH typology has been criticized for failing to differentiate the impact of imports across the components of aggregate demand. All imports are attributed to exports; as a result, the contribution of exports to demand growth is not correctly estimated (Summa et al., 2025). In addition, the DH typology does not differentiate between autonomous and induced components of aggregate demand, a distinction that carries important theoretical implications (ECB, 2005; Morlin et al., 2022). While this debate is relevant in the discussion of growth dynamics, it is not central to the objectives of this paper. Our focus is on how structural and social changes ease the external constraint on growth—thereby creating room for all components of aggregate demand to expand in the long run—rather than on the contribution of the different components of aggregate demand to growth. For this reason, we confine our analysis to the dynamics of trade across different periods and the co-evolution of productive and social change.

2.1. International competitiveness and technological change

Some of the assumptions are the following. First, there are two types of international competitiveness: price and systemic, or nonprice, competitiveness. Prices competitiveness depends on relative unit production costs and is reflected in the real exchange rate, defined as $q = P^*E/P$, where P^* is the price of the competitive foreign good and P the price of the domestic good (which can be consumed at home or exported).[7] While many factors affect unit production costs (such as for instance intermediate and raw materials), we will assume that the only variable cost is labor. This greatly simplifies the model and allows us to concentrate on the role of wages in price competitiveness. This assumption is indeed the one present in most neo-Kaleckian models (see Blecker and Setterfield, 2019, pp. 190-197). In the mathematical appendix B we consider the case in which imported intermediate inputs enter the production process and discuss how this may affect the results of the model.

Systemic (nonprice) competitiveness, on the other hand, depends on the differentiation, imnovation, reliability and sophistication of goods and services a country may produce, captured by a parameter h (more on this below). Technological change affects both types of competitiveness, but it is especially important for systemic competitiveness (Romero and McCombie, 2018). In effect, regardless of real exchange rate depreciation, a technologically backward country will be unable to compete in key segments of the capital goods and electronics industries without narrowing the technological gap. In the high-tech

[7] A real depreciation (a rise in q) has two opposite effects: on the one hand, it worsens the terms of trade (negative effect); on the other, it increases exports and reduces imports (positive effect). We assume that the Marshall-Lerner condition is valid and that a rise in q has a positive effect on the current account.

segments of international trade, technological capabilities are in the hands of a few firms in center countries. Exports will be driven by those capabilities and not by changes in the real exchange rate (Botegga and Romero, 2021). This scenario converges with the concept of "economic complexity"—i.e. the extent to which a country combines diversification in trade with the ability to export certain high-tech goods that only few countries can produce (see Freire, 2019 and Baltar et al, 2025).

Secondly, unlike mainstream models, Structuralist and Schumpeterian (evolutionary) theories emphasize that not all sectors are equal—some offer greater opportunities for learning, productivity improvements, and innovation. Dosi et al. (2021) summarize these ideas by noting that producing silicon chips is not the same as producing potato chips in terms of innovation rates and the diffusion of technology. Additionally, the concept of tacit knowledge (Lundvall, 2007) highlights that skills and knowledge cannot be fully transmitted through written instructions, but must be developed through accumulated experience in production and investment. As a result, technological gaps and specialization patterns tend to persist over time. Path dependency endogenously reproduces the technological and productive asymmetries that characterize the center-periphery system, and represents a kind of dynamic (knowledge-based) increasing returns—which are sector-specific, do not emerge automatically out of the accumulation of capital, and are heavily influenced by policies.

In effect, path dependence implies that institutions and policies are crucial to escaping development traps, as argued by Freeman (1995), Fagerberg and Verspagen (2002), and Fagerberg and tSrholec (2008). A substantial body of literature provides empirical evidence that policies to foster human capabilities and equality may enhance international competitiveness. The literature is extensive, so we will cite only a few relevant contributions. In developed countries, the pioneering work of Katzenstein (1985) demonstrates that a welfare system was essential to the ability of small open European economies to remain competitive in world markets, as it provides both a safety net that mitigates shocks in international trade and the necessary social cohesion for cooperation and technical change. In developing economies, Ranis and Stewart (2007) show that human development is a necessary input for economic growth, not the outcome of such growth. Evans and Heller (2015) present a similar argument (drawing on the work of Amartya Sen), asserting that in a world of rapid technological change, the "developmentalist state" should focus on enhancing human capabilities, especially through the universal provision of education and health. The key link between welfare and productivity growth is also highlighted by Storm and Naastepad when discussing regulations in the labour market and the protection of employment:

"*…in regulated, cooperative industrial relations systems, workers presumably are less suspicious of and resistant to productivity- enhancing automation, and perhaps are even involved in planning and implementing it, because their employment security reduces their fear of technology- spurred layoffs*".

In sum, the quest for equality fosters (not hinders) competitiveness, especially the one based on technological learning (Albuquerque, 2007; Storm and Naastepad, 2009; Hajighasemi et al., 2022). This stylized fact underlies the focus of this paper on equality and human capabilities as social capabilities.

2.2. The short run

This subsection presents the basic equations of the model and discusses the short-run equilibrium. In the next subsections we discuss the medium run and long run.

How are the different time scales defined? The short run is defined as a period in which all prices, including the real interest rate and the real exchange rate, are constant. The medium run is the period in which prices vary, and the real exchange rate and the interest rate change so as to allow the economy to attain a situation of equilibrium in current account and in the labor market. In the medium run, the pattern of specialization and the institutions that regulate the distributive conflict are given. In the long run, however, structural and institutional change is possible. The key question in the long run is whether they are mutually reinforcing or contradictory.

The model that follows is an extension of Blecker (2026). Income is determined by aggregate demand according to the canonical Keynesian equation:

(1) $C + I + G + X^n = Y = W + R + T$

In equation (1) Y is income, C is consumption, I is investment, G is public expenditure, and X^n are net exports (total exports minus total imports), all expressed in units of the domestic good. Total income is distributed among the different economic actors, namely workers, capitalists and the government: W and R are wages and profits after taxes, respectively, and T the taxes levied by the government.

Total consumption is:

(2) $C = C_0 + c_W W + c_R R = C_0 + [c_W(1-\pi)(1-t_W) + c_R\pi(1-t_R)]Y$

In this equation π is the profit share in GDP, c_W is the workers' propensity to consume, c_R is the capitalists' propensity to consume, and t_W, t_R are the tax rates levied on the income of capitalists and workers, respectively. It is assumed $c_W \gg c_R$. It is straightforward that total taxes T are:

(3) $T = [t_W(1-\pi) + t_R\pi]Y$

Investments are a positive function of total profits and the accelerator, and a negative function of the real interest rate r, as follows[8]:

(4) $I = I_0 + a_1\pi Y + a_2 Y - a_3 r$

I_0 represents an autonomous component (in the sense that it does not depend on current income) of investment decisions. In this paper it basically reflects expectations about future growth. The interest rate is assumed to be a policy variable managed by the Central Bank (more on this below).

The economy consists of two sectors: one exports natural resources, while the other produces manufactured goods that are more technologically intensive. Exports of natural

[8] This is the same investment function suggested by Blecker (2026), with the addition of the real interest rate to the argument of the function.

resources face an infinitely elastic demand curve at a given exogenous international price (as in Bianchi et al, 2024; see also Razmi, 2016). In contrast, the market of manufactured goods is imperfectly competitive, and firms set prices applying a markup factor over unit labor costs. Commodities are not consumed domestically, but the industrial good may be either consumed at home or exported. Manufacturing competitiveness depends, as mentioned, on the real exchange rate (price competitiveness q) and the technological intensity and variety of those goods (systemic competitiveness h).

The demand function for net exports is the following:

(5) $X^n = vX_0 + X(h,q) - qm(h,q)Y, X_q > 0, X_h > 0, m > 0$

Where X^n is net exports expressed in units of the domestic good; vX_0 represents exports of natural resources; $v = \frac{P^{NR}E}{P}$ is the price of the commodity in units of the domestic good, P^{NR} is the price of the natural resource in the international market in US dollars, E is the nominal exchange rate (the price of the US dollar in units of the domestic currency), and P is the price of the domestic good denominated in the domestic currency; $X(h,q)$ represents exports of manufactured goods; the parameter m is the economy's propensity to import, which also depends on price and systemic competitiveness. Note also that $\frac{v}{q} = \frac{P^{NR}}{P^*}$ is the commodity terms of trade.

Combining equations (1) to (5), the level of income in the short run is obtained as follows:

(6) $Y = \frac{G_0 - a_3 r + vX_0 + X(h,q)}{1-[c_W(1-\pi)(1-t_W)+c_R\pi(1-t_R)+a_1\pi+a_2]+qm}$

Note that $G_0 = C_0 + I_0 + G$ is the sum of all the autonomous components of aggregate demand. Income is thus determined by the exports, the real exchange rate, the autonomous components of aggregate demand, and the multiplier $\mu = \{1 - [c_W(1-\pi)(1-t_W) + c_R\pi(1-t_R) + a_1\pi + a_2] + qm\}^{-1}$. Stability requires the denominator to be positive.

2.3. Transition towards external equilibrium

The short run is a very temporary truce. Two sources of disequilibrium may be present, requiring correction in the medium run. First, the external sector. In the short run, the current account may show a deficit, which will have to be financed with international loans denominated in foreign currency, as the periphery occupies a subordinate position in the currency hierarchy and does not issue an international reserve currency. Debt-led growth based on international loans, however, has limits (creditors will become increasingly reluctant to finance the peripheral economy), which will hamper growth at some point. Second, conflicts in the labor market would arise, since workers and capitalists may believe that the existing income distribution does not reflect their relative power; therefore, workers will demand higher wages and/or capitalists will raise prices, with an impact on the inflation rate. The medium-run equilibrium is a situation in which there are neither current account deficits nor surpluses, and the inflation rate is stable, as both workers and capitalists believe

the actual income distribution is consistent with what they can obtain, given their relative power.

External equilibrium in this simple model is defined by zero net exports. Given the level of exports, Y^B is the maximum level of output that can be achieved without causing external imbalances (i.e., is compatible with $X^n = 0$)

$$(7)\ vX_0 + X(h,q) - qm(h,q)Y^B = 0 \Leftrightarrow Y^B = \frac{vX_0 + X(h,q)}{qm(h,q)}$$

If initially there is a deficit in current account, i.e. the observed income is higher than the maximum possible level, $Y > Y^B$, there are several forces at work that may make Y and Y^B converge. First, the deficit implies falling profits and a parallel decline in expected profits. As expectations about future profits become more pessimistic, investment falls—and hence output (Y) and imports also decline. The change in expectations is captured by a lower I_0, through a process described by Joan Robinson (1978, p. 208) in the following terms: "*The most important benefit from a surplus on income account, which affects the whole economy, is that, provided that there are energetic enterprises and thrifty capitalists to take advantage of it, it permits home investment to go full steam ahead, while a deficit country is nervously pulling on the brake for fear of excessive imports*." Second, the recessive response may also come from "austerity" in public spending by the government, which reduces G_0. Botta et al. (2023) highlight that the processes of adjustment to current account deficits entail a strong recessive bias in fiscal policy. Last but not least, another variable that depresses investment and income is the rise in the interest rate. In emerging and developing economies, a deterioration in the current account often generates exchange-rate depreciation and capital outflow pressures. The Central Bank may respond by raising policy interest rates to stabilize the exchange rate, contain inflationary pass-through, and support capital inflows. A rise in the interest rate contributes to finance the deficit by attracting foreign capital, reducing aggregate demand and imports (see Frenkel and Rapetti, 2009; Aizenman et al, 2011). The interplay between interest rates, the real exchange rate and the external constraint in developing economies with open capital accounts gives rise to what Ocampo calls the "Balance-of-Payments" dominance of macroeconomics in the periphery (Ocampo, 2016), i.e. a macroeconomy heavily influenced by external conditions and the need to maintain external balance (see also Turner and Spinelli, 2013).

In this paper we will assume that the heavy lifting in correcting the external deficit is done by changes in the real interest rate and we will therefore focus on this variable. This is consistent with the role the interest rate played as an adjustment mechanism in the gold standard era (Eichengreen, 1992),[9] and more generally with the greater concern that exists in developing economies with the volatility of the real exchange rate. The adjustment is formally summarized in the following differential equation, in which changes in Y are driven by changes in r (in response to a deficit in current account):

[9] In the period of our comparative study, Sweden had a Central Bank—indeed the oldest one in Europe—, while in Uruguay the *Banco de la República* played a similar role since 1896.

(8) $\dot{Y} = \gamma(Y^B - Y) = \gamma\left\{\frac{[vX_0+X(h,q)](1-B-a_1\pi-a_2)-m(h,q)q(G_0-a_3r)}{qm(h,q)(1-B-a_1\pi-a_2+qm(h,q))}\right\}$

Where $B = c_w(1-\pi)(1-t_W) + c_R\pi(1-t_R)$ is the economy's average propensity to consume, with the propensity to consume of each class weighted by its share in total income after taxes. See the mathematical appendix A for the derivation of the differential equation (8).

All the combinations of the real interest rate r (and therefore Y) and the real exchange rate q that keep the trade balance in equilibrium and hence stabilize the real interest rate ($X^n = 0, \dot{r} = 0$) are represented in Figure 1 in the plane $Y(r), q$—given the exports of natural resources X_0, international commodity price v, systemic competitiveness h, and the propensity to import m. A higher interest rate and hence a lower Y and lower imports are necessary when the real exchange rate is low; inversely, a higher Y requires a depreciated rela exchange rate to stabilize the current account.

Any improvement in systemic competitiveness implies that aggregate demand can increase without causing a trade deficit for any level of the real exchange rate q (hence the Y^B curve of equilibrium in current account shifts to the left). The fall in the interest rate and the rise in investment will generate the new, higher level of production consistent with balanced trade. An improvement in the price of natural resources P^{NR} (a rise in v) has a similar effect.

2.4. A truce in the labor market

This subsection addresses wage bargaining and income distribution arising from conflicting claims between workers and firms.[10] The price of the commodities is exogenously given by the international market at P^{NR}. The price of the domestic good emerges from the price-setting behavior of the manufacturing firms, which apply a markup z over unit labor costs:

(9) $P = z(\frac{W}{a})$

where W is the nominal wage, $a = Y/L$ is labor productivity (L is total employment) and z is the markup. Workers consume imported goods and hence real consumption is a negative function of the real exchange rate. The price of the workers' consumption basket is $P^C = (P^*E)^m P^{1-m}$

We assume that workers have the same import propensity m as the economy as a whole. The real wage in terms of the consumption basket of workers will then be:

(10) $w = \frac{W}{P^C} = \frac{W}{(P^*E)^m P^{1-m}}$

Using (9) in (10) and the definition of the real exchange rate as $\frac{P^*E}{P} = \frac{P^*E}{z(\frac{W}{a})}$ gives:

[10] For models of conflicting claims in peripheral economies, see Olivera (1991), Gerchunoff and Rapetti (2020) and Porcile and Sánchez Ancochea (2021).

(11) $$w = \frac{a}{zq^m}$$

Where w is the effective real wage that emerges from the price-setting behavior of the firms, which implies $w'(q) < 0$. Note that if it is admitted that foreign prices are also determined by a markup rule, the real exchange rate is $q = z^*\left(\frac{W^*}{a^*}\right)E/z(\frac{W}{a})$, and hence reflects relative unit labor costs abroad and at home, and the monopoly power of the firms at home and abroad.

Capitalists have a target for the markup factor z and workers have a target for w. The workers' target depends on their bargaining power in the labor market, which in turn depends on the employment rate and on social capabilities. The employment rate l determines the tightness of the labor market, defined as $l = L/N$, where total labor demand $L = Y/a$ depends on aggregate demand (Y) and labor productivity (a). Given a, the higher aggregate demand and/or the lower the labor supply (N), the higher l, thereby strengthening workers' bargaining position and raising their target real wage.

Social capabilities (represented by j) also affect the bargaining power of labour. As defined in this paper, social capabilities imply a move towards the decommodification of key goods and services (especially education and health), which, in turn, strengthens workers' relative power in wage negotiations. Higher social capabilities (a higher j) reduce the cost of unemployment for workers, as they will still have access to key (de-commoditized) goods and services.[11]

This allows the workers' target (w to the cap T) to be written as:

(12) $$w^T = \omega^T[(l(Y, N, a), j)],\ \omega_l^T > 0, l_Y > 0, l_N < 0, l_a < 0, \omega_j^T > 0$$

For concreteness, the function of the workers' target real wage will be defined as:

(13) $$w^T = Y^{w_1}N^{-w_2}a^{-w_3}j^{w_4}$$

Where the superscripts represent the elasticities of the workers' target real wage to the tightness of the labor market (captured by Y, a and N) and pro-labor institutions (captured by j). Note that since w has an inverse relation with the real exchange rate, target real wage (w^T) cimplies a target real exchange rate (q^T).

As mentioned, a difference may emerge between what workers demand (w^T, which is what they believe they can obtain as a function of their bargaining power defined in equation 13) and what they actually receive as a result of the price-setting behavior of the firms (equation 11). Workers will demand and obtain a rise in nominal wages when there is a difference between the target real wages and the observed real wages:

(14) $$\widehat{W} = \emptyset(w^T - w)$$

Recalling that $q = \frac{P^*E}{P}$, and assuming that P^*E is constant, then it is clear that $\hat{P} = -\hat{q}$ and hence:

(15) $$\hat{P} = -\hat{q} = \emptyset(w^T - w)$$

[11] The classical argument of decommodification is Esping-Anderson (1990).

Using equations (11) and (13) in equation (15) gives the motion equation for the real exchange rate with the real exchange rate on the right-hand side:

$$-\hat{q} = \emptyset\left(Y^{w_1}N^{-w_2}a^{-w_3}j^{w_4} - \frac{a}{zq^m}\right) \quad (16)$$

When the target real wage is higher than the effective real wage, workers will demand higher wages that will lead to higher domestic prices. This in turn appreciates the real exchange rate (fall in q) up to the point that the workers' target and the observed real exchange rate are equal ($q = q^T$).[12] In equilibrium $\hat{q} = 0$ and therefore:

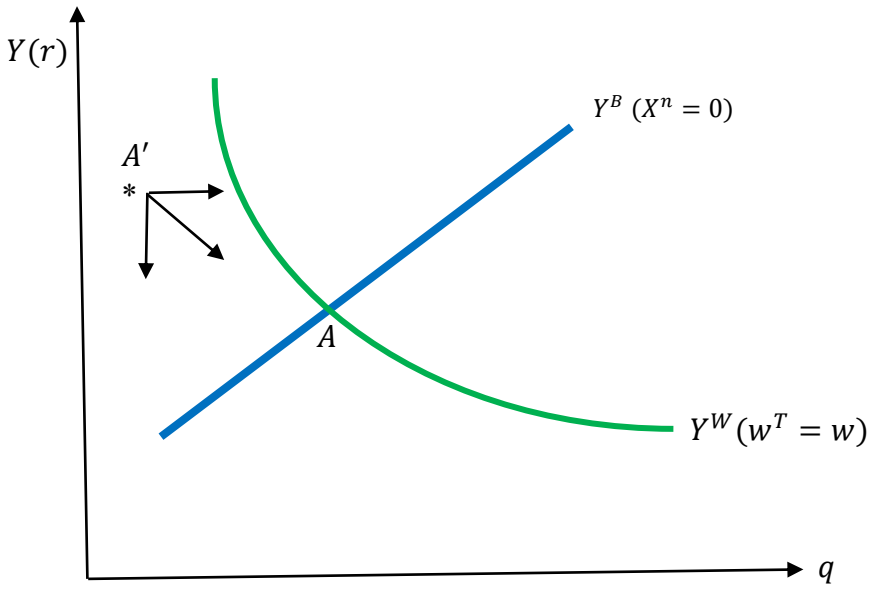
$$Y^W = \left[\frac{N^{w_2}a^{1+w_3}j^{-w_4}}{zq^m}\right]^{1/w_1} \quad (17)$$

This equation gives all the combinations of GDP and real exchange rate (GDP and real wage) that stabilize the labor market (curve Y^B in Figure 1). The equation also expresses the inverse relationship that exists between the real exchange rate and the real wage. Along this curve, it is true that $q = q^T, w = w^T$. When GDP is high, ceteris paribus, the equilibrium real exchange rate (real wage) should be high (low) in response to a low level of unemployment. This is why the Y^W x q curve is negatively sloped (see Figure 1). If there is a change in the institutional framework in favor of workers that raises j, the Y^W curve shifts to the left: for any level of the GDP, a lower real exchange rate will be necessary to satisfy workers' demands. Inversely, if the supply of labor (N) increases, the bargaining power of workers is reduced, the Y^B curve shifts to the right and the equilibrium implies a higher real exchange rate for any level of the GDP.

Figure 1 shows how the external sector and the labor market move towards equilibrium in the medium run. Assume that the economy is at point A' in Figure 1; hence, there is deficit in the current account that must be corrected (A' is above the Y^B schedule). In the face of a deficit in current account, the Central Bank raises the real interest rate. The result is a fall in investment that reduces GDP and imports, bringing Y closer to Y^B. From the labor market perspective, at point A', the real wage (real exchange rate) is too high (low) and incompatible with the existing level of employment (A' is below the Y^W schedule). As Y begins to fall, wage demands are reduced (unemployment obliges workers to reduce their target real wage), inflation falls below international inflation, and the real exchange rate depreciates. The combination of the fall in Y and the increase in q (both reducing the deficit in the current account) moves the economy from A' to A. Note that the effective contribution of a rising real exchange rate to the correction of the deficit depends on the price elasticity of exports and imports and that Marshall-Lerner holds.

[12] If $w = W/P^C$ and $P^C = (P^*E)^m P^{1-m}$, then $\hat{P}^C = m(\hat{P}^* + \hat{E}) + (1-m)\hat{P}$. Since $P = z(\frac{W}{a})$, with z and a constant, then $\widehat{W} = \hat{P}$. The change in the real wage will be $\hat{w} = \widehat{W} - m(\hat{P}^* + \hat{E}) - (1-m)\widehat{W} = m\widehat{W}$, with the assumption that $(\hat{P}^* + \hat{E}) = 0$. Therefore, a rise in W improves the real wage even with a constant z, because the increase in P does not transmit one to one to the price of the workers' consumption basket. If international prices increase at a constant rate in units of the domestic currency, say $\hat{F}$, then $\hat{w} = m(\widehat{W} - \hat{F})$. This does not change the result of the model, since the real wage target implies a real exchange rate target and hence the workers consider the increase in the price of the imported goods when demanding an increase in W.

Figure 1. Equilibrium in the external sector and the labor market



The process of adjustment does not end there. As the short-run equilibrium, the one depicted at A is just a truce—"conditional" and "provisional" as suggested by Gallo and Setterfield—, challenged by political conflict over the extension of the social policies, technological change, and price changes in world markets. Therefore, it is necessary to discuss the long-run equilibrium, which is the topic of the next section.

2.5. The long run: two polar cases of structural and social transformation

In this subsection, two polar long-run scenarios will be analysed: the "Nordic Regime" (NR) and the "Truncated Regime" (TR). These scenarios are Weberian ideal types, which in the real world present themselves in a much less pure or ideal form. Note, in addition, that the objective is not to replace the DH typology with a new one, but to complement it by including the dimension of social capabilities to illustrate how it affects the long-run economic performance of countries. Below, we offer a graphical representation of the dynamics of these growth regimes. In mathematical appendices C and D, these dynamics are formalized to provide a more rigorous analysis of those interactions.

A NR is a growth regime in which social and structural transformation go hand in hand so as to create a virtuous circle of growth and increasing equality (as in Storm and Naastepad, 2012, pp. 190-197). The evolution of this regime can be described as follows (see Figure 2). Initially the economy is at point $A1$. The labor market and the external sector are in equilibrium. Assume now that industrial policy boosts systemic competitiveness, which

implies a rise in h. This shifts the Y^B curve to the left, from Y_1^B to Y_2^B. For the same q, a higher level of aggregate demand is now possible without facing a trade deficit (movement from $A1$ to $A2$). In parallel, there is an increase in the strength of social capabilities j that shifts the Y^W curve from Y_1^W to Y_2^W. As a result, equilibrium in the labor market now requires a higher real wage and hence a lower real exchange rate for the same Y. The new equilibrium will be at $A'2$, which means that the positive effect of the increase in h on aggregate demand (through higher systemic competitiveness) has been partially offset by the rise in j (which means lower price competitiveness). But if the social policy institutions simultaneously strengthen the ability of labor to develop the skills and capabilities required by new technology (as discussed in subsection 2.1), then the rise in j will lead to a further increase in h. In the NR, the boost in social capabilities (human capabilities and equality) encourages the diffusion of technical change, structural change and hence the upgrading of the pattern of specialization. Positive feedback between h and j will shift the Y^B curve again, from Y_2^B to Y_3^B. At the end of the day, the virtuous circle that goes from social policy to diversification and back to social policy more than compensates for the loss of price competitiveness due to a higher real wage. As these positive interactions gradually recede, the economy achieves the long-run equilibrium of the external sector and labor market with a higher level of aggregate demand and higher real wages (at $A3$, dashed arrow).

Figure 2. Nordic Regime: a virtuous combination of industrial policies and welfare policies

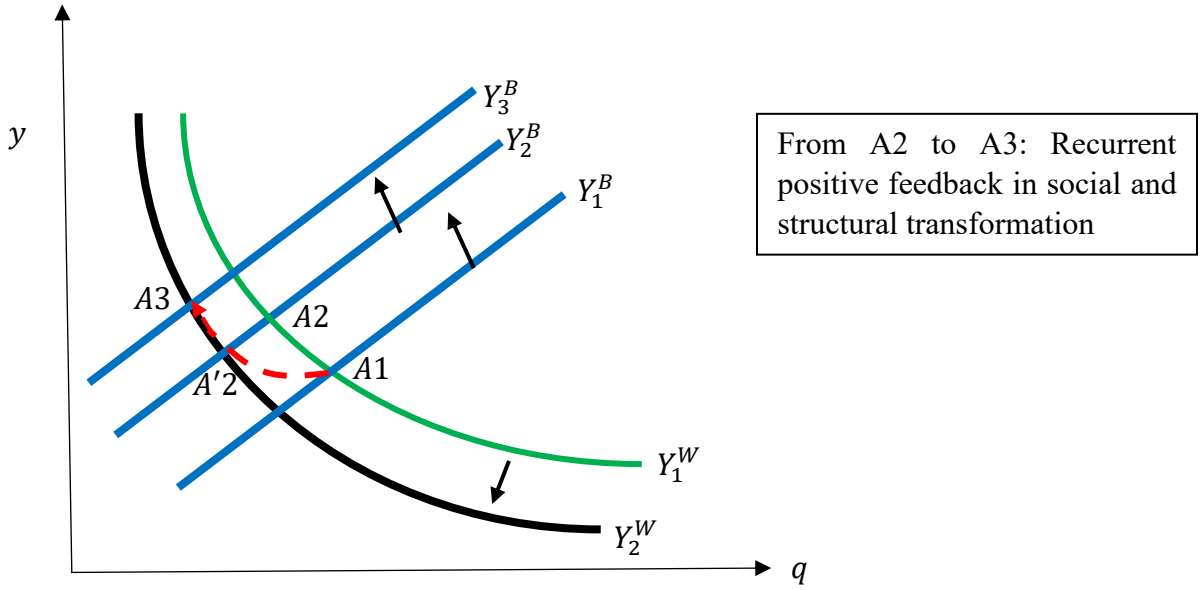
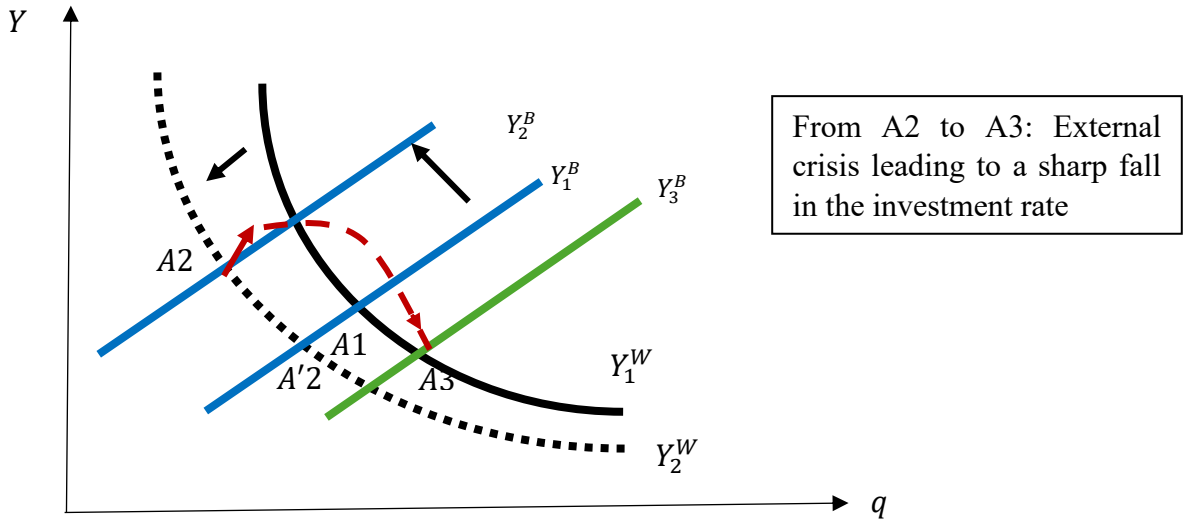


Figure 3. Truncated Regime: slow structural change with negative feedback towards social transformation



The opposite case to NR is the TR pattern that characterizes many Latin American economies. Figure 3 represents the dynamics of the TR. The initial position of the economy is at $A1$. A positive shock on exports comes in this case from a rise in the demand for commodities (higher v and/or X_0 in equation 1), not from systemic competitiveness. This

shock shifts the Y^B curve from Y_1^B to Y_2^B. This opens space for the expansion of social capabilities (increase in j), represented by the shift of the Y^W curve from Y_1^W to Y_2^W. A new equilibrium emerges, with a higher level of income and better real wages at $A2$. However, since social and industrial policies are not part of a coherent strategy—there is no positive feedback between j and h that would foster export diversification and changes in production patterns—the movement of the Y^B curve is rather limited. Moreover, the change in v or X_0 is more likely to be transitory, because commodity prices exhibit in general high volatility. If the favorable external conditions are reverted, then the economy moves to point $A'2$ or to $A1$ (in the latter case if the government reverses the redistributive policies it adopted during the commodity boom).

If the government sustains the levels of income and income distribution of $A2$ after the end of the positive shock in the commodity markets, then the country will incur a rising external debt. If there is a debt crisis or exchange rate crisis, the investment rate will fall and so will aggregate demand (as in the dashed curve). A fall in investment would imply losing ground in terms of technical change and diversification. The country may thus end up at point $A3$, with a lower level of income and lower real wages than it had at the initial point $A1$.

Note that in this model, the government's efforts to expand other components of aggregate demand (through a more expansionary monetary or fiscal policy) will always encounter the barrier of the external constraint—hence the stop-and-go pattern that has characterized growth in many Latin American countries. The regime is called truncated because it is limited by two barriers. On one hand, the lack of industrial policies and the negative effects of Dutch-disease phenomena (associated with temporary booms in exports of natural resources) lead to what Fernando Fajnzylber called the 'truncated industrialization of Latin America' (Fajnzylber, 1983), a reference to the region's failure to upgrade its technological capabilities. On the other hand, there is a "segmented social state" (Filgueira, 2005) or a "truncated welfare state" (Holland, 2018) in the sense that social policies are not comprehensive and protect a relatively small share of the total workforce (see also Grimalda et al, 2020; Martinez Franzoni and Sáchez-Ancochea, 2014)—which means weak social capabilities.

The economic structure and the institutions in the TR give rise to a political economy that makes change much more difficult to achieve than in the NR. Actors in an economy whose systemic competitiveness depends on externalities linked to intersectoral flows of knowledge, skills, and human capital (as in the NR) will be inclined to reach cooperative agreements in both R&D and income distribution. They will be more committed to cooperation, institutionalized compromises, and political stability than the actors of the TR. The challenge in the NR is how to enhance rents through innovation; in contrast, the challenge in the TR is how to redistribute rents from natural resources or how to make workers accept a higher q (lower w) to boost price competitiveness. Clearly, the intensity of the conflict and the instability of the political system will be much higher in the TR.

3. Comparing the growth regimes of Uruguay and Sweden, 1870-1939

We will use the model developed in the previous section to discuss social and structural change in Uruguay and Sweden between 1870 and 1939. Although PK models are designed with advanced economies in mind—where workers and firms are highly organized—the central insight remains valid: income distribution is fundamentally shaped by power relations. The economic history literature precisely helps us understand when and how these relations changed, and how they have interacted with structural change. The key variables addressed in this brief historical detour are growth of exports and imports, and the trade balance, as proxies for the external constraint; changes in the production structure and specialization (as proxies for h); and changes in social capabilities, captured by indicators of human development and equality (proxies for j and w).

Our periodization is based on shifts in the international economy, a key determinant of both countries' economic performance. Clear structural breaks can be identified in 1914-1918 (First World War) and in 1930 (Great Depression). While the First World War marked the end of the First Globalization era (FG, 1870-1914) and the beginning of the First Globalization Backlash (FGB), the 1930s delivered the final blow to the gold standard, a cornerstone of the FG era. It also signaled the rise of beggar-your-neighbor policies in the monetary and trade domains, in the form of tariffs and preferential trade and payments agreements (Findlay & O'Rourke 2009). We divide the period from 1870 to 1939 into three subperiods, excluding the war years from the data: the 'golden age' of the First Globalization (FG, 1870-1914), the First Globalization backlash phase I (FGBI, 1919-1929), and the First Globalization backlash phase 2 (FGBII, 1930-1939), with FGBI in the 1920s serving as a transition to the deeper and more conflictive FGBI I of the 1930s. We start with economy-wide parameters and end with social capabilities.

3.1. Productive resilience

Table 2 shows the growth rates of GDP and trade for the two countries. The most striking aspect of the comparison is the reversal of fortunes between the two countries in the 1930s. Until then, Uruguayan GDP grew at a slightly higher rate than Swedish, both during FG and FGBI. Uruguay's rapid growth during that period resulted from a sharp population increase driven by European immigration (Pellegrino, 2010; Bértola et al, 2024), infrastructure investments (Finch, 2005), improvements in productivity within the export primary sector (Álvarez et al, 2024), and the expansion of the domestic economy (Bértola, 2024). But by the FGBII, Uruguayan GDP decelerated significantly, whereas Swedish GDP accelerated. On exports, Uruguay grew in all cases at rates below those in Sweden. More significantly, exports and imports in Sweden remained positive in the 1930s, whereas in Uruguay they were negative, with export contraction more intense than import contraction. In Uruguay, imports consistently grew at a higher rate than exports except during FG. In contrast, in Sweden, the evolution of these two variables tended to be more similar.

Table 2. Uruguay and Sweden: rates of growth in real terms of GDP, exports and imports, 1870-1939

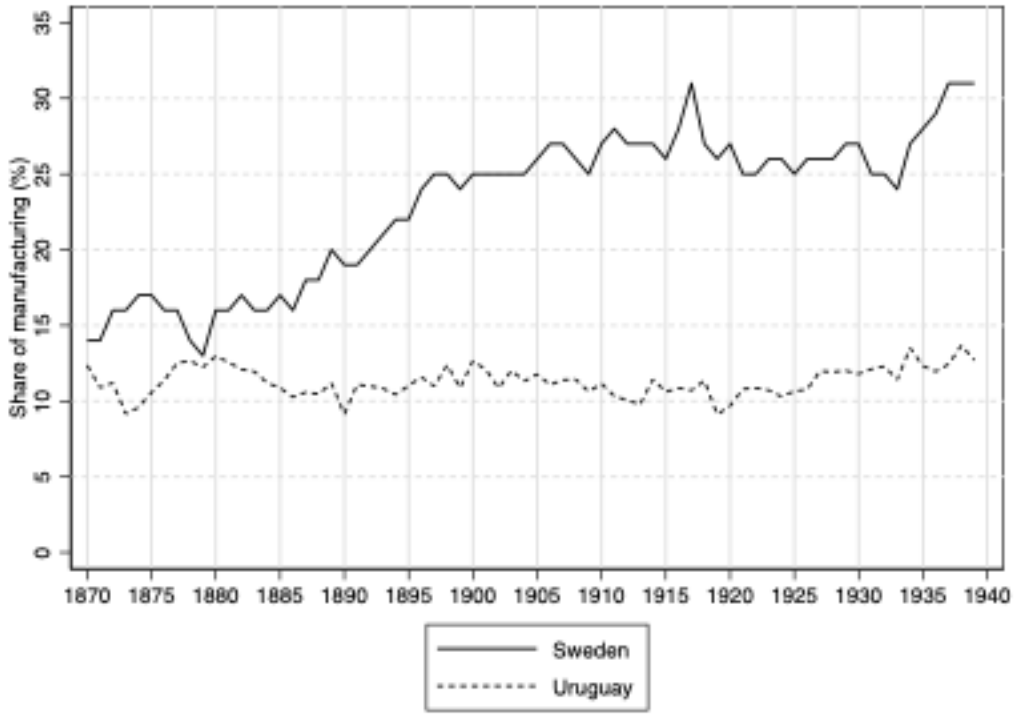
	Rates of growth (%)		
	1870–1913	1919–1929	1930–1939
Uruguay			
Exports	2.7	3.8	-1.9
Imports	2.5	5.8	-1.0
GDP	3.7	5.4	1.9
Sweden			
Exports	2.9	9.5	4.5
Imports	3.2	5.3	4.2
GDP	2.3	4.0	4.4

Sources: own elaboration based on Bértola et al. (2014) and Edvinsson (2014) for Uruguay and Sweden, respectively.

Why was the impact of the 1930 crisis much more intense in the case of Uruguay? The obvious answer is that Uruguay was much more vulnerable to international crises, given its primary-exporting specialisation. Additionally, the primary sector experienced stagnation following the First World War, a situation further aggravated by protectionist policies from importing nations, which restricted access to their key markets during the Great Depression (Finch, 2005; Bértola, 2024). In contrast to Sweden, Uruguay had not developed a productive structure capable of cushioning the negative effects of the Great Depression and world market disruptions. As discussed in the theoretical model, we argue that the positive feedback between social capabilities and structural change prevailed in Sweden, but not in Uruguay. The 1930 dramatic negative shock in international trade revealed that there was something quite different in the capabilities of the two countries that a) gave rise to a different resilience to the crisis; and b) explained why their paths diverged so significantly after 1930.

At the production level, a key indicator of the distinct capabilities driving the two countries' growth paths is the share of manufacturing in GDP. Figure 4 shows that in Uruguay, this share started at approximately 12 per cent in the 1870s and henceforth never exceeded 14 per cent. Although Uruguay advanced industrialization in the 1930s through import substitution, the rate of industrial growth only increased from the 1940s onward (Bértola, 1990). In Sweden, meanwhile, this share drifted upwards. It also started at about 12 per cent but increased incrementally by the end of the 19th century, and again in the 1930s, so that it accounted for 30 per cent of GDP by the end of the 1930s. The Swedish growth in this period was driven by industrialization; quantitatively, in the sense that the share of manufacturing labor and value added expanded, and qualitatively, in the sense that labor productivity improved continuously and converged with that of the core countries (Hamark & Prado 2025; Prado 2008). The manufacturing sector also played a pivotal role in creating jobs in the growing service sector (Ostermeyer 2023).

Figure 4. Share of manufacturing in GDP in Sweden and Uruguay, 1870–1939



Source: for Uruguay, Bértola et al. (2024); for Sweden, Schön and Krantz (2015)

In addition to having different shares of manufacturing in value added, the two countries also displayed different compositions of manufacturing production (Table 3). Specifically, the metal, engineering, and chemical industries were significantly more prominent in Sweden than in Uruguay. A driving force of this shift towards high-value added industries was rampant electrification, thanks to an ample supply of sites suitable for hydropower and large-scale public grid investments (Prado 2014; Molinder et al. 2021). For Uruguay, transformation occurred at a much slower pace. The dominant industries were mainly linked to the primary export sector, leveraging natural resource advantages, and included specialized non-tradable sectors focused on urban growth and construction (Bértola, 1990; Finch, 2005). Additionally, hydropower developed later, after 1945, with the establishment of the first hydroelectric power station, thereby restricting Uruguay's industry's access to abundant, low-cost energy resources (Bertoni, 2011). Since we do not have comparable data for the late 1930s in Uruguay, we included the available data from the mid-1950s, which marked the peak of Uruguayan industrialisation. Even then, Uruguay had not yet achieved the level of industrial production diversification that Sweden had attained in the 1930s. Indeed, the data for Uruguay indicate very little structural change between 1930 and 1954.

Table 3. Manufacturing production by sector in Uruguay and Sweden (%)

	Share in manufacturing (%)					
	1870	1900	1913	1930	1938	1954
Sweden						
Food & drink, textiles and clothing, leather and footwear	36	30	28		24	
Wood, paper, stone and building material and other industries	27	30	28		25	
Metal, engineering and chemical industries	36	40	43		51	
	100	100	100		100	
Uruguay						
Food & drink, textiles and clothing, leather and footwear				64		57
Wood, paper, stone and building material and other industries				21		29
Metal, engineering and chemical industries				15		14
				100		100

Source: Álvarez et al. (2022)

These structural differences are also evident in trade composition. In Sweden, the country's export structure underwent significant changes industrialization progressed. In the 1870s, raw materials such as oats, timber, and wood products were the primary focus. While the significance of timber and wood products declined, the 1890s witnessed an increase in the exports of paper pulp, iron ore, and engineering products, albeit from very low initial levels. The growth of the mechanical engineering and electromechanical industries in the 1890s proved pivotal for export performance in the years that followed. Consequently, the composition of exports gradually shifted from raw materials toward semi-processed products, such as paper pulp, and high-value-added goods in mechanical and electromechanical engineering (Bohlin, 2007). This diversification stood in sharp contrast to Uruguay, where the agricultural sector accounted for approximately 90 per cent of total exports throughout the period (Álvarez et al., 2022). The commodity structure of imports in Sweden was more diverse than that of exports. From 1870 to 1890, agricultural and food products, textiles, and clothing were the predominant imports. In the 1890s, the import structure shifted toward fuel (such as coal) and other raw materials, as well as inputs. The share of consumer goods in total imports decreased drastically due to import substitution (Bohlin, 2005). In Uruguay, imports exhibited greater diversification compared to exports. The commodity composition of imports was primarily composed of consumer goods, capital goods for the local industry, and fuel (mainly coal and oil) (Vallejo & Willebald, 2024).

In summary, in Sweden, the growing share of manufacturing was linked to increased exports, which helped sustain the import drive essential to structural change. This share then plateaued until the mid-1930s. Unlike in Uruguay, the increasing share of manufacturing showed few fluctuations, reflecting the diminishing significance of unprocessed raw materials, which tend to fluctuate with shifting world market demand. By the end of the period, the share of manufacturing stood at 30 per cent, compared with Uruguay's about 15 per cent. When considering the industrial sector as a whole, the share reached 45 per cent in Sweden, while the Uruguayan share climbed to 27 per cent. Furthermore, exports from Sweden diversified toward manufacturing, whereas in Uruguay, exports remained heavily

concentrated in agricultural goods. Although there was some diversification of primary exports—refrigerated meat and wool increased their share in total export at thee expense of leather and salted meat (jerky)—, the export structure showed little change throughout the entire period (Álvarez et al., 2026). This difference in the structures of output and exports highlights the distinct productive and social capabilities that would provide resilience against crises and enable convergence with central economies following the collapse of the FG.

3.2. Social capabilities

The model argues that the Nordic pattern succeeded in making social capabilities complementary to industrial diversification and technological capabilities. The model focuses on education and health, along with equality, as conditions that encourage rapid technical change to reduce labour costs and build the social cohesion required by the diffusion of technology. It is not easy to find indicators that unambiguously illustrate this positive interaction, especially for the nineteenth century. We present two indicators with long-term series: education and inequality. Clearly, they are very imperfect proxies for the complex and far-reaching social transformations that occurred. But we believe they nevertheless show that the model's insights are not in contradiction with the direction and intensity of social change in both societies, and may help explain the co-evolution between social change, capabilities, and growth.

Table 4 presents data on the average years of education in the two countries, showing that Uruguay consistently lagged behind Sweden. A similar trend is evident in Figure 5, which illustrates the evolution of Gini coefficients for both nations. We have rescaled the original Ginis into two indices due to intrinsic problems with level comparisons. In Uruguay, income inequality rose sharply at the end of the nineteenth century, and flattened thereafter. During the FG, two main factors fueled increasing inequality. First, export income was largely held by the agrarian elite, meanwhile agriculture contributing significantly to GDP (Bértola, 2024). Second, rapid population growth from European immigration hindered wage growth (Bértola et al., 1999). In FG1 and FG2, urbanization and early industrialization partially mderated these trends (Bértola, 2005; Marmissolle & Willebald, 2023). In contrast, Sweden's Gini index consistently declined throughout the whole period. Drawing on a massive collection of new data, including 232,000 individual income tax returns, 13,000 property tax returns, and a rich set of complementary sources, Bengtsson et al. (2026) argue, in contrast to Kuznets (1955), that structural transformation largely explains the compression of inequality after 1920. They demonstrate that the movement out of agriculture, which was an unequal sector, accounts for much of the decline in income inequality, along with the expansion of better-paid jobs in manufacturing and offices. The compression of incomes was also aided by emigration, as well as by education and other policies that facilitated structural transformation. Hence, as our model's NR, they also highlight the interplay between structural transformations and social capabilities.

The wage/rental ratio offers an additional measure of income distribution. It is relevant for countries with a fair share of agriculture in GDP, implying that land constitutes a key productive asset and that land holdings are unequally distributed. Then, if the ratio

increases, incomes become more evenly distributed. The wage/rental ratio (Figure 6) shows a trend similar to the Gini index (see figure 5). In Sweden, wages grew faster than land prices during this period, resulting in a more equitable distribution of incomes. In Uruguay, land prices outpaced wages until World War I, resulting in a more unequal distribution. This was followed by a shift in which wages began to grow faster than land prices. As Williamson (2002) pointed out, these trends may be explained by globalization forces. In Sweden, low-skilled wages grew faster than land prices due to rural migration to urban centers and large-scale emigration to the US, which reduced demographic pressure in rural areas. In addition, the grain invasions from the New World put downward pressure on grain prices and, by extension, land prices. Large landowners specialized in grain production rallied for protection; their quest was met with success through the introduction of grain tariffs in 1888. This mitigated somewhat the downward pressure on land prices (Bohlin 2009). In contrast, as a region of new settlement, Uruguay experienced waves of European immigration, thereby increasing the labor supply. Furthermore, Uruguay's primary export specialization implied that land prices were driven by rising agricultural export prices. With a more concentrated and unequal land ownership structure than Sweden (Álvarez et al., 2022; Senghaas, 1985), globalization forces led to a higher concentration of income in the hands of landowners, particularly before the First World War.

Finally, the Human Development Index estimated for the two countries also indicates a clear advantage for Sweden, reinforcing the idea of a favorable coevolution of social and economic indicators during the 1870-1939 period (see table 4)

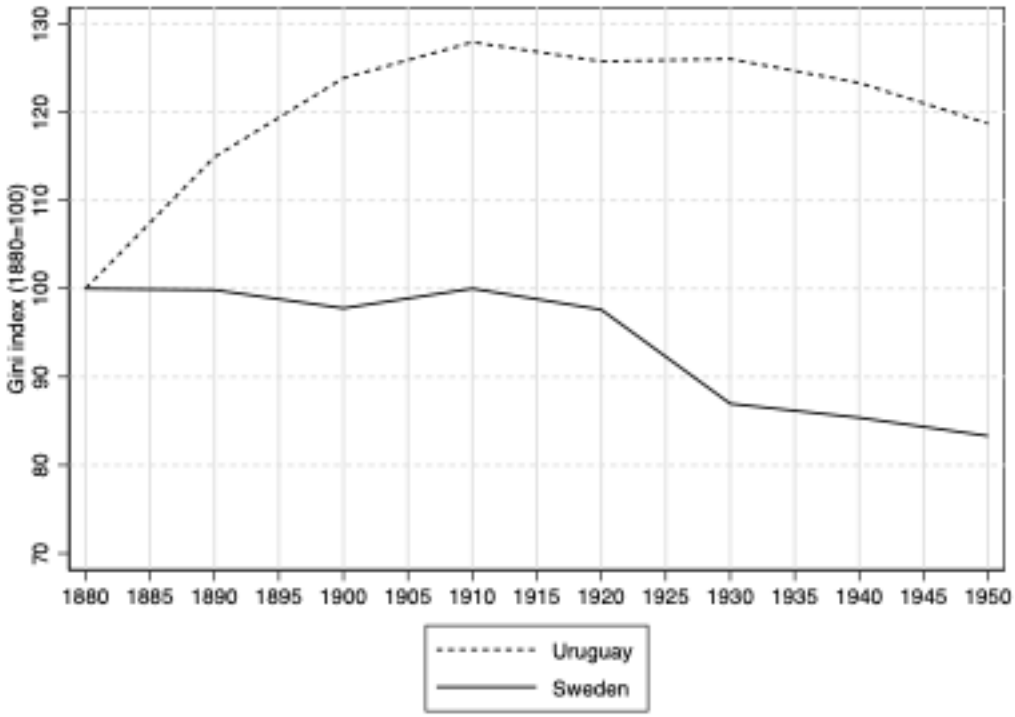
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Table 4. Average years of education in Sweden and Uruguay, 1870-1940

	Years of education		Human development index	
	Sweden	Uruguay	Sweden	Uruguay
1870	4.67	2.02	0.183	
1880	5.05	2.14	0.2	
1890	5.46	2.29	0.22	
1900	5.92	2.44	0.242	0.163
1910	6.33	2.59	0.268	0.181
1920	6.68	2.82	0.283	0.183
1930	6.98	3.27	0.319	0.197
1940	7.28	3.83	0.344	0.231

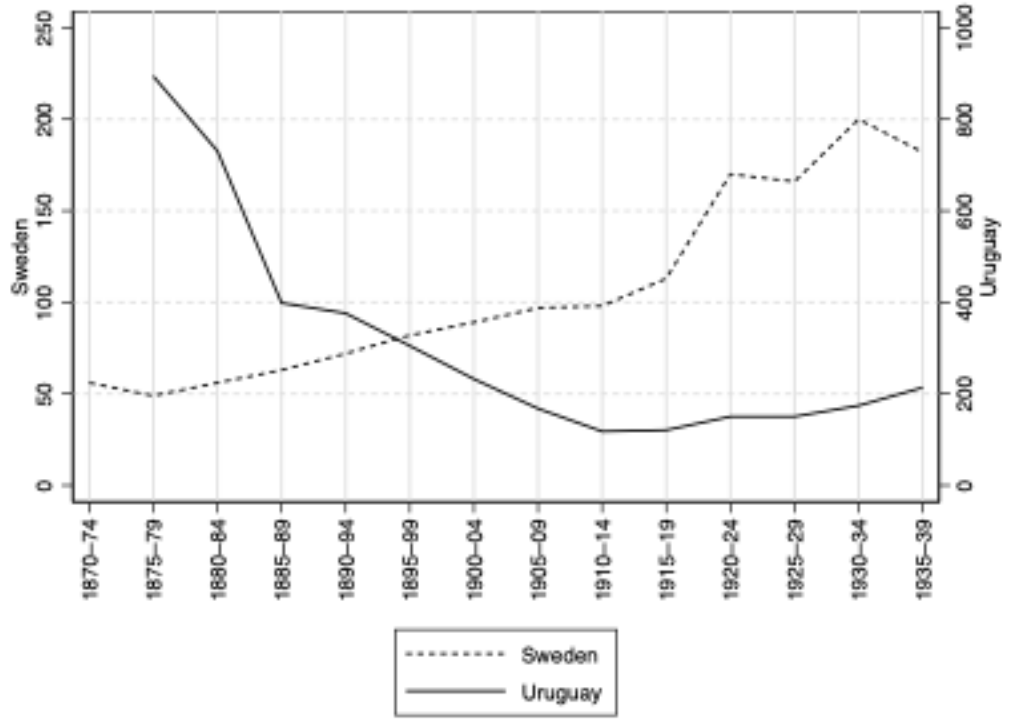
Source: Bértola et al. (2012)

Figure 5. Gini coefficients for Sweden and Uruguay, 1870–1950



Source: For Uruguay, Bértola et al. (2012); for Sweden, Bengtsson et al. (2026).

Figure 6. The wage/rental ratio for Sweden and Uruguay, 1870–1940 (1911=100)



Note: Sweden: left axis; Uruguay: right axis.

Sources: UY: Land is estimated based on the nominal land price index from the PHES; Nominal wages based on Bértola et al. (1999); Sweden, Bohlin & Larsson (2007) and Bohlin and Prado (2011).

Although it is not possible to address in detail the political dynamics that shaped the productive and social transformation of these two countries, three aspects will be highlighted. First, Sweden benefited from a stable political system that was dedicated to long-term development objectives. This stability enabled the state to provide essential public goods, including infrastructure and a stable, pro-growth institutional environment. In Uruguay, civil wars between the Blanco Party and the Colorado Party were a persistent source of insecurity and destruction in the countryside until 1904, when the last Blanco uprising was defeated by the Colorado Party, which then took full control of the government. Only at this point was the country de facto unified under a single authority; peace was restored, and political competition relied on ballots instead of armed revolts (Barrán and Nahum, 1979).

Second, the national railway system began to develop in Sweden in the 1860s, with the national government overseeing the main railway lines connecting large cities, while local authorities and private stakeholders invested in linking smaller population centers. A tightly knit network of local and regional railway lines would eventually crisscross Sweden during the interwar years. Infrastructure projects were particularly crucial for Sweden, whose early industrialization hinged on the extraction and processing of raw materials, and whose economic activities remained dispersed throughout the country, resulting in relatively small cities (Berger and Enflo, 2017). This contrasted with the Uruguayan case, where British

investments in railways gained momentum in the 1880s but were highly focused on connecting the hinterland with the exporting port of Montevideo (Díaz, 2012).

Third, the Swedish process of democratization was slow to develop but gained momentum in the early 20th century. In the final decades of the nineteenth century, limited suffrage was combined with a liberal regulation of civil society. The unequal pattern of landholdings spurred a bottom-up mobilization for the betterment of the lower classes (Bengtsson & Kersting 2026; Bengtsson 2022). This mobilization had political ramifications, laying the foundations for the formation of the progressive parties that fought for universal suffrage. The conflicts between conservatives, liberals, and left-wingers were channeled through democracy by the early 1920s, even though it required revolutionary tides across Europe, posing an immediate threat to the undemocratic constitution, to pave the way for universal suffrage in 1918—which was implemented for the first time in the 1921 election. Sweden has maintained democratic rule ever since. The political alliance between the Social Democrats and farmers was at the core of the pro-growth coalition that emerged and consolidated in the 1930s, becoming dominant during the post-World War II decades (Magnusson, 2000; Schön, 2012). Conversely, democratization and inclusion gained momentum in Uruguay after 1904, but they were first halted in 1916 (the 'Alto de Viera') and then rolled back with the 1930 coup d'état. These disruptions occurred because democratization lacked a comprehensive political alliance in support to structural change. Public policies shifted as the result of the conflicting interests and variable alliances between the traditional agrarian sectors, the industrialists, workers and the emerging middle classes. At the end of the day, the differing outcomes of democracy were closely related to the agrarian structures of the two countries. Land was concentrated in a few hands in Uruguay, and large landowners in Uruguay were reluctant to accept the expansion of labor rights and state intervention.

In summary, the Swedish evidence illustrates that complementary transformations developed on both the industrial and social fronts. These stylized facts about Swedish development align with the Nordic Regime presented in the previous sections. In contrast, the growth spurt in Uruguay, followed by a phase of semi-stagnation, is captured by the development trap of the Truncated Regime. It reflects complex and highly conflictive processes in the political and social arenas, where alliances and production patterns emerge and decline under the pressures of domestic and international disruptions.

4. Concluding remarks

In this paper, we sought to advance the discussion of growth regimes in two directions. First, as in Hein et al. (2020), the basis of the growth regime lies in the economy's social and political conditions. In our work, the key concern is with the building of social capabilities in a peripheral economy—more specifically, we focus on increasing equality and human capabilities—and its interaction with structural change. We consider a short run, a medium run and a long run, which give rise to "transitory" or "conditional" equilibria, driven by different variables: the expansion of income in the short run, changes in the real exchange

rate and the real interest rate in the medium run, and changes in social capabilities and specialization in the long run. The diversification of the production structure is key to preventing external constraints from hindering economic growth. In the long run, export growth is driven by the political economy that shapes the interplay between structural and social change.

Second, given the centrality of the political economy, we build on the insights of the economic history of Uruguay and Sweden to understand their very different performance between 1870 and 1939. Uruguay and Sweden represent polar examples of the co-evolution of social and industrial transformation. During the First Globalization, Uruguay grew at a higher rate than Sweden when high demand and commodity prices temporarily alleviated the external constraint. Sweden, albeit experiencing slower growth during the same period, managed to maintain export growth in line with, or even exceeding, import growth. Uruguay struggled to do the same. The consequences of these differences came out in full during the the Globalization Backlash.

What forces explain the diverging paths? In Uruguay, a positive net trade balance was converted into higher rents for the landowning class, with limited diffusion of the benefits in the form of more equality, technological spillovers, and production linkages, to the rest of society. Conversely, a negative trade balance in Sweden coexisted with an industrial response supported by improving distribution and human capabilities, favoring sectors that were less affected or more resilient to the Globalization Backlash. Note that these results suggest that looking at net exports alone does lose an important part of the story, as argued by Summa (2025). Moreover, behind structural and social transformations there were different configurations of interests and power. Political and institutional stability was significantly higher in Sweden than in Uruguay, which endured civil wars and violent political conflicts until 1904. The agrarian structure made a key difference, being much more unequal in Uruguay. Democratization advanced in both countries in the early 20th century, but social inclusion encountered strong resistance in Uruguay after 1916. In the 1930s, Sweden built a pro-growth alliance between farmers and industrial workers that ushered in a long-lasting era of political stability and prosperity, while Uruguay faced a coup d'état in 1933 that drastically curtailed civil liberties, halted the expansion of social policy, and supported pro-agrarian interests.

The economic history analysis does not claim to establish a unidirectional causal relationship. Rather, it serves to illustrate the forces that sustain a virtuous circle of competitiveness and equality or lead to a development trap. The evidence suggests that social capabilities are likely to be an important initial condition. Indeed, Sweden's human development indicators have exceeded Uruguay's since the very beginning. This head start is consistent with the notion that the benefits of backwardness are more easily realized when the necessary social capabilities already exist.

Appendix A. Inflation and the exchange rate in the medium run

We start from equation (6) which gives the equilibrium level of real GDP:

A.1. $$Y = \frac{G_0 - a_3 r + \nu X_0 + X(h,q)}{1-[c_W(1-\pi)(1-t_W)+c_R\pi(1-t_R)+a_1\pi+a_2]+qm}$$

Differentiating with respect to time and if only the interest rate change we have:

A.2. $$\dot{Y} = -a_3\mu\dot{r}$$

The real interest rate responds according to:

A.3. $$\dot{r} = \tilde{\gamma}(Y^B - Y)$$

Therefore, it is possible to write the change of GDP over time as a function of the changes of the real interest rate:

A.4. $$\dot{Y} = -a_3\mu\dot{r} = -a_3\,\mu\tilde{\gamma}(Y^B - Y) = \gamma(Y^B - Y)$$

Where $\mu = \{1 - [c_W(1-\pi)(1-t_W) + c_R\pi(1-t_R) + a_1\pi + a_2] + qm\}^{-1}$ is the multiplier and γ is a function of a_3, the multiplier μ and the response function of the Central Bank, $\tilde{\gamma}$.

A positive surplus (deficit) in the trade balance leads to a fall (rise) in the real interest rate and an increase (decrease) in investment and aggregate demand, which will stop when net exports are zero (equation 8 in the main text). Formally:

A.5. $$\dot{Y} = \gamma(Y^B - Y), \gamma'(Y) < 0, \gamma'(q) > 0$$

The derivative with respect to Y is negative because a higher Y implies a higher demand for imports and hence more pressure on the current account; the derivative with respect to q is positive because a higher real exchange rate improves price competitiveness and (assuming Marshall-Lerner) this improves the current account.

The motion equation for the real exchange rate is:

A.6. $$-\hat{q} = \emptyset\left(Y^{w_1}N^{-w_2}a^{-w_3}j^{w_4} - \frac{a}{zq^m}\right), \emptyset'(Y) < 0,\ \emptyset'(q) < 0$$

The derivative with respect to Y is negative because the bargaining power of workers increases with Y; and the derivative with respect to q is negative because a higher q implies a lower real wage and hence a rise in workers' demand for higher wages.

The Jacobian of the differential equations system (A.5) and (A.6) is:

A.7. $$J = \begin{vmatrix} \gamma'(Y) & \gamma'(q) \\ \emptyset'(Y) & \emptyset'(q) \end{vmatrix}$$

The trace is negative since $\gamma'(Y)$ and $\emptyset'(q)$ are both negative. The determinant is positive since $\emptyset'(Y)\gamma'(q) < 0$ and hence $\gamma'(Y)\emptyset'(q) - \emptyset'(Y)\gamma'(q) > 0$. These conditions imply that the equilibrium is stable.

Appendix B: Price setting with imported intermediate inputs

In this appendix we present two extensions of the model of price formation. First, we consider the possibility of having intermediate inputs in total unit cost. Second, we consider the impact of labor productivity growth in wage bargaining.

Imported intermediate inputs

Assume that the production process uses an imported intermediate input in production, along with labor. Total unit labor cost will be:

B.1. $P = z(\frac{W}{a} + \frac{P^*E}{b})$

In B.1. W are nominal wages, a is labor productivity, P^* is the price of the intermediate input, and b is the productivity of the intermediate input.

The real wage in terms of purchasing power of workers is (equation 10 in the main text):

B.2. $w = \frac{W}{P^C} = \frac{W}{(P^*E)^m P^{1-m}}$

Using B.1. in B.2:

B.3. $w = a\left(\frac{1}{z} - \frac{q}{b}\right) q^{-m}$

The result shows that the inclusion of an imported intermediate input in the production process does not alter the key message of the model with only labor as a variable cost: there is a negative relationship between the real wage and the real exchange rate. There is an important difference, however, which is the following: even with a constant markup z, if technical change is directed at reducing b, the economy may attain at the same time higher competitiveness and a higher labor participation in GDP.

Wage bargaining with growing labor productivity

In an economy in which labor productivity grows, relative power will not translate just into real wages, but in terms of labor shares and profit shares in GDP. Define the share of the real wage (in terms of the workers consumption basket) in GDP (in units of the domestic good) as w^S:

B.5. $w^s = \frac{a\left(\frac{1}{z} - \frac{q}{b}\right) q^{-m} L}{Y} = \left(\frac{1}{z} - \frac{q}{b}\right) q^{-m}$

If productivity changes over time, workers will set their target in terms of labor shares instead of just real wages—i.e. they will have a target w^s, and the capitalists will have their own target, which they will pursue by changing prices with a fixed markup. The result of the bargaining process will be an equilibrium real exchange rate at which workers and capitalists attain their targets—even though as mentioned, such a target is preliminary and do not imply that actors (especially workers) may consider this result satisfactory, but more of a truce in the medium run.

Appendix C: The long-run dynamics of the growth regimes

How structural change and social change interact defines the growth regime in the long run

In this appendix we analyze the dynamic conditions necessary for having either the NR or the TR. In the long run, nonprice or systemic competitiveness (h) and welfare institutions (j) vary. Their coevolution can be captured by a system of differential equations in which h and j are the sate variables:

C.1. $\frac{dh}{dt} = \varphi(h, j)$

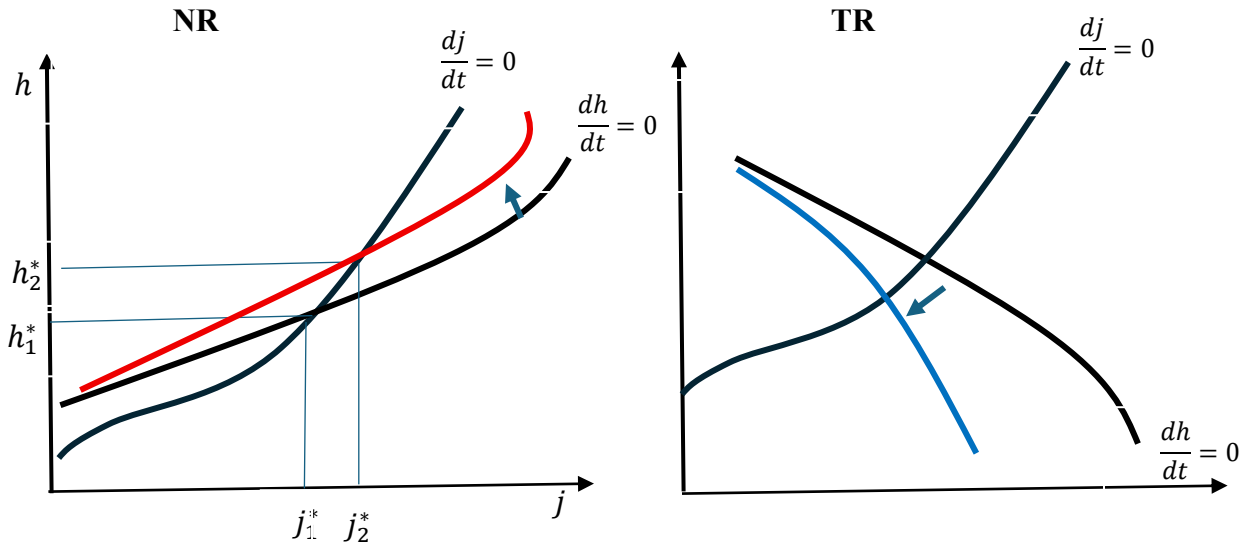
C.2. $\frac{dj}{dt} = \vartheta(h, j)$

We assume that in both regimes the rate of growth of systemic competitiveness tends to fall when system competitiveness is already high ($\varphi_h < 0$), as there are less opportunities for diversification or it becomes more technologically challenging. In the same vein, the increase in social protection falls when this protection is already extensive ($\vartheta_j < 0$). On the other hand, higher systemic competitiveness allows for a faster expansion of the welfare state in all cases ($\vartheta_h > 0$). *The key difference between the two regimes lies in how social protection affects systemic competitiveness*. If there are reinforcing effects between industrial policies and social policies, then the NR emerges; but if social capabilities fail to support industrial change, the TR prevails. Figure A1 shows on the left half the case of NR, where $\varphi_j > 0$ (systemic competitiveness and social protection reinforce each other); on the right, the case of TR, where $\varphi_j < 0$. For having a stable equilibrium in NR, the slope of the $\frac{dj}{dt} = 0$ isocline must be higher than the slope of $\frac{dh}{dt} = 0$ ($\frac{\vartheta_j}{\vartheta_h} > \frac{\varphi_j}{\varphi_h}$). In the case of the TR, the equilibrium is stable because $\varphi_j < 0$. Thex bn

What happens if strengthening the institutions for social protection shifts the $\frac{dh}{dt} = 0$ curve to the left? As can be seen on the left half of Figure A.1, this leads to an equilibrium with higher h and j in the NR. In the case of the TR (right half of Figure A.1), the new equilibrium will show a higher j but a lower h.

When equality and human capabilities are high, the economy will be able to advance more rapidly in technical change and diversification. Social capabilities are a fertile ground for structural change. In the same vein, the impact of a change in social capabilities is closely related to the type of production structure that prevails in each case. In a production structure which is diversified and technology-intensive, the positive effects of education and equality will be rapidly felt in learning and structural change; in an economy which exports mostly low-tech commodities, they will be overcome by the "loss of competitiveness" effect associated with higher unit labor costs.

Figure A1. Changes in the equilibrium values of h and j after a change in the parameters of social capabilities



Appendix D: The long-run dynamics with public expenditures to foster *h* and *j*

Policies for structural change and policies for building social capabilities demand public expenditures. We assume that a share L of total public expenditure goes to structural change (in the form of R&D or subsidies to industries); and $(1 - L)$ goes to social capabilities (in the form of expenditures in education, training, monetary transfers or support for the unemployed). This can be represented by the following equation.

D.1. $G^*(h) = n_0 + n_1 h - n_2 h^2$

D.2. $\dot{h} = a_1 L G^* - a_2 h + a_3\, j\, h$

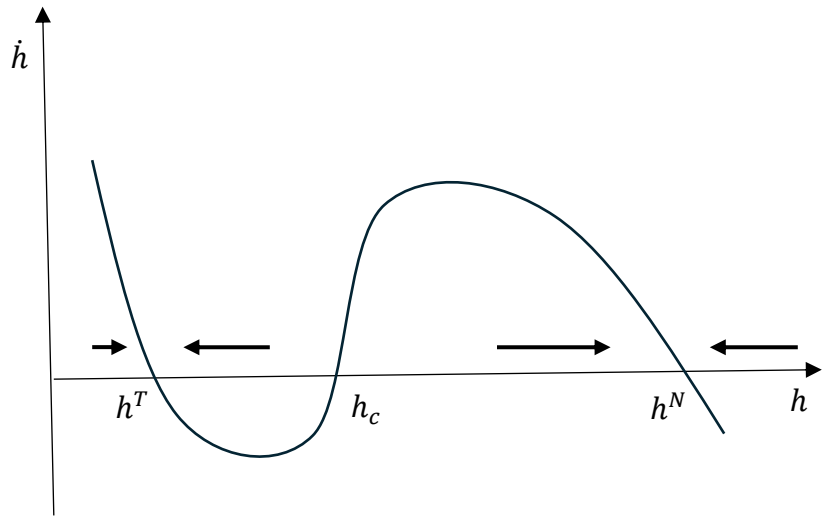
D.3. $j(G^*) = j_0 + j_1(1 - L)G^*$

In this system of equations, G^* is the level of public expenditure that is in line with external equilibrium, i.e. when $Y^B = Y$. This level of investment increases when systemic competitiveness increases because the external constraint is eased and there is more room for expansionary policies (equation D.1). This increase, however, is not assumed to be linear, but attains a maximum value at a certain critical level of $h = n_1/2n_2$, and declines beyond that point.

Equation D.2. shows the impact of public expenditure in building systemic competitiveness, which also benefits from positive feedback with social capabilities j (third term on the right-hand side of equation D.2). The process is not explosive since two forces tame the cumulativeness of systemic competitiveness: the trade-off that exists between the allocation of public expenditure between the two objectives (productive and social); and the increasing technological difficulties of producing new, more advanced goods and services (second term

on the right-hand side of equation D.2). Finally, equation D.3. shows that social capabilities are a positive function of social expenditure.

Figure D.1. The diagram phase of the accumulation of social capabilities



As shown in Figure D.1, the system may produce two stable equilibria, one at a low value of h (corresponding to the truncated regime, h^T) and the other a high value of h (the Nordic regime, h^N).

Two challenges should be overcome to move from the truncated equilibrium to the Nordic equilibrium. The first is to surpass the critical value h_c in systemic competitiveness. The second is that the reinforcement mechanism—given by the interaction between a_3 and j_1. i.e. how strongly j feeds back into pushing h up—has to be strong enough relative to the direct pull from G^* $(a_1 L)$ and the decay rate (a_2). This is the condition for having a negative local minimum and a positive local maximum for $\dot{h}$. Note that this also implies that L cannot exceed a certain critical value itself in order to have two stable equilibria. Some expenditure should necessarily be directed at building social capabilities; otherwise, $\dot{h}$ declines with no limits once it crosses h^T.

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