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Santosh Mehrotra
Jawaharlal Nehru University and IZA

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IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

An Application to Latin America of a Dual Synergies Model: Can a New Industrial Policy Break the Middle Income Trap?

The paper applies the "dual synergies" model—linking economic growth, poverty reduction, and human capability formation—to explain why Latin America (LAC) remains trapped at middle-income levels. It challenges orthodox views that prioritize growth alone, arguing instead that growth, social policy, and human capital mutually reinforce each other. Using stylized facts, the paper shows that LAC's extractive, commodity-dependent development model has produced volatile growth, weak job creation, high informality, and limited poverty reduction. This contrasts sharply with East Asia, where coordinated industrial policy, early investments in health and education, and financial deepening enabled sustained growth and structural transformation. In LAC, weak fiscal capacity, low savings, foreign-dominated banking, and inequality constrain public investment in human capital, weakening growth–poverty links. The paper argues that breaking the middle-income trap requires an integrated strategy: a renewed, state-capable industrial policy aimed at diversification, innovation, and manufacturing upgrading, combined with stronger social policies.

JEL Classification: O11, O14, O15, O25
Keywords: Latin America, industrial policy, East Asia

Corresponding author:
Santosh Mehrotra
University of Bath
Claverton Down
Bath BA2 7AY
United Kingdom
E-mail: santoshmeh@gmail.com

An Application to Latin America of A Dual Synergies Model: can a New industrial Policy break the Middle Income Trap?

1. Introduction: A Conceptual Framework

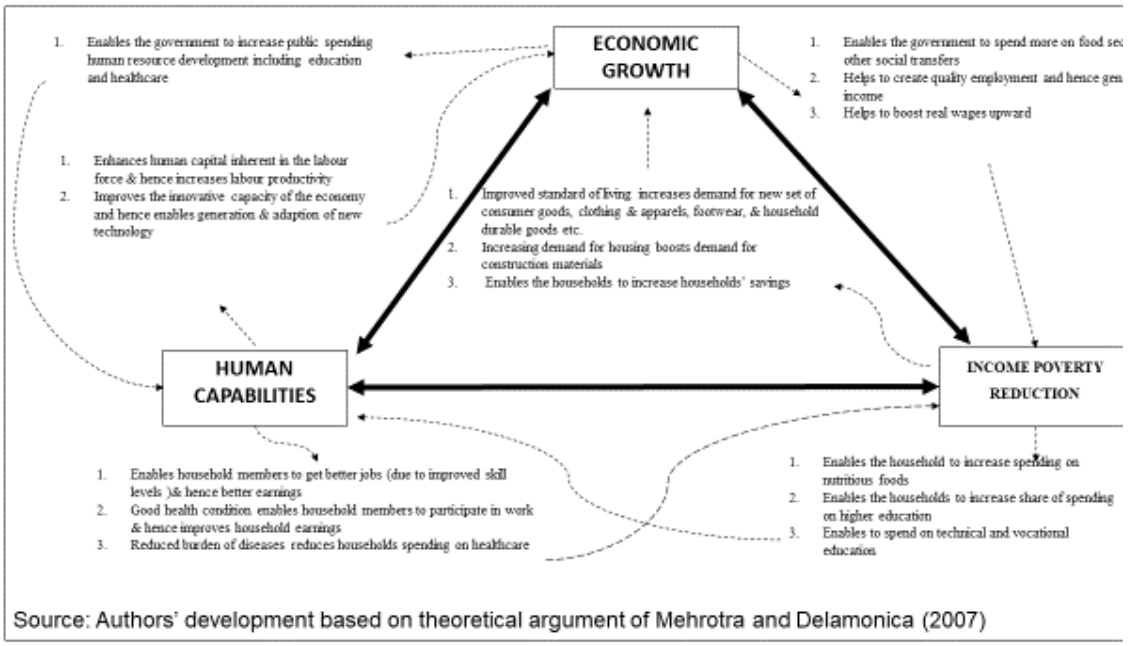
Mainstream economists tend to suggest that 'economic growth typically promotes human development, and a strong positive relationship is evident from the line of best fit (the "regression")' (Ravallion, 1997)[1]. When growth and poverty, or growth and enhancement of functionings (see Sen, 2000) indicators are modelled, it is usually argued that it is growth that influences health indicators or poverty, and rarely the other way around. In other words, a policy of "unaimed opulence" is assumed (DReze and Sen, 1988) that growth typically promotes human development' is usually the hypothesis (Ravallion, 1997), which is proven by the use of regressions, where the regression line is (by its construction) the expected effect of growth on a human development indicator or on poverty (Dollar ??). It is rarely stated that correlation never proves causation.

Indeed, orthodox policy analysis has traditionally placed faith in the outcomes of cross-country (or inter-temporal**)** regression analysis, rather than explaining the reasons why some countries divert from these average trends and are 'outliners'. To us, the outliers demonstrate that it is possible for countries to relieve the non-income dimensions of poverty and achieve social indicators comparable to those of industrialised countries regardless of the level of income (Mehrotra, Taylor and Delamonica, 2000; Mehrotra and Parida, 2021).

In our conceptual framework, we do not downplay economic growth, but as economic growth is such a predominant part of the orthodox paradigm, the pace at which social outcomes improve appears to be at a discount. In our dual synergies theoretical model (Mehrotra and Delamonica, 2007), we propose that a synergy exists between income-poverty-reduction, enhancement of functionings and economic growth, which does not put increasing the growth rate on a pedestal higher in the policy objectives hierarchy than the other two variables (i.e. enhancement of functionings and direct poverty reduction) (see Figure 1). Instead, it calls for the integration of social and economic policy – with the main instruments in the hands of the state being consistent fiscal and macro-economic policies, which promote all three desired objectives or ends simultaneously.

[1] See also World Development report 2000/1, and the critique by Stiglitz, 2003.

Figure 1: Feedback Loops: Growth, Poverty and Capability



Source: Authors' development based on theoretical argument of Mehrotra and Delamonica (2007)

The analytical model (of synergies), illustrated in Figure 1, shows that there is a mutually interactive relationship in place between Economic Growth and Income Poverty Reduction; between Income Poverty Reduction and Human Capabilities; and between Human Capabilities and Economic Growth. The enhancement (or deterioration) of one leads to the improvement in outcomes in the other variable. The modality through which these relationships work is also summarised in Figure 1. We have empirically demonstrated the validity of this argument using data of Indian states (1992-2018), which show that the GDP growth rates of states of India are causally connected with both the income poverty level of states as well as the stock of human capital of the state. Similarly, Ranis and Stewart (2000) and Suri et al (2002) have demonstrated these relationships in the context of a large set of developing countries.

In section 2 we will use this analytical model to understand the Latin American economies, through a series of stylized facts about their poverty and human functionings level. These relationships have been discussed in more detail by the author in Spanish (in Mehrotra, 2022, UNAM, open source). Here we show how the LAC extractive pattern of economic development has not been conducive to rapid economic growth, or income poverty reduction, or building human capital.

In section 3 we draw some policy implications for all developing economies, and examine the conceptual and empirical reasons for an Industrial Policy (IP). Section 4, basing itself on the preceding analysis, discusses IP in Latin American economies This includes a discussion of the contents of the old Industrial Policy (IP) and of the new IP that is incipient in LAC. The final section concludes.

2. Latin America: An Application of the Analytical Model

In this section we discuss the conceptual relationships discussed above in the Latin American context, based on a series of stylized facts drawn from a body of secondary literature relying mainly on the period of growth and human development from 1980 to 2020, although some historical context is provided by the three decades of growth (1950 to 1980) during the period of import-substituting industrialization, characteristic of the Prebisch-Singer influence on development economics[2]. Over that period most developing economies experienced relative reasonable GDP growth, along with investment in human capital (albeit little absolute income poverty reduction) (see Sender et al, 2021 for SSA; see Prebish ??, Furtado, ...Cardoso, ...; and Bhagwati and CHakrvasrty, 1969, for India; Wade ?? and Rodrik ?? for Asia; for the structural weaknesses in this period see ILO, 192 for the Basic Needs approach and Heath 1980 for the informal sector).

The Growth-Poverty Relationship

The 'extractive' model in LAC. Latin American economies' pattern of growth has long been characterised by what is known as an 'extractive industry based' model. Many countries

[2] This influence was also found to be in place in other regions of the global South (i.e Sub-saharan Africa and East/Southeast/ and South Asia)

in the region, especially in South America were already exporting primary commodities significantly in 1990, despite having seen a period of three decades of import substituting industrialization (ISI). However one outcome of the multiple exogenous shocks developing countries suffered during the 1970s (a quadrupling of global oil prices post 1973 after the Arab-Israleli war followed by another doubling of oil prices in 1979) most Latin American (and SSA) economies and India experienced very severe external payments problems, in addition to major international level borrowing by government and corporates in LAC. These developments stressed the capacity of weak states to service their external debts. Domestic borrowing was limited in LAC (and SSA) (unlike say, in India), given their rather narrowly-based economic structure and a shallow financial market.

This was in complete contrast to the fiscal situation in much of Asia, especially East and SE Asia, given that these economies had taken pains to ensure financial deepening as part of their strategy of ISI (Studwell, 2013?). Their external payments situation was also more robust, and hence more capable of dealing with these external financial shocks, as their ISI strategy was supplemented by export orientation of their manufacturing efforts, which had ensured that their current account deficits were still under control, despite the external oil price shocks all economies suffered in the 1970s. India also suffered a massive external payments shock, but most of its borrowing was domestic rather than in foreign exchange (unlike the LAC countries). In other words, while Asian countries recovered reasonably fast from the external shocks of the seventies, LAC and SSA faced prolonged external debt crises starting the 1980s – from which they did not recover for a decade or more.

By contrast both East/SE Asia and South Asia managed to sustain GDP growth. South Korea and Taiwan had already emerged as the 'miracle economies', buoyed by two to three decades of sustained growth and poverty reduction, founded upon investment in health and education early in their development process (Mehrotra and Jolly 2000).

Even India, which had grown at the Hindu rate of growth of 3.5% pa for three decades (1950-1980) (at a time when population was still growing on average 2.25% pa), raised its GDP growth rate during the 1980s to 5.4% pa just as population growth rate started falling (total fertility rate reached 2.0 or below the population stabilization level in 2021). India's demographic dividend, characterised by a rising share of working age population in total population (and a simultaneous fall in the dependent population share), which began in the early 1980s is still on-going. This is one reason (apart from the economic reforms of 1991 and beyond) why GDP growth rates rose even further in the 1990s, and yet again to 8% pa between 2002-3 to 2014-15, and despite falling (during Covid), have sustained at 5.7% pa over the last decade.

Meanwhile, by contrast the external debt crises of LAC (and SSA), starting the early 1980s, led to these countries falling prey to a cycle of stabilization and 'structural adjustment' loans with the IMF and World Bank, respectively. The neo-liberal policies of the 'Washington Consensus' came to rule both these regions (LAC and SSA) throughout the 1980s and 1990s. The result was GDP growth slowed to 1% pa on average over the two

decades in both regions. The results on human capital formation as well as income-poverty, in both regions characterised by high levels of income inequality, were extremely adverse to say the least, which we discuss below. These were also the decades when most Asian economies were growing fast, reducing the incidence of income poverty, while investing in human capital.

Thus, China had not only invested in health, education and reduced wealth (mainly in land ownership) inequalities over 1950 to 1979. When its economic reforms towards a market economy began, its citizen and workforce were well prepared to take advantage of its demographic dividend. China's GDP began growing at 9-10% pa, and sustained that pace for three decades – an achievement unprecedent in human history. This period saw its incidence of poverty fall from ??% to ?% over 1980 to 2010. This was also the period when, thanks to its Industrial Policy, driven by the State Planning Commission, China had followed the Korean, Taiwan, Singapore and Hongkong economies, which in turn were followed by Malaysia, Indonesia and Thailand, in what came to be known as the 'flying geese model' (Singh, 1990??). Asia became the 'Factory of the World'. Europe, the US and much of the rest of the global South was overwhelmed by first Japanese, then East Asian and then in turn by Chinese manufactured exports through the next several decades starting 1990s, which has continued until till date.

However, the extractive model of development in LAC (and SSA) continued apace through the last two decades of the 20th century, although some industrial capacity had already emerged at least in the major LAC economies of Mexico, Brazil and Argentina in first three decades after -WW 2 . Since 2000 Latin American economies saw an increased inflow of FDI, especially a growing trend towards investments in natural resources. This pattern has deepened this resource dependent extractive structure in the 2000s. In 1990, according to ECLAC exports of primary products as a percent of total exports in Latin America decreased from 66.9% in 1990 to 40.9% in 2000, but with rising FDI in the noughties increased again to 61% by 2011 (Veltmeyer 2016).

What is remarkable is that undeterred by the global economic crisis post-2008, FDI flows towards Latin America peaked in 2008 (US$ 128.3 billion), a trend quite opposite to the FDI flows worldwide at the time, which shrank by at least 15 percent. This surge in investment in LAC continued until 2012.

Investment flows continued because the region remains the world's leading source of metals: iron ore (24%), copper (21%), gold (18%), nickel (17%), zinc (21%), bauxite (27%) as well as silver. Oil made up 83.4% of Venezuela's total exports from 2000 to 2004, copper represented 45% of Chile's exports, nickel 33% of Cuba's exports, and gold, copper and zinc 33% of those of Peru. Together with agricultural production, the extraction of oil, gas and metals remains central to the region's exports. In 2008-2009 exports of primary commodities accounted for 38.8 percent of total exports in Latin America. It is for these reasons that we began by calling Latin America's pattern of growth an extraction based model. These exports were the only sources of economic growth during the 1980s and 1990s for LAC (and SSA),

as large Asian economies like those of China, India and the ASEAN (10 countries of SE Asia) continued to grow and absorb LAC (and SSA) resource based exports, even though the European and US markets experienced a relative slowdown in growth in the 1970s relative to the 'golden age of capitalism' from mid-1940s (the post WW 2 Marshal Plan) until the mid-1970s.

While the 1980s and 1990s saw in Latin America the triumph of a neo-liberal state, what emerged in LAC since the noughties is what has been called a 'new extractivism' and the 'postneoliberal state'. Neoliberalism's decline as an economic doctrine and model in several countries in Latin America, occurred alongside strong social movements in many of its countries, which successfully challenged this model. As a result of social movements, a shift occurred in policy and governance terms towards the left in what has been called as 'progressive extractivism.[3] These regimes saw natural resource extraction as an instrument of a process of inclusive development—using resource rents and taxes on corporate profits to reduce poverty. This model did challenge the traditional model in LAC, but did not go far enough to recognize the importance of a domestic Industrial Policy within LAC itself, which could have challenged the traditional extractive policies and the structure of the economy that it gave rise to, inherent in both models. This model is, we would suggest, the foundational reason why the link between economic growth and poverty reduction remains weak in LAC. [4]

Extractive model creates few jobs. The second problem undermining the link from growth to poverty reduction is that fewer jobs are created in an extractive model of development. For our analytical model of synergies in development, a main problem of the resource extraction model is that, unlike with manufacturing, it cannot be established by design to take locational advantage of existing infrastructure, markets and labor supply. Development based on natural resource extraction are necessarily localized in enclaves with linkages to the global market but with very few to the local and national economy, with limited multiplier effects, since backward and forward linkages are fewer. Fewer jobs are created.

And since the technology that such production is using tends to be relatively capital-intensive, labour receives less. Thus labour receives less than 10 percent of the world market value of exported minerals, six percent in the case of Argentina and Chile and as little as 1.2 percent in the case of Mexico. Veltmeyer and Petras report that after four years of booming exports (from 2002 to 2006) the index of the value of real wages in the extractive sector had grown by less than 0.5 percent. This is in contrast with the well-established pattern of cumulative wage increases in the era of post-war state-led development based on 'labor-

[3] In 1990A protest in Ecuador caught the attention of Indigenous communities throughout Latin America; 1994 the Zapatista Rebellion took place in Chiapas, Mexico; in 1997 Evo Morales founded the Movement Toward Socialism (MAS), an Indigenous-led political party, in Bolivia; and in 1991 the constitution of Colombia recognized Indigenous languages and ethnic diversity.

[4] Global commodity prices dropped by 6 percent in 2012, a marked change from the dizzying growth during the 'commodities supercycle' of 2002–12, when prices surged an average of 9.5 percent a year, or 150 percent over the 10-year period). On the other hand, while commodity prices declined overall in 2012, some commodity categories—energy, food, and precious metals—continued their decade-long trend of price increase.

seeking' FDI, human resource development, and industrialization – as was quite common in much of East and South east Asia (and increasingly in South Asia) since the middle of the noughties. In this context, the share of labor (wages and salaries) in the social product (i.e. in the income derived from the production process) settled at a much higher rate—as much as 60 percent—with undeniably positive development outcomes and implications. Naturally, the elasticity of poverty-reduction to growth is greater in Asia.

Extractive model vulnerable to external shocks. The third problem of the Latin American model, which again vitiates a positive interaction between growth and poverty-reduction is that an extractive-model, with heavy dependence upon exports of primary commodities, is vulnerable to exogenous shocks. During the ISI period from 1945 to the 1970s, a certain number of industries had indeed emerged in Latin America. Thus, Brazil had already seen significant capacity built in the manufacture of small jet planes and automobiles; Mexico had seen a labour intensive manufacturing grow along the US-Mexico border (as part of NAFTA) and the emergence of a maquiladores sector. Nevertheless, the extractive model was quite well established even then, and during the hey dey of neoliberalism, growth through the 1980s and 1990s was so slow that, after accounting for population growth over those two decades, the per capita income was not much higher in the region in 2000 than it had been in 1980. However, after 2000, as global GDP growth rose in the noughties, with China and India, as well as Europe and North America increasing their imports of primary commodities, the economies of Latin America boomed.

But this surge began to collapse after the outbreak of the global crisis in 2008. The boom and investments in to natural resources in Latin America survived till 2012, then ended. The result was a sharp fall in GDP growth. An additional result was that the poverty reduction that Latin America saw in the noughties also came to an end. The global boom was good for poverty in Latin America, just as the global recession post 2008 became a bane for it (ECLAC, 2014).

After a sustained fall in poverty between 2002 and 2015 in LAC from 44.5% to 27.8% (thanks to GDP growth driven by rising global primary commodity prices), poverty has risen again since 2015 to 29.6% in 2017, and of extreme poverty from 11.2% to 7.8% to 10.2%. Similarly the absolute number of poor had fallen over the same period from 226 mn to 164 mn, but rose again to 182 mn, and of the extremely poor also first fell from 57 mn to 46 mn but rose again to 63 mn. This economic growth has slowed, and for LAC it demonstrates a sustained vulnerability of the extractive based industries, which have suffered as global growth and hence demand fell (after an initial recovery post-2008 global crisis).

Given the high level of integration of LAC in international markets, the fall in global growth impacted demand for primary commodities. LAC GDP growth since 2013 has been on a downward trend, falling below 2% and even lower. With population growth at 1% pa over 2015-2020, it is clear that per capita incomes have barely risen in the region of 1% pa or thereabouts, since 2013.

Please note that although the structure of production continues to be biased in favour of extractive industries (the predominance of petroleum, iron ore, copper ore and refined copper, soyabeans, and oil cake), manufactures like motor vehicles, data processing machines, and wireless equipment are also present. An underlying reason for the middle-income trap situation becoming entrenched is that LAC has been caught in this extractive-industry biased production structure – as innovation is limited in these sectors, and there are limits to a rise in productivity. No country in the world has managed to sustain GDP growth or sharply reduce poverty without developing a robust manufacturing sector. However, the share of manufacturing in employment, which was 12.5% in 2010 in LAC, had fallen to 11.7% by 2017. Manufacturing share of GDP in 1990 was 19.6%; that share had dropped to 14.4% in 2017 (CEPAL, 2019).

South east Asian nations have much higher levels of manufacturing in both output as well as employment. This is of particular concern for LAC, as the majority of these economies are upper-middle income countries. Meanwhile, India, which even after sustained GDP growth averaging 7% pa over a 30 year period after 1992, was still a low-middle income country, its manufacturing contribution to GDP has been mostly around 17% since 1992 (albeit India could do much better on labour intensive manufacturing in which it still has a significant comparative advantage), while its engineering, pharmaceuticals and automobiles exports continue to grow.

However, Scandinavian countries, along with Australia and New Zealand, which through local innovation have built value- added around natural resource exploitation, attest to the arguments of Stijns (2001) and Lederman and Maloney (2007) that natural resources are not a curse. However, they are a blessing only as long as one has a strategy that provides an answer to "how" natural resources can be exploited in a way that progressively diversifies and upgrades the overall level of skills and economic activity in the country for catch- up. Unfettered market forces are unlikely to do this (Devillin and Moguillansky, 2013).

High informality of LAC's workforce keeps poverty high. The final reason for the poverty-elasticity of growth in Latin America being relatively low is the very high share of informality of the workforce, despite the region's high per capita income level. Most countries in the region are upper-middle income (per capita income of $ 4235 per annum to $ 13200) ; yet the rate of informality is high, estimated at 53% (ILO 2018).

Since earnings from labour are the major source of incomes, slow and volatile growth impacted employment. Informality rate is very high (84%) for own account workers that represent 27.7% of total employment. And informality rate is 37% for employees whose share in total employment is 63.3%. The employment structure by firm size shows that some 28% of the labour force work as own account workers, where informality rate reaches 90% (ILO 2018).

With agriculture in LAC being large-scale historically (the continent's land-man ratio is very favourable) its reliance upon new technologies has been high. It is relatively capital intensive agriculture, except among the indigenous farming communities. Most haciendas till

the land using capital-intensive methods, so agriculture cannot generate much employment. If anything, it displaces labour, which must find non-agri work. But the extractive model in non-agriculture is also capital intensive and does not generate many formal jobs. Hence the rest of the labour force ends up in informal service provision, as a residual labour force absorber. The incomes in informal work are lower, hence another factor in why the poverty elasticity of growth is low.

The Growth-Human Capital Relationship: Why Weak in Latin America?

Human capital formation is critically dependent upon state investments. The private sector in health and education has always catered to the well-off, not to the majority of the population (as we have argued, in the now industrialized countries (see Mehrotra and Delamonica, 2007; as well as in the global South, see Mehrotra and Jolly 2000, and for India, see Mehrotra, 2016). But the state's capacity to invest in health or education or economic infrastructure is critically dependent on the state's fiscal capacity. However, fiscal capacity is crucially dependent upon sustained GDP growth (Ranis and Stewart, 2000; UNDP, 2004).

We have seen above the reasons for the volatility of GDP growth – the bane of Latin American societies. With volatile growth, the capacity of state to spend is limited, due to a relatively low tax to GDP ratio, given per capita incomes. How can public expenditure increase in a typical LAC country if tax to GDP ratio is only as high as in India (a low middle income country, with per capita income only a third or a fourth of Brazil or Mexico)? The Latin American unweighted average for tax to GDP ratio had risen from 13.9% in 1990 to 16.4% in 2000, and to 19.4% in 2010 – driven by growth (which was mostly externally driven). The average for South America was the same as the LAC average in 2017 at 22.8%, though lower in Central America and Mexico at 21% (ECLAC, Social Panorama, 2019). The fact that it is rising is itself a sign of hope for the state's potential to make social investments needed to realize the dual synergies that drive inclusive growth.

By contrast, most East and South east Asian states invested early in their development process in school education and basic health care (Mehrotra and Jolly 2000; World Bank, 1993). The sustained growth that they experienced over the 1980s and 1990s, and even since then, becoming the Factory of the World, enabled them to sustain human capital formation, which underpinned their growth strategy.

Secondly, the fiscal capacity of the state is also impacted by the pattern of growth – especially the nature of its financial development. The financial system in most Latin American economies is dominated by foreign-owned banks. This is in complete contrast to economies across Asia. The banking system could, in principle, be either publicly or privately owned. If mostly private, it could be mostly foreign-owned or domestically owned. Which of the variants predominates, in many ways determines the depth of financial development and financial inclusion in the economy.

Foreign direct investment is very important to extractive industries, and this investment is mediated by mostly foreign banks, which are themselves multinational corporations. This combination, on the one hand, keeps the base of the economy relatively

narrow, which generates limited tax revenues. On the other hand, foreign banks are not interested in ensuring financial inclusion, in the sense of banking for all: the majority of households in a economy whose banks are mostly foreign owned, would not even have a bank account; in LAC, the share of households with a bank account is 57%.[5] In other words, the savings of a significant proportion of the not so well-off, are not accessible to the banking sector: hence, the savings to GDP ratio is relatively low, despite the high mean national income level.

In such contexts, households that lack access to good financial savings instruments may opt to save in other ways—by accumulating cash or jewelry, by buying durable goods, or by investing in the family firm— which may not be the most productive. These mechanisms reduce the collective efficiency with which the existing savings are used. A good financial system not only mobilizes savings but also pools them and allocates them efficiently to finance the projects with the highest returns (which is what characterizes the East Asian and South Asian financial development model) (Studwel, 2013). If savings are not pooled within a well-functioning financial system, then the overall economy suffers a loss.

National savings result from the combination of decisions by individuals, businesses, and the public sector. On all fronts, Latin America's savings are low for UMICs: gross public savings are only a bit more than one-third those of emergent Asian economies, while private savings are 69 percent of those of advanced economies and only 57 percent of emergent Asian economies (Taylor, 2016). Tax evasion accounts for more than half of potential tax revenue in the region, which places much of the burden on compliant citizens, who then have every incentive against saving, with pernicious effects on aggregate investment and productivity.

Given low savings rates in Latin America, which are 10-15 percentage points of GDP lower than that in Asian economies (including a low middle income country like India), it is not surprising that investment rates are lower relative to GDP, hence growth is lower. Only about 16 percent of the adult population in Latin America and the Caribbean report saving through a bank, compared to 40 percent in Emerging Asia (in India over 75% of households have a bank account), and 50 percent in advanced economies. Instead, households in LAC—especially relatively poorer households—save more through informal mechanisms, or just give up on saving altogether (IADB, 2016).

The region must increase investment by between 2 and 4 percentage points of GDP per year for decades to loosen this binding constraint on growth. But Latin America saves only around 20% of GDP, a number that has hardly changed over the last few decades. Low national saving limits the financing available for building and maintaining productive social infrastructure. Poor social infrastructure, in turn, results in the inadequate provision of services such as potable water, sanitation, health, and education.

[5] People with bank accounts, percent of the population over 14 years of age, 2021: The average for 2021 based on 16 countries was 57.33 percent. The highest value was in Chile: 87.06 percent and the lowest value was in Nicaragua: 23.19 percent. https://www.theglobaleconomy.com/rankings/percent_people_bank_accounts/Latin-Am/# Also see Gershenson et al, 2021.

In addition, a third and final reason for weak links between growth and human capital, is that in Latin America savings usually falls after crises. People naturally want to protect the real value of their hard-earned savings; thus, they often channel savings abroad, purchase durable goods, or step up consumption rather than invest locally when there is too much volatility. High volatility may also discourage foreigners from lending at longer terms and lower cost. A negative cycle sets in whereby low national saving drives the requirement for more foreign savings, which becomes more difficult to attract, increases external borrowing costs, induces financial fragility and crises – eventually undermining growth and reducing the fiscal capacity of the state, and households' ability to invest in their own human capital. Thus, the state's investments in social or physical infrastructure is constrained, as well as its investments in health and education. Herein lies the nub of the relationship between growth and human capital formation in Latin America.

The relationship between Human Capital Formation and Poverty in Latin America

Latin America is well known to have among the highest income inequality for any developing region of the world.[6] The high levels of inequality and poverty, on account of the reasons discussed above, keeps household private spending on health and education low, which prevents poor households from pulling themselves up by investing their own or their children's health and educational well being.

Secondly, given that public spending is constrained (by factors discussed above), and yet Latin America's demographic dividend is over (Brazil's ended around 2018), an additional problem is staring policy makers in the region: aging. The society and state will need to increase spending to address two new challenges with aging: more on health services for the aging, and more on social insurance and pensions for the elderly. This will further compromise the ability of economy to enhance human capital levels for the majority who are still in the workforce or will enter the labour force.

3. Why an Industrial Strategy/Policy for the 21st century?

Governments in almost all market-economy countries intervene to a greater or a smaller degree in the operation of their industries. For example, even the US government intervenes in industry through anti-trust laws, industrial standards, pollution regulations, and labor laws. Japan did and East Asian countries do. What makes interventions by the three East Asian states (Japan, South Korea, Taiwan)/other South east Asian countries into an "industrial policy" is that their interventions were *generally coordinated and viewed as a coherent whole*.

Equally important, in all East Asian and South-east countries, industrial policy was planned and executed as part of five year or longer-term plans – regardless of whether it was

[6] According to the World Bank, the Gini index for Latin America and the Caribbean was 47.2 in 2022 (World Bank, World Development Indicators). According to the World Inequality Report, the poorest 50% of the population in Latin America earns just 10% of the total income, while the wealthiest 10% earns 55% (Chancell et al 2022).

Japan, China, South Korea, Malaysia, Thailand, Indonesia or the Philippines. In fact, it was precisely because these countries had planning institutions – working hand in hand with industrial policy – that the East/SE Asian countries managed to steer policies through even turbulent times in the global economy, thus sustaining growth (while populations began to fall). They did not, unlike much of LAC or SSA, experience "lost decades" in the 1980s and 1990s; in LAC and SSA two full decades of potential economic growth and human development were lost while populations grew. The important identifier of these East/SE Asian countries were their planning structures, backed by effective industrial policy, implemented by learning bureaucracies (Chang, 2003; Mehrotra and Jolly, 1997; Mehrotra 2020).

Hausmann and Rodrik (2006) have pointed out that the income gaps between the LAC and SSA regions and the industrialized countries have increased in the wake of neoliberal strategies. The East Asian economies on the other hand, contrary to the Washington Consensus, continued with selective industrial policies, even at times defying their comparative advantages (Lin and Chang, 2009).[7] By contrast, SSA (like LAC economies) experienced premature deindustrialization with manufacturing contribution to GDP falling from 15 per cent in 1990 to 10 per cent in 2008, attributed partly to the pace and depth of trade liberalization on one hand and neglect of agricultural investments on the other (ILO, 2014). SSA economies' GDP remains till date heavily dependent upon primary commodity exports and production, with very limited structural transformation. In LAC, except for Brazil and Mexico, the majority of economies also remain highly primary commodity export dependent, with limited industry.

Despite this evidence, however, there are many[8] that were sceptical that industrial policy could be practiced in other developing countries, since they have weaker bureaucracies and that, in any case, the international environment in which today's developing countries are operating is unlikely to accept interventionist industrial and trade policies in the 21st century. However, a capable state existed in China: the Chinese government in its 7th and 8th Plans (1986-90 and 1991-95 respectively) explicitly embraced industrial policy to promote industrialization in China.

When the market economies of US and Europe were hit by the GEC, the very proponents of neoliberal policies started to undertake strategic government efforts to revive their industrial sectors defying in principle their own prescriptions for free markets and trade. Criticizing 'picking the winners approach' in the form of selective and thus market distorting industrial policies, these market economies have taken up identifying certain sectors

[7] When they did not defy it in the mid 1990s (by following IFI advice on financial liberalization, they paid a price in the form of an financial and economic in 1997-98 (see Stiglitz, 2000 Globalization & its discontents). In fact, the Japanese government even offered to create an alternative to the IMF in the late 1990s, only to be snubbed by Larry Summers and the US Treasury.

[8] In the World Bank in particular there were many skeptics (see for instance, the World Bank's East Asian Miracle, 1993). However, that position came under serious attack during and after the Asian economic crisis of 1997-8 from the then Chief Economist of the World Bank, Joseph Stiglitz (see Stiglitz, 2000). Later on, during the period that Justin Y Lin, the Chinese economist, was the Chief Economist of the World Bank (2008-13), there was a clear shift in position, as Lin was very clear about the role of industrial policy in the success of Chinese and East Asian manufacturing growth (see Lin, 2009).

themselves to support and promote through industry specific measures. The European Union has for instance identified sector specific initiatives to promote sectors like motor vehicles, transport equipment industries, energy supply industries, chemicals and agro food industries (European Commission 2010 as cited in Stiglitz et. al 2013).

The US government, as Wade (2013) pointed out, has been pursuing selective industrial policy since decades, nurturing its industries with the aid of defence, health and intelligence agencies. Wade (2013) goes on to suggest that the biggest success of US' industrial policy has been to persuade the world of denying its application in the US. The role of US industrial policy has been in the promotion of new technology across sectors. The US government funded the setting up of manufacturing innovation institutes to build what they call the National Network for Manufacturing Innovation (NNMI). In his State of the Union address on February, 12 2013, the then President Obama announced the launch of 'manufacturing hubs', conceived on the principle of private sector partnering with Departments of Defence and Energy to create global centres of high-tech jobs (Stiglitz et. al, 2013).

Latin America too saw a revival of IP (Devillin and Moguiallsky, 2014). Local economic groups,6 some of which have become multinational in their economic activities.7 However, while these firms have scale, talent, and import the latest machinery and equipment, many have not been leaders in locallybased development or innovation and investment in R&D, which tends to be very low in almost all Latin American countries. Indeed, the whole area of promotion of innovation and R&D, as well as creating networks of collaboration among business, academia and government, is a prime area of action for industrial policies in Latin America.

Hence, time is more than ripe now for the policy path dependence in LAC to change.

The theoretical rationale for industrial policy in Latin America

For the benefit of sceptics, we deliberately start with the *theoretical justification by mainstream economists for industrial policy.* They accept government intervention in case of market failures. Mainstream economists point to specific instances of market failure that require government measures in the form of industrial policy: (i) deficiencies in capital markets usually as a result of information asymmetries; (ii) lack of adequate investments inhibiting exploitation of scale economies; (iii) imperfect information with respect to firm level investments in learning and training; and (iv) lack of information and coordination between technologically interdependent investments (Lall, 1996; also World Bank, 1993). These are good reasons why a planning mechanism that is economy wide should be in place in such a large economy as Brazil or Mexico or India.[9]

Nevertheless, on account of the scepticism about industrial policy, it is necessary to re-state the rationale for industrial policies, since we believe they remain relevant in the 21st

[9] Tragically, India abolished its Planning Commission at the end of 2014 (when the right wing Modi government came to power). India became the only Asian economy to have taken such a step (see Mehrotra and Guichard, 2020)

century. Chang (2003a, b) noted that the *East Asian Miracle* study (World Bank 1993) did recognize three justifications for industrial policy. The first, in its view, was the need to *coordinate complementary investments* when there are significant economies of scale and capital market imperfections. In other words, industrial policy is needed for a big push in investments – something the East Asians were able to achieve. Second, industrial policies are needed to address *learning externalities*, such as subsidies for industrial training. In fact, it can be argued that industrial policy was reinforced by state investments in human capital, particularly general academic as well as vocational education/training aligned with the industrial policy, in most East Asian countries (Lee, 2016; Mehrotra and Acharya, 2017). However, the lack of such investment in human capital (education, vocational skills or health) has been a major constraint upon LAC economies being able to attract foreign investment in manufacturing (with some exceptional sectors/countries) in the first half century of development (even though primary commodity production or natural resource extraction attracted plenty of FDI).

Third, the state can play the role of *organizer of domestic firms into cartels* in their negotiations with foreign firms or governments – a role that has become particularly relevant in the 21st century after the big business revolution of the 1990s (following mega-mergers and acquisitions among TNCs) (Nolan, 2003). In fact, given that China is one of the only few late industrializers that had been unable to create a large number of mega firms with an international reputation, one of the objectives of China's industrial policies since the 1990s has been to support the growth of such firms (with limited success, e.g. Lenovo computers, Haier home appliances).[10]

There are three other very important reasons why developing economies need industrial policy (Chang, 2003; Rodrik, 2000). First, the role of industrial policy is not only to prevent coordination failures (i.e. ensure complementary investments) but also *avoid competing investments* in a capital-scarce environment. Excess capacity will lead to price wars, adversely affecting profits of firms – either leading to bankruptcy of firms or slowing down investment. The East Asian state managed this role of industrial policy successfully.

Second, industrial policy can ensure that the *industrial capacity installed is as close to the minimum efficient scale as possible* through policy measures such as investment licensing, forced mergers and export requirements. Choosing too small a scale of capacity can mean a 30-50 per cent reduction in production capacity (Chang, 2003). This is another role industrial policy performed in East Asia.

Finally, when *structural change is needed, industrial policy can facilitate* that process. In a fast-changing market, losing firms will resist and block structural changes that are socially beneficial but that will make their own assets worthless. Under those circumstances, industrial policies must help such firms. East Asian governments prevented such firms from undermining the process of structural change, such as orderly capacity-scrapping between competing firms and retraining programmes to limit such resistance.

Unfortunately, however, the potential role of industrial policy has been consistently downplayed in developing countries outside of East Asia ever since the early 1980s after the growing

[10] This fact is especially notable for China, given that it was a much later addition to the "Flying Geese" model of East Asian industrial growth, in which Japan was the leader, Korea and Taiwan in the second tier, with Malaysia, Singapore, Hongkong, all following. China joins the "flying geese" only after the mid-1990s

dominance of the orthodox paradigm – with well-known consequences in much of Latin America and also Sub-Saharan Africa. There has been a return to industrial policy in LAC in the last decade or so (as discussed in the next section).

The East Asian miracle was very much founded upon export-oriented manufacturing, which employed the surplus labour released by agriculture, thus raising wages and reducing poverty rapidly. This strategy was the outcome of conscious, deliberate planned strategy. The growing participation of East Asian countries in global value chains, graduating beyond simple, manufactured consumer goods to more technology- and skill-intensive manufactures for export was a natural corollary to the industrial policy.

4. Industrial policy and Social Policy: are there lessons for LAC from Asia?

We have seen in the previous section that the LAC economies have long suffered from two structural problems; the first is the reliance on an extractive model of development, combined with an absent Industrial Policy; the second was the limited investment in health and education, a situation compounded by neo-liberal policies for two decades. In both respects the East Asian model had been the exact opposite. We discuss both in the context of LAC in turn, though giving more attention to IP (for reasons of space).

However, across the globe, neo liberal policies suffered a massive setback, when their unrestrained influence culminated in a global financial crisis in 2008, followed by a global economic crisis (GEC).

Return with a vengeance: Industrial Policy is back

In the following 10 years, a notable change came within countries in respect of government approach to IP, not just in developing but also in developed countries: UNCTAD (2018) reports that about 100 countries had adopted industrial policies in the wake of the GEC. This included a large number of LAC countries as well.

What was the nature of these LAC industrial policies? A review of industrial policies over time concludes that more recent policies rely instruments that aim to improve infrastructure, education and training, enterprise development, the building of clusters and linkages, entrepreneurship, innovation, access to finance and social policies (Salazar et. al. 2014; Devillin and Moguillansky, 2013). This reflects a change in the scope of industrial policies, compared with those used earlier in the context of import substitution. With industrial policies aspiring to structurally change an economy's production structure and trajectory of growth, investment, in particular foreign direct investment (FDI), has become a prominent part of industrial policies. For instance, a detailed assessment of the empirical impact of industrial policies concluded that "Industrial policies through FDI promotion may be more successful than intervention in trade, in part because FDI promotion policies focus on new activities rather than on protecting (possibly unsuccessful) incumbents. If such measures are part of a broader effort to achieve technological upgrading then they may be

helpful, whereas if they are implemented in isolation they are likely to fail" (Harrison et al., 2010). Likewise, Rodrik (2013: 51) states that the "focus these days may need to be more on segments of industries than on entire industries, and more on foreign investors than locals. But ultimately the principles of cooperative industrial policy based on public private partnerships … still apply".

However, although almost all Latin American countries have programs of FDI attraction, that is not the case regarding effective strategies to leverage FDI for economic upgrading and spread effects in the local economy. Ireland, Singapore, Malaysia, among others, have used industrial policies to do precisely this with their FDI attraction programs. Another area ripe for industrial policies in Latin America is the preparation for climate change. Climate change brings not only threats, which should be anticipated and addressed by firms and society, but also opportunities in terms of new technologies and emerging comparative advantages.

During ISI, industrial policies combined trade protection with investment promotion (both state and foreign investments were supported) and national development banks were the main financing agents. Two of the most notable examples of industrial policies in the region during the 1970s were the Second National Development Plan of Brazil, and the National Industrial Development Program 1979–82 of Mexico, which coincided with its boom in oil exports. However, *the structural problems discussed in the analysis of dual synergies remained.*

In this context, industrial policy went outside the 'correct' political discourse. Hence, industrial policy, ended up to be practically excluded from the new economic model that was established by market-friendly economic reforms. This loss of legitimacy of industrial policy, however, was not homogeneous across the world. It was more noticeable in Latin America. For example, in several countries of East and South East Asia, active sectoral policies, sometimes even with targeting at the firm level, survived until the mid-1990s—fading gradually, and at different rates, as domestic production and technological capabilities gained competitiveness.

Although most LAC governments shared the negative stance towards IP, such an extreme view did not always coincide with de facto policy measures. Even strongly reformist governments, such as those of presidents Menem in Argentina, Collor de Melo in Brazil, and Salinas de Gortari in Mexico, maintained certain sectoral policies, in particular for the automotive industry, beyond their plain support of the market-led economic model (Peres, 2013).

Much of the region's experience in IP during the Washington consensus era is summarized by the term 'competitiveness policies' (Peres 1997). In the mid-1990s, almost all countries in the region designed programmes to support the competitiveness of their economies. The national competitiveness strategies were based on the cluster methodology, albeit under a variety of names, mainly, industrial agglomerations or 'conglomerates'. Policies to promote clusters have been extensively implemented also at the sub-national level, and countries such as Mexico and Brazil built up strong capabilities to support local development.

Incentives for the footwear cluster in the state of Guanajuato or the electronics industry in the state of Jalisco (Mexico) are two relevant examples (Unger 2003; Dussel Peters 1999). In Brazil the main player has been the Brazilian Service to Support Micro and Small Enterprises (SEBRAE), which implemented programmes throughout the country.

The region's policies, even those with sectoral scope, have focused much more on enhancing the efficiency of existing sectors than on creating new ones (Melo and Rodríguez-Clare 2006; Melo 2001; Peres 1997). This is consistent with the search for greater penetration in international markets, grounded essentially on the pursuit of static comparative advantages (unskilled labour and natural resources). This has been the case both in countries with a diversified production structure, such as Brazil and Mexico, as well as in those whose production structures are concentrated in few activities (e.g. automóviles in Mexico).

The creation of new activities appeared sporadically as a policy objective, mainly related to international trade negotiations aimed at increasing market access and to the attraction of FDI. Policy initiatives resulted in the expansion of Mexico's export platform in the framework of the North American Free Trade Agreement between this country, Canada, and the US (NAFTA) (automobiles and transport equipment components, electronics and clothing); the promotion of the basic assembly activities (*maquiladoras*) in a number of Central American and Caribbean countries (clothing); and investments in privatized firms in the services and primary sectors in South American countries (Peres,2013). Different combinations of sectoral policies and transnational corporations' strategies induced a certain level of production diversification. Nonetheless, this strategy had limitations, such as low value-added in the assembly activities, weak linkages to the domestic economy, and the consequent scant generation of endogenous technological capabilities (Peres and Reinhardt 2000).

Beyond the different approaches to sectoral policies, the region displays a strong convergence in terms of policy design over the last decade, centered around five basic elements: (i) emphasis on increasing international trade competitiveness, (ii) generalization of the legitimacy of horizontal or neutral instruments, (iii) support for small businesses and micro-enterprises, basically for reasons linked to their job creation capacity, (iv) efforts to design science, technology, and innovation policies aimed at advancing towards knowledge-based economies, and (v) focus on sub-national or local economic areas. The spread of cluster support programmes is the clearest example of the combination of these elements (e.g.SEBRAE programmes to support clusters in Brazil).

This convergence indicated that the region accumulated capabilities and experience in policy formulation. Most market distorting policy instruments were eliminated or phased out. Besides, governments now tend to approach industrial policy from a much more systemic view than in the past. In all these aspects, the reemergence of industrial policies in the región has seen a combination of new and old objectives and instruments, such as cluster development and structural change, or technology funds and state procurement, respectively.

However, the outcomes of these policies remain weak (as the second section of this paper attempted to demonstrate); the implementation and evaluation of impacts are still particularly weak in the region (Peres.2013).

The countries of the region accumulated sensible experience in terms of policy management in the areas of macroeconomic policy and central banks; such experience could and should be replicated in areas linked to industrial development. At present, political parties or coalitions of parties that based much of their long-term platforms on the rejection of 'economic neoliberalism' are in power in Brazil (though President Lula only returned in 2023), Bolivia, Chile, Ecuador, Nicaragua, Uruguay, and Venezuela (though not in Argentina, where the situation changed in 2023). Industrial policies had frequently been mentioned by these parties as a substantive part of their strategic guidelines for achieving sustainable development with greater social justice.

However, reality appears not to have fulfilled expectations. There has been no significant action in most countries mentioned above to change the current economic model, in terms of its pattern of production specialization, through the application of industrial policies.

Peres(2013) has attempted two explanations. "The first would be that the discourse of the opposition was rapidly constrained, upon its rise to power, by the pressure of global financial markets and the existing consensus as to what constitutes a 'responsible' macroeconomic policy, and that, as part of the same move toward international acceptance, the discourse of structural change was relegated to second or third place." He continues: "Another explanation might be that,… the structural change or industrialist discourse lacked the strength to show that it could be translated into specific operational proposals, capable of yielding at least a few results that were attainable within the space of a single administration." Clearly then, much remains to be done, as we argued in section 2.

Social Policy remains weak despite a revival

In addition to Industrial Policy, a clear policy implication emerging from sections 1 and 2 was that Social Policy (SP) needs to become more effective in LAC. However, it has to be recognized that in the noughties when growth had revived early this century, significant changes were introduced in SP.

Several results followed from that revival of SP. Between 2000 and 2018, public social expenditure as a share of GDP increased from 8.5% to 11.3% and per capita social spending rose from US $484 to $ 938 in constant terms. Access to benefits also expanded. Thus, direct policy action to reduce poverty (as the dual synergy model would suggest) was taken: the share of the population 65 years and older who receive a pension benefit (contributory and non-contributory) increased from 51.5% to 76.2% between 2000 and 2017. Much of this increase was on account of non-contributory programmes. Several countries (Argentina,Bolivia, Brazil and Uruguay) reached nearly full coverage. This should be qualified by noting that for non-contributory benefits, they were small and confined to

informal workers, while formal workers with contributory schemes, had better benefits (Arza et al, 2022).

Despite these successes, informality in the workforce remains high in LAC, as we noted in section 2. Arza et al (2022) rightly ask: "But did these reforms succeed in breaking with the unequal character of Latin American social policy?" Their own answer is revealing: "In terms of class and labour market status, the expansion of CCTs [Conditional Cash Transfers], non-contributory pensions, and basic health care did decrease access gaps, yet contributory health and pensions are still of better quality and more generous than non-contributory ones. In some cases, the difference between the two types of benefits is quite large. A similar trend appears when we focus on gender: women improved their autonomous access to resources, both due to labour market incorporation and greater access to cash benefits from new social programs. However, women continue to exhibit lower pension coverage and lower benefit values than men (p54)."

Concluding remarks

We began this paper with a conceptual framework which helps us explain the current structural constraints of most Latin American economies. The dual synergies framework enables us to focus on policies that could weaken those structural factors holding back growth in the Latin American economies.

Most of these economies could learn from the Asian experiences in both structural change with economic growth, but not without a concomitant investment in the expansion of health services, or improving the quality of education, or further on the path of social protection. ECLAC (2022, 2023) shows in their analysis that poverty increased during Covid, and economies contracted (even though they later rebounded).

Most LAC economies have rightly adopted industrial policies, especially but not only since the global economic crisis of 2008, as a way forward to advance structural change in their economies; they have also made significant progress on several fronts of social policy that have remained a barrier for most LAC economies in competing with the rest of the world. Social expenditures have also picked up significantly during and post-Covid (ECLAC, 2022,2023), despite reversals of policy (e.g. the ending of Progressa in Mexico, the pushback against CCTs in Brazil, and the impending reversals likely in the wake of a return to hyperinflation in Argentina under right wing/populist regimes).

This is not a scenario in which weak industrial policies can succeed. Devilling and Moguillansky (2013) establishes that successful industrial policies should be based on medium- and long- term strategies, built on the basis of a solid public– private alliance and implemented by strong and well- aligned public institutions. Yet satisfying these requirements is by no means a straight forward matter, especially in a region where the Washington Consensus doctrine was applied with severity resulting in a majort weakening of institutional capabilities in this field. However, a process of reconstruction seems to be underway (Alvarez, 2013).

Yet the road ahead remains long, and hard, on both counts of industrial policies to induce structural change and social policies to induce less unequal societies.

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