



United Nations  
Office for South-South Cooperation



## South-South Ideas

**The Link Between Trade and  
Inequality: A Review of the  
Literature and Emerging Research  
Agenda From the Perspective of  
South-South Cooperation**

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The Link Between Trade and Inequality: A Review of the Literature and Emerging Research Agenda From the Perspective of South-South Cooperation

**February 2021**

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# Abbreviations and Acronyms

<b>DESA</b>	Department of Economic and Social Affairs
<b>FDI</b>	Foreign Direct Investment
<b>g</b>	Real Income Growth
<b>HEIs</b>	Higher Education Institutions
<b>IPR</b>	Intellectual Property Rights
<b>MDGs</b>	Millennial Development Goals
<b>NAM</b>	Non-Aligned Movement
<b>NSC</b>	North-South Cooperation
<b>r</b>	Asset Returns
<b>SAP</b>	Structural Adjustment Programme
<b>SBTC</b>	Skill Based Technological Change
<b>SDGs</b>	Sustainable Development Goals
<b>SSC</b>	South-South Cooperation
<b>WTO</b>	World Trade Organization

# Executive Summary

The paper constructs a hypothesis that South-South trade based on the logic of sharing may provide an alternative way to guide international trade and help reduce the scourge of inequality that is observed globally. Reviewing both the theoretical and empirical literature on globalization, in general, and international trade, in particular, it argues that while developed countries are facing increasing levels of internal inequality their Southern counterparts are no less vulnerable. The extant literature suggests five drivers of inequality are being observed globally: trade, financial deepening, technological advances, domestic policy changes and differential access to the inputs required for human development, all of which are intricately linked to each other. These drivers are contributing to intra-country inequalities in income and wealth distribution with a disproportionately higher incidence of wage inequality. This points to the significant role played by the present structure of trade based on the notion of “competitive advantage” in contributing to the rise in inequality, whether directly or indirectly.

The evolution of the theoretical understanding of “comparative advantage” and its subsequent reformulation into a notion of “competitive advantage” as the technical basis of trade, with near total neglect of the bi-directional causality between trade and the domestic features of a country, has perhaps failed to appreciate the linkage between trade and inequality. A trade theory that was fundamentally developed on the assumptions of perfect competition in the factor and product markets and technology differentials, in an era of factor immobility under an assumed regime of “diminishing returns”, has lost its relevance today. This calls for a new approach to constructing its theoretical basis.

A different structural perspective on global trade developed during 1950s and 1960s under the nomenclature of “dependency” and “centre-periphery theories”. However, this could not sustain the overwhelmingly empirical perspective of the literature on trade, until it was revived under the name of “new trade theory”. The gradually increasing share of South-South trade over the last couple of decades and its resilience in the face of COVID-linked disruption, as observed by a very recent document (UNCTAD, 2020) call for a thorough theoretical and empirical understanding of the nature and implications of South-South trade. The conceptual framework of a “development compact” that has evolved to capture the ethos of South-South Cooperation is an effective way to operationalize the linkage between capacity building, trade, investment, technology sharing and development finance in the quest for development of the Global South. This points to the importance of “cooperative advantage” in contributing to the welfare of citizens in need.

The paper provides a tentative new research agenda for immediate consideration in our quest for empirical validation of the “development compact” in ensuring “gains from trade” and their subsequent distribution among stakeholders in an equitable manner.

# Introduction

International trade is often blamed for the increasing inequality across the globe. In view of the continuously growing volume of South-South trade, one may be prone to ask whether such trade is contributing to this growing scourge. This paper seeks to answer this question and constructs a hypothesis that the nature of South-South trade may provide a new conceptual basis for the implications of trade in tackling the scourge of inequality. However, much more research is required to test the validity of this hypothesis.



The Agenda 2030 to achieve the Sustainable Development Goals (SDGs) calls for efforts that leave no one behind, within a stipulated time period. This is a bold step in the right direction.

The World Social Report 2020 published recently by the United Nations' Department of Economic and Social Affairs (DESA, 2020) is titled "Inequality in a Rapidly Changing World". This report chronicles the increasingly deep divides both between and within countries in an era of considerable global economic growth and significant improvements in the standards of living of the global populace. It also points to the role of gender, ethnicity, race, location and socio-economic status in influencing the opportunities available to individuals and communities. The 2005 version of the report warned that increasing inequality could jeopardize the achievement of the internationally agreed millennial development goals (MDGs). The Human Development Report 2019 also underlined concerns about inequality in "Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century" (UNDP, 2019). The Agenda 2030 to achieve the Sustainable Development Goals (SDGs) calls for efforts that leave no one behind, within a stipulated time period. This is a bold step in the right direction. Its adoption by 193 countries also indicates that the political will exists to overcome the challenges that may emerge. It also includes the key lessons learnt from the less than impressive outcomes from the efforts to achieve the MDGs. Unlike the MDGs, the SDGs have been identified through long-term consultations with all stakeholders, to ensure broader ownership. SDG 10, which aims to reduce inequality within and among countries, bears witness to this desire. SDG 5, aimed at reducing gender inequality, further strengthens this resolve. The other goals also centre on the idea of facilitating inclusive development, with a clear objective of contributing to achieving an equitable world. Needless to add, considerable and extensive global-cooperation efforts will be needed to arrest the present trend of rising inequality.

Inequality can broadly be viewed from two perspectives: inequalities in income or wealth and inequalities in opportunities. Income inequality has also been extended to capture the extent of wage inequalities, which have also been increasing for some time. Some characteristic inequalities are observed in access to opportunities because of geographical advantages or disadvantages, for example access to health and education. Inequality is also influenced by race, religion and gender differentials.

Income includes returns in terms of flows, i.e. wages, salaries, interest from savings, dividends from stocks and profit over a period of time. Wealth is a liability-adjusted measure of assets that includes the value of both movable and immovable assets accumulated over a period of time. Inequality measures the extent to which income or wealth is distributed in an uneven manner among individuals. Inequalities in access to health (Dewan et al, 2019; Johar, Soewondo, Pujisubekti, Satiro and Adji, 2018) and education (Lee and Lee, 2018) are also a matter of concern, as they may be considered simultaneously to be both the causes and effects of inequalities in income and wealth. Inequality may also exist at the gender-identity level within a community and inequalities linked to race and religion are also observed. These perspectives are important in exacerbating inequality in human societies.

Recent theoretical contributions and empirical findings identify issues such as technological change, globalization, financialization and increasing functional income inequality as explanatory factors for the phenomenon of income inequality across countries, while also highlighting forces that could be expected to balance this, such as education, labour market institutions and welfare state redistribution (Sauer, Rao and Pachauri, 2020).

Wealth inequality is linked to the fundamental tenets of capitalism – innovation, economic freedom and entrepreneurship – along with the persistence of crony capitalism, which breeds corruption and provides disproportionate benefits to small groups (Edwards and Bourne, 2019; Piketty and Zucman, 2014). Piketty (2014) provides an analytical framework for this proposition and asserts that the relationship  $r > g$ , where  $r$  is the rate of return on capital and  $g$  is the growth rate in an economy, plays an important role in amplifying wealth inequality and leading to higher capital concentration. When  $r$  is greater than  $g$ , there is a systemic incentive to encourage wealth accumulation, contributing to increased inequality in wealth distribution. Madsen (2017) provides interesting empirical support for Piketty's argument in the context of the dynamics of inequality in Britain between 1210 and 2013. The current behaviour of stock markets, where market indices are steadily rising across the globe in spite of the contractions observed in all countries, perhaps attests to this idea.

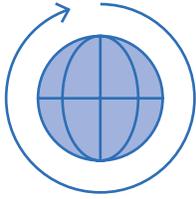
The interaction between income inequality and inequality in access to the vital resources required for sustained livelihoods operates at both the individual and community levels. Kaestner and Lubodsky (2016) describe the negative relation between access to health insurance and income inequality in the United States. Riley (2020) considers social stratification to be the most important cause of health inequality, and social stratification only varies *between* populations and hence goes beyond linking health inequality to understanding differentials in disease and death *within* a population. She thus raises the issue of community level inequality with regard to health. Inequalities in income and access to education share bidirectional causality. While access to education is affected by income inequalities (OECD, 2017), equitable access to education plays a vital role in reducing income inequality (Oxfam, 2019). Evidence suggests that black and minority ethnic students and staff continue to be disadvantaged in higher education institutions in the UK (Bhopal and Pitkin, 2020).

The extent of global inequality is also high. Even though Bourguignon (2015) and Hellebrandt and Mauro (2015) suggest that global inequality has started to fall after rising for decades, the global Gini coefficient is higher than that for any individual country. Measured in absolute terms, global income inequality increased significantly between 1975 and 2010 (Niño-Zarazúa, Roope and Tarp, 2017). The level of inequality that has accompanied the most recent wave of globalization is likely to be unprecedented in historical terms. According to the United Nations Development Programme, the income gap between the fifth of the world's population living in the richest countries and the fifth of the world's population living in the poorest went from 7:1 in 1870 to 11:1 in 1913 and to 74:1 in 1997 (Pieterse, 2002, p. 1025).

The Global Wealth Report published by Credit Suisse in October 2019 estimates that 1% of global adult individuals own 45% of global wealth, while 56.6% of global adults own 1.8%. The share of the top 1% was 47.3% in 2001. This came down to 41.3% by 2011 and then started rising again, to 44.1% in 2017, 44.4% in 2018 and 45% in 2019. The Gini coefficient of global wealth distribution also shows an increasing trend since 2017, from 88.1 to 88.6 in 2019. Alternative estimates suggest that the Gini coefficient of global wealth distribution was 92.2 in 2014 and the share of the top 10% was 88.3%. Wealth inequality fell from 2000 to 2007, with the share of the top 10% falling from 89.4% to 86.5%, before rising steadily to 88.3% in 2014 (Davies, Lluberas and Shorrocks, 2017, p. 749). Individuals with over US\$1 million in wealth (defined as the market value of financial and non-financial assets minus debts) comprise just 0.7% of the world's population but have combined household wealth of US\$111.8 trillion, 45 percent of the global total (Davies, Lluberas and Shorrocks, 2017, p. 749). The Credit Suisse Report puts the corresponding figures at 0.9% and 43.9% in 2019. It further observed that from 2000 to 2008 the share of financial assets in gross wealth (an important driver of wealth inequality) fell from 55.2% to 50.2%, before climbing to 55.0% in 2014, recognising a definitive role for globalization of financial assets as driving wealth inequality across the globe.

Saez and Zucman (2016) follow the rising trend in wealth inequality in the United States while Zucman (2019) also observes a rising trend in global wealth distribution, cautioning that "recent studies may underestimate the level and rise of inequality, as financial globalization makes it increasingly hard to measure wealth at the top." According to Oxfam (2019), the combined wealth of the world's richest 380 people equals the wealth of the bottom half. By 2018, just 26 billionaires controlled as much wealth as the bottom 50%. This report also indicates that the share of global wealth of the bottom 50% is shrinking (Oxfam, 2019).

The politics of national and global inequality are not merely parallel processes, they are intertwined. The same globalizing forces that shaped global income distribution over the twentieth century have also affected inequality at home. Many of the protectionist trade policies championed as solutions to national inequality may exacerbate global inequality (Lockwood, 2020). The National Research Council (2010) finds that the forces of globalization have contributed to the growth of global inequality, linking the timing of the recent shift in inequality patterns (the early 1980s) with the rise of new forms of economic globalization that have transformed spatial relationships around the globe: "expanding transportation and communication networks, trade liberalization, reorganization of financial structures, and the rise of new regional trade agreements have been redefining flows of commodities, investments, labour, and political power across the globe". This has accentuated the iniquitous process.



Globalization imposes constraints on some key redistribution tools such as taxation and the regulation of financial markets. International coordination and, in particular, more transparency in cross-border financial operations are needed if governments are to recover some autonomy in these matters.

Bourguignon (2015) provides a very succinct summary of the extant literature linking inequality with globalization, positing that “globalization imposes constraints on some key redistribution tools such as taxation and the regulation of financial markets. International coordination and, in particular, more transparency in cross-border financial operations are needed if governments are to recover some autonomy in these matters” (p. 1).

Inequality has been captured in the literature from a number of perspectives. Stiglitz (1969) was, perhaps, one of the initial efforts, further developing this in his subsequent work (2015, 2018). While some of these perspectives may be linked to describing economic inequality, they also discuss social inequality in terms of race, ethnicity, religion and gender at length. Economic inequality considers perspectives relating to income and wealth. Obviously, all these types of inequalities have been linked to the onslaught of globalization and hence, by implication, to global trade.

This paper is divided into four parts. The next section provides a review of the literature linking trade to income inequality, contrasted with the main current moral and philosophical argument of competitive advantage, which provides the guiding spirit for most global trade. The third section identifies the implications of these findings in the context of the growing trade under the principles of South-South Cooperation through the operationalization of the idea of a “development compact” based, on the contrary, on a philosophy of generating mutual benefit for the partners through cooperative advantage. The final section provides some concluding remarks and a tentative research agenda for further investigations.

# 1. The Link Between Trade and Inequality: A Review of the Literature

Globalization of international trade features strongly as one of the causes of increased intra-country income inequality (Autor, Dorn, Hanson and Song, 2013; Feigenbaum and Hall, 2015; Jensen, Quinn and Weymouth, 2016; Milanovic, 2016 and Pierce and Schott, 2016). The recent rise in protectionism and increasing populist measures across the globe, and the associated inward looking domestic measures, underscore this trend. A recent note by UNCTAD (2019) identified the following factors as creating the potential for unequal distribution of the gains from trade among the citizens of a country.

- The off-shoring model of global production induces inequality by lowering the wages of unskilled and blue-collar employment opportunities in developed countries<sup>1</sup> and expanding the wage gap between formal and informal sectors in the Global South;
- International trade has different impacts in rural areas compared to urban areas, where clustering leads to localization of the gains from trade that are long-lasting because of interregional and inter-sector rigidities in respect of labour mobility. Thus trade policies can exacerbate geographical inequality within countries.
- Growth in global trade leads to the dominance of large firms and consequent gains for them at the expense of small firms, women, fishers and farmers, who lag behind due to limited information, lack of financing, high entry costs and under-representation in trade policy making.
- Market entry and access conditions also contribute to unequal distribution of the gains from trade within a country as non-tariff barriers have greater effects than tariffs.
- Trade contributes to structural transformation, sometimes this is in a positive way but sometimes it is in the opposite direction.

International trade has long been considered an important factor for stimulating growth in an economy. This is represented by the famous “trade as an engine of growth” paradigm that influenced the continuous faith in pushing for free trade across the globe. Adam Smith’s efforts to redefine the wealth of a nation as the value of its production, compared to the prevailing notion of its stock of bullion, paved the way for arguments in favour of free trade. The mercantilist argument of protective trade that encouraged more exports with fewer imports to enhance the stock of bullion in a country had subsequently to be abandoned to make greater space for what Smith argued for while favouring free trade. Mercantilism had, by then, expanded

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<sup>1</sup> Even though UNCTAD found this problem in developed countries, it is observed in the developing countries as well, albeit to a lesser degree.

the empires of the colonial powers beyond Europe. These powers had accumulated enough capital to facilitate industrial revolutions, leading the conquering countries to seek to expand their markets into their colonies. Their domestic markets were too small to absorb the volume of mass produced goods made possible by replacing animal power with machine powers. Smith identified the role of the division of labour in increasing productivity and hence the wealth of a nation. He further argued that division of labour is contingent on the size of the market. Larger markets support further division of labour and thus further increases in productivity. The present day concept of global value chains and the creation of global markets owe their origins to Smith's concept, which still appears to be attractive and effective. David Ricardo extended the idea a little further by moving from "absolute" to "comparative" advantage as the basis for trade. Both Smith and Ricardo identified the implications of "advantage" (characterized by differences in productivity) between two countries as the crucial factor leading to trade.

Smith argued that such trade depends on absolute differences in productivity. A country would export a commodity to another country if it enjoys a higher level of productivity, and import a commodity in which its productivity is lower than that of the partner country. Ricardo emphasized relative advantage or the relative opportunity costs (cost in terms of other goods given up) of producing the same commodities among countries. In trade between two countries, in a situation where a country is more productive in both commodities, it will export the one in which it is relatively more productive and import the one in which it is less productive. The idea of comparative advantage thus opened up a space for trade between two countries, even when one is less productive in both products. It should be noted that both Smith and Ricardo considered a two country-two commodity model in which labour was the only factor of production.

In tune with the classical tradition, both Smith and Ricardo considered only the supply perspective of international trade, basing their logic on the premise of the labour theory of value. The lack of a demand perspective did not help them in working out how and whether the gains from trade would be distributed among the trading partners. As a corollary, the linkage between trade and the distribution of gains could not be captured by these classical theories of international trade given the strong belief that trade enhances global welfare as the total quantity of goods consumed by the two countries together would be higher compared to a situation with no trade. Therefore, the possibility of trade leading to changes in the level of inequality was never discussed theoretically in the classical framework.

The emergence of the neo-classical framework led to a shift in emphasis from production to distribution. The formulation of the idea of demand based on utilitarian premises helped economic understanding of the idea of distribution of the output produced among the factors engaged. Based on the assumptions of constant returns to scale and perfectly competitive product and factor markets, it was concluded that every factor would get a share of the output equal to the value of its marginal contribution to the production process. As the framework was created to ensure that no one factor can influence the decisions arrived at by the market, the neo-classical framework also failed to incorporate the possibility of inequality into its logical structure. Although mentioned by Smith as a practical possibility, the idea of increasing returns to scale could not be incorporated into the framework for a long time, as it was not compatible with the prevailing ideas of perfectly competitive markets.

However, neo-classical thinkers adapted the classical framework of international trade theory by bringing the idea of demand into its domain. This was achieved when Marshall reworked some of J. S. Mill's theories of reciprocal demand into rigorous diagrams, including Marshallian offer curves to study the equilibrium terms of trade in a two commodity-two country model. Marshall first introduced the graphic apparatus of offer curves in his "Pure Theory of Foreign Trade" in 1879, which was published as a privately printed paper. It was mainly through the writings of Edgeworth (1894) and others who had read Marshall's original contribution that the offer curve came to be known. This was later firmly established by Meade in his "A Geometry of International Trade", published in 1952. The notion of perfectly competitive markets, however, prevailed. [See Negishi 2001 for an excellent historical review of the evolution of ideas around offer curve].

Heckscher (1919) and Ohlin (1933) opened up a new perspective for the understanding of the drivers of trade by defining comparative advantage in terms of relative differences in the factor intensities of products and linking these to differences in factor endowments between countries. They argued that a country relatively more abundant in capital would export goods that require more capital-intensive technologies and import goods that are less capital intensive in production. Their model was also based on the fundamental premise of perfectly competitive markets for both goods and factors, with both countries using the same technology to produce the good and the technologies showing constant returns to scale. Vanek (1968) extended the model to argue that international trade is more an implicit trade in factors, rather than the observed trade in goods.

While one extension of the famous Heckscher-Ohlin (H-O) theory of international trade created arguments in favour of globalization and liberalized trade, another extension underscored the possibilities of increased inequality resulting from that process. The first extension is widely referred to as the factor price equalization theorem, which was propounded by Samuelson (1948). This argued that when product prices are equalized between countries as they move to free trade, following the logic of the H-O model, the prices of the factors (capital and labour) will also be equalized between countries, if the technologies adopted are the same. The conclusions of the theorem are however, dependent on assumptions of constant returns to scale and perfectly competitive markets for products and factors. Laing (1961) observed that the conclusion of the theorem is not realized in the absence of constant returns to scale: increasing or decreasing returns to scale prevent factor price equalization. However, Panagaria (1983) showed that the theorem holds good under decreasing returns to scale if certain conditions are met.

The second extension claims its root from Stolper and Samuelson (1941). The Stolper-Samuelson theorem posits that a rise in the relative price of a good will lead to a rise in the real return to the factor used most intensively in the production of the good and, conversely, a fall in the real return to the other factor, provided the markets are perfect and the production processes exhibit constant returns to scale.

This argument was originally used to support the expansion of free trade. It was argued that free trade will be Pareto optimal if the losing factor is compensated by the overall gains. Moreover, the prospect of increasing returns to capital through free trade did perhaps encourage countries with abundant capital to pitch for unrestricted trade, following the global political economics of the day. Another factor in favour of using the theorem to call for unrestricted trade was the earlier economic modelling of trade using labour as a homogenous entity. The later day efforts at disaggregating labour into skilled and unskilled categories created more debates when it was empirically observed that unskilled labour, being relatively scarce in the developed world, was losing out due to free trade. This made wage inequality the intense focus of investigation by researchers.

To cut the whole story short, it may be argued that mainstream economic theory is yet to incorporate inequality into its fundamental framework. The failure to consider the incompatibility between increasing returns to scale and perfectly competitive goods and factor markets, and also the role of the virtuous cycle driven by external economies where modernization breeds modernization (P. Krugman, 1992), rendered the structure ineffective for appreciating the implications and causes of inequality. The assumption of full employment, coupled with the notion of equilibrium in the trade balance can also be operational in sweeping the issue of inequality under the carpet. The observed inequality in distribution of natural resources – minerals, forests, etc. – also could not be captured in the fundamental theoretical structure of international trade. The extant trade theories thus suffered from the lack of such an overall theoretical structure for incorporating these features of the modern economy.

Another perspective for this debate on inter-country inequality arising out of trade was provided by scholars who developed an insight into the deteriorating terms of trade between developing (exporters of primary commodities) and developed (exporters of value-added products using imported primary commodities) countries. This school of thought was started by Prebisch (1950), Singer (1950) and Myrdal (1956). Their arguments can broadly be summarized as a phenomenon where the deteriorating terms of trade observed over a long period of time were to the detriment of the interest of Southern countries, while benefitting industrialized countries from the developed world. This phenomenon has been rightly identified as contributing to inter-country inequality. [See Ziesemer (1998) for a detailed exposition of the ideas linked to the terms of trade crisis facing the Southern world]. This approach to understanding the structural impediments in global trade that hamper fair distribution of the gains from trade among the trading partners is referred to as dependency theory. These ideas were further extended by scholars such as Celso Furtado, Fernando Henrique Cardoso, Osvaldo Sunkel, Andre Gunder Frank, Johan Galtung, Samir Amin and Immanuel Wallerstein and came to be known as "Centre-Periphery Theory". [See Love (2007) for a detailed exposition on the evolution of the centre-periphery model].

In a nutshell, the conceptual structure of the approach can be summarized in terms of the argument that there is a central core of capitalist countries where the market is the sole driving force in determining the dynamics of their economies. Periphery countries, on the other hand, are often characterized by non-existent markets, with production and distribution activities being controlled by non-market relationships

such as kinship, traditional patron-client ties and the primacy of available natural resources as the main driving forces of their socio-economic systems. Primary dependence on natural resources for sustaining livelihood in these societies and disproportionately larger availability of natural resources are often cited in the literature as the proximate reason behind engagement in trade and subsequent colonization of regions by those not overly endowed with such natural bounties (see, for example, Todorov, 1984; Ferro, 1997; Hochschild, 1998). The proponents of this approach argued that the prevailing wage inequalities between the core and periphery contributed to sustaining the extractive implications of global trade. Unfortunately, this approach could not withstand the persistent general preference for empirical validation, and its apparent failure to incorporate innovation, technological change and changes in labour processes perhaps led to it falling into relative oblivion. The idea has been given a new lease of life by Krugman (1991a) and his followers. Kostoska et al (2020) present a review of the recent literature and suggest a new approach from a complex-network perspective. This uses empirical evidence to pursue the "old" ideas and locate the structural factors contributing to increasing inter-country inequality through trade. He argues that "remarkably stable position of core countries at the top of structure clearly indicate that the rise of global production networks has actually restored a huge and unequal international division of labor, splitting the world into 'headquarter' and 'factory' economies" (p 1), even though his analysis suggests a downward trend observed recently in overall inter-country inequality.

Kanbur and Stiglitz (2015) rightly call for a new theoretical framework for analyzing inequality and wealth distribution, lamenting that discussions on inequality in economic literature were solely based on the stylized empirical facts identified by Kaldor (1957) and Kuznets (1955). Unfortunately, these stylized features have ceased to be acceptable in today's globalized economic structure. They argue for the need to break away from competitive marginal productivity theories of factor returns and theoretical constructs that generate rents with consequences for wealth inequality through a greater focus on the institutional perspectives of an economy (J. Stiglitz, Abernathy, Hersh, Holmberg and Konczal, 2015). They also underline the need to understand the interaction between income from physical and financial capital and income from human capital, in determining both intra-generational inequality and the inter-generational transmission of inequality. They consider that a normative theory is required to address the mechanisms transmitting inequality across generations.

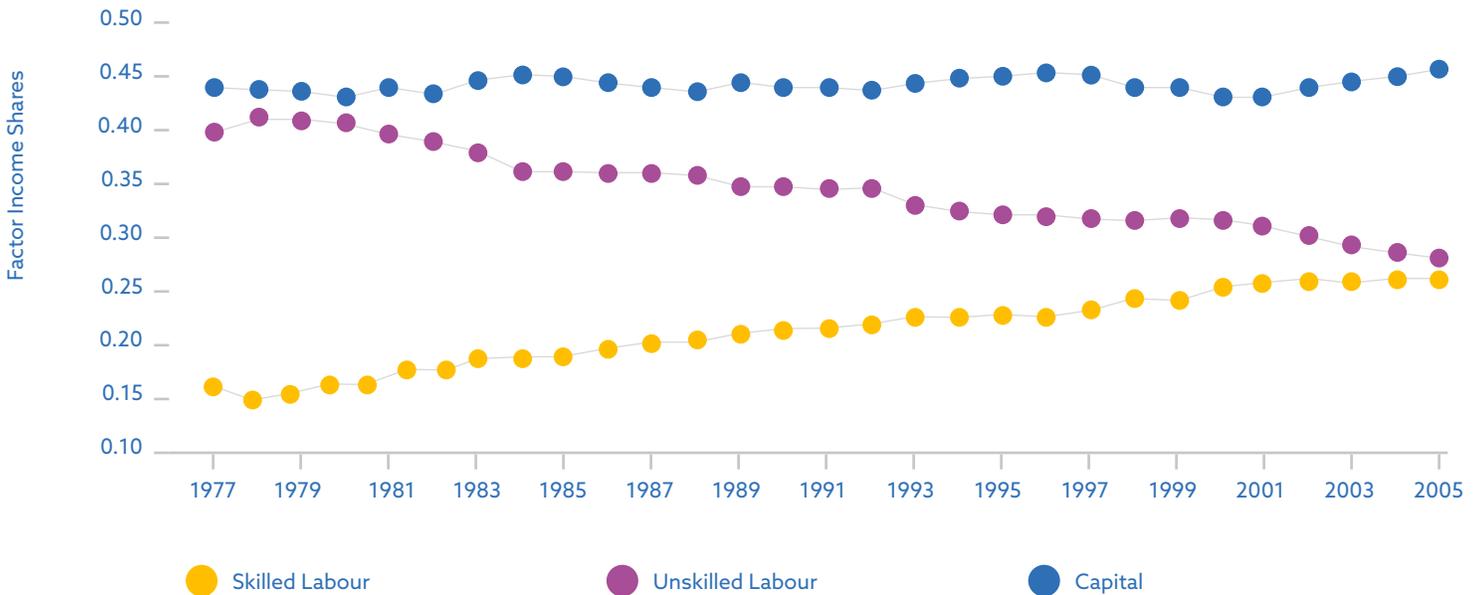
Krugman (1979, 1980, 1981a, 1981b, 1991a, 1991b, 1992 and 1994) introduced the ideas of increasing returns to scale, product differentiation, imperfect markets and market size into what is now referred to as New Trade Theory as the basis for trade. Krugman and Venables (1995) further extended the arguments and linked trade to inter-country inequality in terms of a new core-periphery model in which an agglomeration of firms creates a spontaneous division of countries into losers and winners, due to a reduction in transport costs below a minimum threshold value. The status of the countries may converge or, at the extreme, may even be reversed if transport costs fall further, so that nations in the periphery may gain while their counterparts in the core may lose. These arguments provide some clues to reducing inter-country inequality, as found by Bourguignon (2015) and Qureshi (2017). However, they fail to account for increasing intra-country inequality.

Helpman (2016) provides an excellent review of the theoretical and empirical literature on the relationship between globalization and wage inequality. He argues that “trade played an appreciable role in increasing wage inequality, but that its cumulative effect has been modest, and that globalization does not explain the preponderance of the rise in wage inequality within countries”. Jaumotte, Lall and Papageorgiou (2013) report estimates, using a panel of 51 countries over a 23-year period from 1981 to 2003, that support the idea that technological progress has had more impact on inequality than globalization has: “the limited overall impact of globalization reflects two offsetting tendencies: whereas trade globalization is associated with a reduction in inequality, financial globalization—and foreign direct investment in particular—is associated with an increase in inequality”.

The lack of a well grounded theoretical framework linking inequality to its causes did, however, encourage researchers to identify empirically some of the possible proximate relationships between inequality and institutional and technological factors. As Martins (2019) posits, “contemporary discussions on inequality often focus on whether inequality is caused by human institutions that can be changed, or by irreversible technological change which brings differences in the marginal productivities of capital and labour, which in turn cause inequality as an unavoidable (and some would even say, salutary) consequence of technological progress. Sraffa (1960) showed that distribution cannot be consistently determined through marginal productivity theory, as in neoclassical supply and demand analysis, opening the door to explanations pointing towards institutional factors, and undermining explanations where inequality is the inevitable outcome of technical progress” (p. 508).

The recent spurt in empirical literature on inequality is more tilted towards investigating increasing disparities in intra-country wage distribution. The reasons are not very hard to find. Increasing wage inequality has been a steady feature in the developed world (Cingano, 2014; Dervis and Qureshi, 2016; Keeley, 2015; Morelli, Smeeding and Thompson, 2015; Roemer and Trannoy, 2015 and Roser and Cuaresma, 2016). The latest issue of the World Social Report observes that income inequality has increased in most developed countries since 1990 (DESA, 2020), but that it fell from 1990 to the early 2010s in most Latin American countries before then rising again in some. A prominent factor that emerges as the root cause for this is increasing imports from developing countries by developed countries. Conforming to the arguments inherent in the Stolper-Samuel Theorem, this is linked to falling wages accruing to the unskilled labour force in the developed world induced by the low wages received by their counterparts in the developing world. Paul (2020) describes the declining trends in the income share for unskilled labour, coupled with consistent rises in that of skilled labour, in the United States between 1975 and 2005. We can infer from the chart below that the share of capital rose marginally during this period, implying a decline in the overall share of labour income in national income in the United States. This is a reason to believe that the stylized fact of a constant share of labour income proposed by Kaldor has been losing its relevance. Guerriero (2019) estimates the global trends in the declining share of labour and confirms that there “is a general declining trend over the last two decades, in particular from the 1990s onwards”, even though revised estimation procedures suggest that there may have been underestimation bias in earlier estimates.

**Figure 1:** Labour Income Shares for Unskilled and Skilled Workers Show Opposite Trends in the Usa.



Source: Paul 2020, p. 1.

We would now like to review some of the recent efforts to develop analytical models and generate empirical findings linking wage inequality to its proximate factors. It should be noted that there is a historical linkage between development and inequality, as it is argued that the development pathways followed by some countries often contributed to increasing inequality. Waldenström (2009) notes a clear example of this linkage in the history of Sweden. Five proximate factors have been identified in the literature, which includes many contributions on the nature and causes of wage inequality. We present the findings from some select studies to show the varieties of empirical relationships found. The five proximate measures may be divided into two categories. The first category captures institutional factors, while the second considers technological and human factors. The first category identifies three proximate factors: trade, financial deepening and government policy efforts. The second category identifies technology and inequality in human capital. Incidentally, most of the studies in the academic literature are based on experiences from the developed world. The implications of wage inequality on health, education, gender and racial inequalities have also been considered in several studies. We shall refer to those available from the perspective of developing countries at the end of this section.

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## Effects of Trade

Reichelt, Malik and Suesse (2020) note that recent evidence shows that rising wage inequality in industrialized countries can be attributed, partially, to trade integration. However, contrary to the popular belief, in the context of German trade relations with China between 1994 and 2010, they found that imports by Germany did not affect wage inequality. Rather, rising exports to China are responsible for the effects of trade integration on inequality, as they increase wage dispersion within German labour market regions.

Sauer et al. (2020) argue that declining shares of income for labour and increasing imports from high-income countries contribute significantly to increasing income inequality, while taxation and imports from low-income countries exert countervailing effects. The effects of technological change, financial globalization, domestic financial deepening and public social spending are idiosyncratic, while no systematic evidence of the equalizing effect of education across high- and low-income countries could be observed.

Klein, Moser and Urban (2010) found a significant export wage premium for high-skilled workers in German manufacturing and an export wage discount for lower skilled workers, supporting the linkage between trade and wage inequality. According to their estimates, the export wage premium for high-skilled workers can account for up to one third of their overall skill premium. However, an increase in exports diminishes the wage inequality associated with both gender and nationality. Wood (1995) traced the deteriorating economic status of unskilled workers in developed countries to increasing trade engagement with developing countries.

Some studies have estimated the extent of the Stolper-Samuelson effect in both developed and developing countries. Jakel and Smolka (2011) estimated that in the United States, having high skills increases an individual's probability of favouring free trade by up to twelve percentage points, other things being equal. In Ethiopia, the effect is reversed to eight percentage points. Coser and Suverato (2014), echoing the findings by Goldberg, Koujianou and Pavcnik (2007), argue that the increased wage inequality in developing countries cannot be explained by the theorem.

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## Effects of Financial Deepening, Unrestricted Capital Flows

Pi and Fan (2020) looked into the interaction between capital concentration (resulting from financial deepening) and wage inequality and found that in the United States the share of wealth of the top 1% increased by about 70% between 1976 and 2012, while industrial pay inequality (measured by the Theil index) increased by about 20%. Similar phenomena were observed in Australia, France and the United Kingdom, with both indicators turning severe from 1980 to 2010. [See also Pi and Zhang 2018, Pi and Chen 2016, Pi and Chou 2012 and 2013 for further statistics on wage inequality from several perspectives.]

However, in Spain less severe wealth concentration was accompanied by a lower degree of wage inequality. While the share of wealth going to the top 1% decreased by about 25% from 1982 to 2007, wage inequality increased by only 8%. Regression analysis of the relationship between capital concentration and wage inequality in nine developed countries from 1963 to 2012 indicates a significant positive correlation between capital concentration and wage inequality, explaining this phenomenon.

This paper links wage inequality to frictions between the labour market and the financial market, thereby bringing in heterogeneity in capital, as the owner of capital may play the role of either a financial investor or an entrepreneur. Financial friction is measured as the difference between the return businesses earn from capital and its market cost in the face of financial friction. Basing their argument on the premise that capital concentration does not matter without financial frictions because capital can move freely in the economy and equilibrium can be reached with no financial cost, the authors contend that higher capital concentration will widen (shrink) wage inequality when the asset-liability ratio in the skilled sector is sufficiently high (low) relative to that in the unskilled sector. They also provide some empirical evidence for such industrial characteristics. They also cite studies by Hansson (2000), Gera, Gu and Lin (2001), Bowen, Daley and Huber (1982), Bhandari (1998) and Boquist and Moore (1984) that provide empirical support for their conclusions.

Madsen (2017) shows that  $r$  (asset returns) and  $g$  (real income growth) are robust and significant determinants of wealth and income inequality and that they have been the major forces behind the large waves of inequality over the past eight centuries.

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## Policy Environment

Kristal and Cohen (2017) analysed data for 43 US industries between 1968 and 2012, concluding that declining unions and the fall in the real value of the minimum wage explained about half of the increased inequality, while computerization explained about a quarter. This suggests that much of the increasing inequality in the United States is driven by worker disempowerment rather than by market forces. This finding could resolve the puzzle of the diverging inequality trends in the United States and Europe. They note a disproportionately larger role for institutional changes in explaining wage inequality in the United States compared to technological changes. The sharp increase in wage inequality is attributed more to the “grabbing hands” of elites, as per Krugman (2002) and Piketty (2009), than to the invisible hand of the market, due to the broken social contract between capital, labour and the state.

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## Technology

Sampson (2014) introduces labour market imperfections that generate rent sharing between firms and workers, with the assumption that workers are heterogeneous. He develops an analytical model and contends that trade increases demand for skills and wage inequality in all countries, both on aggregate and within the upper tail of the wage distribution. This holds when firms receive random technology draws and when technology depends on firm-level R&D. His paper improves on those by Egger and Kreickemeier (2009), Helpman and Itzhoki (2010), Helpman, Itzhoki and Redding (2010), Davis and Harrigan (2011) and Elhanan Helpman, Oleg, Muendler and Redding (2012), who base their argument on an assumption of homogenous labour and so could not address the effects of trade on returns to observable worker characteristics. Han, Liu and Zhang (2012) reported evidence that the surge in exports following China's accession to the World Trade Organization (WTO) led to an increase in the college wage premium.

Arguing that technology may contribute to reducing the wage gap in developing countries, Cruze et al (2020) estimate that, as online trading allows smaller firms with relatively more unskilled workers to access world markets, expansion of online exports may reduce the wage gap in developing countries. After correcting for potential endogeneity bias in a sample of 22 developing countries for which online trading and wage gap data can be matched, a 1 percent increase in the share of online exports over GDP is estimated to lead to a 0.01 percent decline in the skilled-unskilled wage gap. Bénabou (2004) considers how technological developments affect redistributive institutions.

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### **Impact of Wage Inequality on Access To Human Capital**

Regression results by Lee and Lee (2018) using panel data for a broad range of countries between 1980 and 2015 show that a more equal distribution of education contributes significantly to reducing income inequality.

Bhopal and Pitkin (2020) collate evidence to suggest that racial and religious identity contribute to disadvantages in higher education institutions in the United Kingdom. Using data for the United States, Kaestner and Lubodsky (2016) show that measured inequality is about 25 to 30 percent lower if the average cost of Medicare and Medicaid benefits is added to recipients' incomes for the purpose of assessing how those programmes influence inequality. This is consistent with the findings of Burkhauser, Larrimore and Simon (2013) that employer-provided health insurance marginally increases measured inequality as coverage rates and marginal tax rates rise with income. However, the poor are still significantly disadvantaged in terms of health and they propose that policies that aim to improve individuals' earnings capacity will have the dual effect of reducing both income and health inequalities.

The proximate factors underlying the phenomenon of linkage between trade and inequality having been identified, comparative advantage, unfortunately, firmly remained the fundamental philosophical and moral basis for global trade (Porter, 1985), with even deeper emphasis on competitive advantage. Krugman's argument in terms of specialization and the consequent increasing returns to scale leading to monopoly as the basis of trade also underscores the Darwinian argument of survival of the fittest, generating a new core-periphery model of trade that explains increasing inequality. It is still difficult to remove competition as the basis of trade from the common understanding of the process. The literature on the linkage between trade and inequality as it is observed in developing countries also highlights this expected phenomenon.

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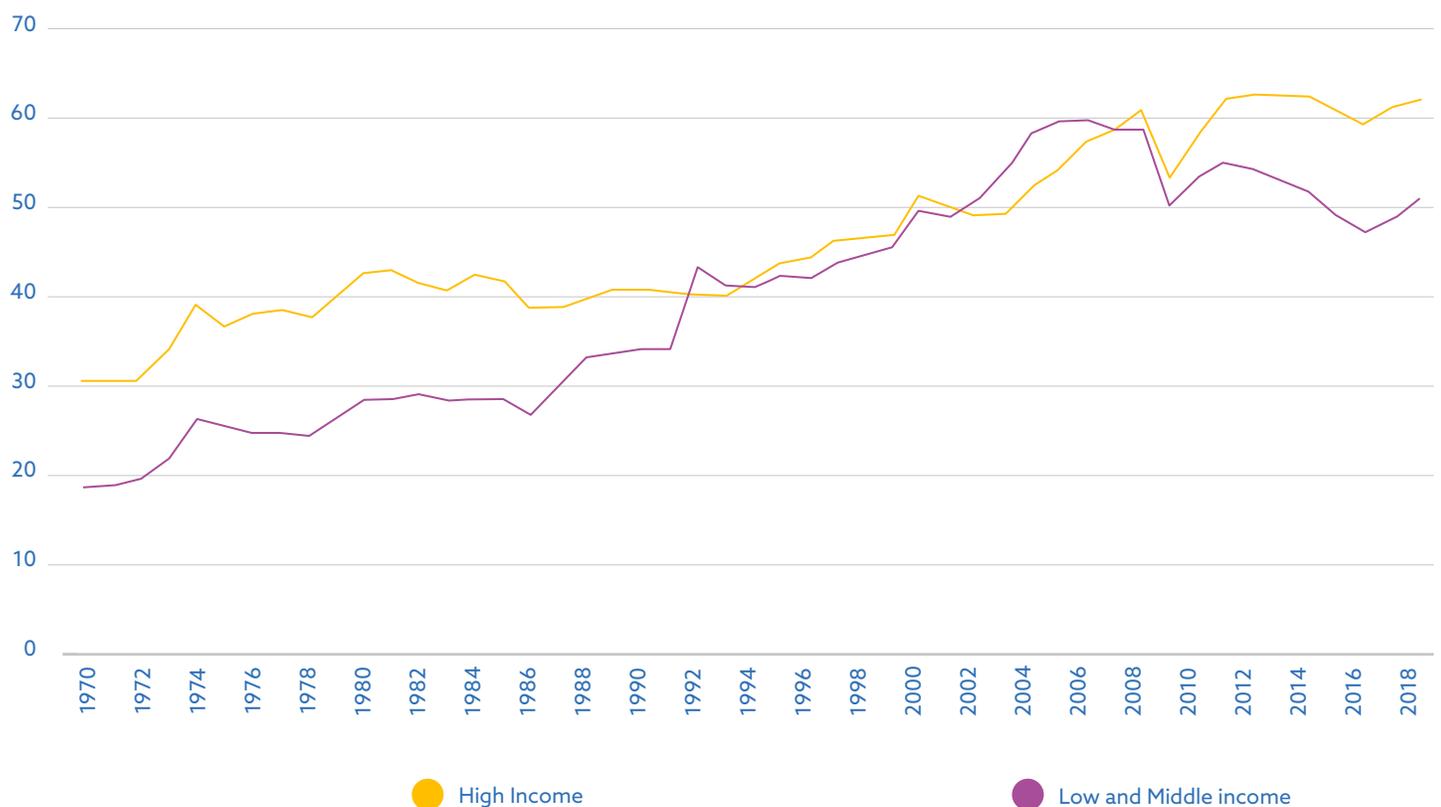
### **Perspectives from Developing Countries**

Pavcnik (2017) provides an extensive review of the evidence of the impact of trade on shaping inequality in the Global South. Developed against the background of significant efforts by Southern countries to liberalize their trade regimes, which in 2016 accounted for over 40% of the global trade in goods (remaining at more or less the same level in 2019: 44% of trade in goods and 30% of trade in services), she finds that the prevailing perception of the Southern countries emerging as winners and their developed counterparts being conceived to have lost out does not hold water if one looks at intra-country inequalities in developing countries, even if true to some extent in terms of inter-country comparisons. The wealth share of the top 10% of individuals in China increased from 49.76% in 2000 to 59.86% in 2019.

Rises of between 62.34% and 68.38% were recorded for other emerging countries during the same period. The increase in countries not belonging to Europe, North America and High Income Asia Pacific countries is marginal, from 59.89% to 60.38% (Credit Suisse, 2019). Using data for 21 Southern economies<sup>2</sup>, Nguyen et al (2019) confirm the existence of an inverted U-curve relationship between financial development<sup>3</sup> and income inequality. This implies that income inequality may rise in the early stages of financial development and fall after a certain level is achieved. The weak financial structures of countries in the Global South make them candidates for increasing income inequality. Zhu and Trefler (2005) provide a general equilibrium model that also underscores the growing incidence of wage inequality in developing and emerging countries. This issue had also previously been raised by Wood (1997), who observed that increased openness had widened wage differentials in Latin America since the mid-1980s.

However, we should also note that the dependence of developing countries on trade has also increased significantly over the last few decades, with the share of trade in their GDP surging (Figure 2). We shall examine this feature in a greater detail in a later section.

**Figure 2:** Trade as % of GDP.



Source: World Development Indicators, The World Bank, 2019.

<sup>2</sup> Argentina, Bangladesh, Brazil, Bulgaria, Chile, China, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, the Philippines, Poland, Romania, South Africa, Thailand, Turkey and Ukraine

<sup>3</sup> Measured as the ratio of domestic credit to private sector GDP.

Pavcnik (2017) argues that “International trade, just like technological progress, domestic competition and shifts in consumer tastes, reallocates resources within a country and both destroys and creates jobs, with implications for income distribution” (p. 2). Frictions that impede the inter-industry, inter-firm and inter-location mobility of workers are very evident in shaping the unequal impact of trade on the population of the Global South. Such impediments to mobility, characterized by rigidities in skill formation among the work force in the absence of effective re-skilling mechanisms, tie workers to specific industries and firms. These rigidities are also accentuated by lack of flexibility in moving geographic location when required, as workers are constrained by their economic and social status. Consequently, the adverse effects of trade appear to be highly concentrated geographically in Southern countries, as in their developed counterparts. These adverse effects also spill over into worse educational outcomes, thereby contributing to inequalities in educational capabilities, as explained in the previous section.

Pavcnik (2017) goes on to argue that the process of trade liberalization has been facilitated by the reduction of trade policy barriers across the North. By the 1980s, when Southern countries began to enter the global trade market, the average import tariffs levied by high income countries had fallen to less than 5%. Average import tariffs in the Global South have also reduced substantially, though not to the same extent as seen in their Northern counterparts since the early 1990s. The conditionality imposed under the Washington Consensus ensured these tariff reductions to a considerable extent. Many countries have entered into preferential regional trade agreements among themselves. Reforms have also led to lower costs for accessing export markets. However, non-tariff barriers imposed by developed countries have increased simultaneously.

Having set up the background to provide a logical perspective for understanding the consequences of trade in Southern countries, Pavcnik (2017) found evidence of wage inequality being influenced by the emergence of skill and knowledge premiums. The earnings of better educated workers increased relative to those who are less highly educated. Evidence also points to lack of mobility across industries, firms and locations, reducing the capacity to absorb the immediate shocks of trade reforms in the short and even medium terms. Even the long-term impacts were found to be severe in the case of Brazil. Dix-Carneiro et al (2017) found that regions in Brazil facing larger tariff cuts experienced prolonged declines in formal sector employment and earnings relative to other regions. The impact of tariff changes on regional earnings 20 years after liberalization was three times the effect after 10 years. Finally, the study calls for the design of compensation schemes that would enable sharing of the gains between the winners and the losers through effective public policy measures. Wu (2018) argues that policy distortions and financial frictions are two leading candidates for generating capital misallocation in China, leading to significant reductions in total factor productivity.

Francis (2020) observes that Inequality in China has risen alongside its massive period of growth since the introduction of market reforms in 1978 (Zhou and Song, 2016). Poverty reduction in China has lifted millions out of absolute poverty, but China has also become one of the most income-unequal economies in the world. This disparity in income is divided between rural and urban populations, with restrictions on internal migration reinforcing this disparity (Zhou and Song, 2016). Ding

and He (2018) record increased income inequality in urban China between 1986 and 2009, using micro-level annual Urban Household Survey (UHS) data. As per their estimates, the variance of log household disposable income in China increased from 0.14 in 1986 to 0.41 in 2006, almost threefold over 20 years. This compares to an increase from 0.48 in 1986 to 0.54 in 2006 in the United States. In Japan, the same statistic increased from 0.18 in 1986 to 0.21 in 2006.

Yinglang and Zhao (2014) confirmed that international trade increased income inequality among regions and industries in China. They observed that the proportion of individual income in GDP fell from 47.5% in 2003 to 42.5% in 2011. While the average income of workers engaged in information technology and financial services increased significantly, those engaged in agriculture and as non-skilled labourers in the manufacturing sector saw a deterioration in their income, contributing to increasing inequality. The rise of private property in urban areas in the 1990s is seen as a new source of inequality, further reinforcing rural-urban disparities (Sicular, 2013).

Klein and Pettis (2020) argue that China's trade surplus results from facilitating the rich squeezing workers, in the confidence that they can always sell their goods, earn their profits and park their savings in safe assets, thanks to liberalized trade regimes. This phenomenon contributes to rising savings rates. However, these increases in savings are not reflected in household savings. Rather, this increase is ensured by increased corporate and government savings. Zhang et al (2018) note that consumption per capita in China is only on a par with that of Nigeria, while GDP per capita in PPP terms is similar to that of Brazil. If the consumption of Chinese households was comparable to that of Brazilian households, their consumption levels would more than double. Simultaneously, the ratio of household disposable income to GDP fell from 67 percentage points in the late 1990s to 58 percentage points in 2008, only to increase gradually to 61 percentage points in 2014.

We mentioned earlier that wealth inequality in China has been increasing for quite some time. China's excessive emphasis on trade as a driver for its growth is often linked to this increasing inequality in wealth and income. Urata and Narjoko (2017) identified a robust positive relationship between the Gini coefficient for income distribution and the trade-GDP ratio for China between 1981 and 2010. India, Indonesia and Viet Nam have shown an upward trend in the 21st century after experiencing a relatively stable trend. By contrast, Cambodia, Malaysia, the Philippines and Thailand have shown a downward trend in the 21st century, after experiencing a slight upward trend. UNCTAD (2013) provides some empirical evidence for the highly unequal share of the benefits of international trade going to people below the poverty line in India. An earlier indication of linkage between trade and wage inequality was reported by Verhoogen (2008) for Mexico.

Expansion of global value chains across the countries and the consequent increase in trade in intermediaries contribute significantly to increased intra-country inequality (Basco and Mestieri, 2019). This argument was previously made by Rodrik (2016) to explain the rising trend in premature deindustrialization in middle income countries due to international trade.

Does the creation of a South-South value chain have the potential to reduce inequality?

Dabla-Norris et al (2015) note that the level of income inequality is at its highest level in decades in advanced economies, while a more mixed result is found in emerging markets and developing countries, with some countries recording falling inequality. However, unfair access to education, health care and finance remains significant. This study notes that the infant mortality rate is twice as high in poor households compared to rich households (in terms of wealth) in emerging market economies. Similarly, female mortality rates tend to be disproportionately higher in lower-income groups. Further, there are large disparities in health access across income levels within developing countries and, to a lesser extent, in emerging market countries. These differentials are not very evident in developed countries. Education inequality has, however, been declining in emerging developing countries, even though educational outcomes remain much worse for disadvantaged groups, partly because of pro-rich biases in public spending on education. In 2000-2012, almost 60 percent of the poorest young-adult (aged 20-24 years) population in sub-Saharan Africa had less than four years of schooling, compared to 15 percent in the richest quintile.

Large disparities also exist in access to financial services. While 80% of adults have accounts with formal financial institutions, the corresponding figures are 30% in emerging economies and less than 20% among the bottom 40% of the income groups in developing countries. These figures rise to 50% and 30% for the top 60% of the income group in emerging and developing economies, respectively. In comparison, 85% of adults in the top 60% of the income group in developed countries enjoy banking services from institutional sources. Inequality in terms of access to these services also influences the skill premium enjoyed by underprivileged groups in these countries and contributes to their lagging behind with the increased liberalization of trade.

Dabla-Norris et al (2015) further highlight the fact that technological progress through information technology has simultaneously resulted in rising productivity and improved wellbeing, while driving up the skill premium, resulting in an associated increase in wage inequality. Adoption of labour-saving technologies and offshoring has led to de-industrialization and rising skill premiums. Feenstra and Hanson (1996, 1999, 2003) find that outsourcing can account for 31%-51% of the increase in relative demand for skilled labour in manufacturing industries in the United States during the 1980s, compared to 15%-33% in the 1970s.

Using data on the Danish labour market, Munch and Skaksen (2009) show that both domestic and foreign outsourcing affect wages. While international outsourcing tends to raise the wages of workers with further education and lower the wages of workers with basic and vocational education, domestic outsourcing tends to raise the wages of workers with basic and vocational education, with no significant impact on wages for workers with further education. Increased trade flows might have reduced income inequality in developing countries and emerging economies by increasing demand and wages for the abundant lower-skilled workers.

Santos-Paulino (2012) finds that trade and poverty seem to be positively related for developing countries, i.e. increases in trade might lead to increasing poverty (using US\$2 per day as the poverty line). But the data show that trade is leading to extreme poverty reduction in the least developed countries (LDCs), using the \$1.25 poverty measure. When looking at the relationship between output growth and poverty for developing countries, the evidence suggests that the faster countries growth, *ceteris paribus*, the faster poverty rates will fall.

Citing Freeman (2010), Dabla-Norris et al (2015) further argue that financial globalization, leading to increased financial flows through foreign direct investment (FDI) and portfolio investments, allegedly contributed to increased income inequality in both developed and emerging market economies. Financial deepening, changes in labour market institutions, gaps in existing tax-and-transfer systems to counteract rising market inequality and a strong positive correlation between educational attainment and the skill premium were identified as possible drivers of increasing inequality. Empirical estimates suggest that the increases in market income inequality in the sample countries over the last 30 years are largely explained by less-regulated labour markets, financial deepening and technological progress. Globalization, in the form of financial openness, played a smaller but reinforcing role, with improvements in health outcomes offsetting around ½ percent of the almost 3 percentage point average increase in the Gini coefficient. However, the relative importance of the skill premium, globalization, technological progress and financial deepening in driving inequality varies across developed economies and the other developing countries, including the emerging economies. The degree of impact on developed nations has, however, been larger than that experienced by other countries.

Van der Hoeven (2019) provides a very recent perspective on increasing income inequality in the Global South. The proximate drivers he identifies as having contributed to the rising trend in inequality in developing countries are: (i) trade globalization, (ii) financial globalization, (iii) technical change, (iv) macroeconomic policies, (v) labour market policies, (vi) wealth inequality and (vii) fiscal policies related to taxation and transfers. The first four drivers are often beyond the control of an individual country and are, to a large extent, influenced by conditionality attached to development aid provided through official development assistance (ODA). The others, being apparently under the control of the country, can have positive or negative consequences in relation to rising inequality, depending on how they are handled by the government. However, most developing countries subject to conditionality under the "Washington Consensus" for eligibility to receive development assistance from traditional donor countries have lost their autonomy in deciding their domestic policies based on their needs.

An interesting study by Munoz et al (2019) investigates the relationship between trade openness and income inequality in 11 Latin American countries<sup>4</sup> between 1989 and 2015. Their results show that overall trade flows reduce income inequality in Latin America. However, the effects of trade differ depending on the trading partners: trade with similar-income countries exacerbates inequality, while trade with emerging and higher-income countries reduces income equality. Unlike, the divergent patterns emerging from Asia, all the countries in the Latin American region exhibited a decline in inequality between 1990 and 2015, even though the average

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4 Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela

Gini coefficients for the countries in this region were significantly higher than the average Gini index for high-income countries (45.3) and low- and middle-income countries (41.5) during the late 2000s (UNDP, 2013).

The study finds that Latin American countries mostly trade with developed and emerging countries and trade in equipment and machinery, consumer goods, intermediate goods, oil and mining, and agriculture. However, breaking this down into trade within and outside Latin America, they find that all of the benefits in terms of reducing inequality come from regional trade, while trade with countries that do not belong to Latin America worsens income inequality. This observation is further strengthened when it is observed that trade with developed countries raises income inequality, while trade with developing countries reduces it. This corroborates the skill-biased technological change (SBTC) hypothesis of Haskel and Slaughter (2002) and Acemoglu (2003), confirmed empirically by Meschi and Vivarelli (2009), that the distributional effects of trade openness on income inequality depend on the development stage of the trading partners, based on the patterns of relevant skill premiums.

Their findings provide preliminary support for the hypothesis that technological differentials between trading partners are important in shaping the distributive effects of trade openness, as they consider data from 70 developing countries from 1980 to 1999. However, the study does not capture the implications for trade on equality at a regionally disaggregated level. Munoz et al (2019) further argue that “a possible explanation is that Latin America’s regional trade is shaped by trade agreements between countries rather than comparative advantages (Acosta and Montes-Rojas, 2008). Apart from Mercosur, between Argentina, Brazil and Uruguay, there are other trade agreements, such as the Andean agreement, which includes Bolivia, Colombia, Ecuador and Peru. The positive association between imports from the non-Latin America region and inequality stems from the fact that the region’s basket of imports from outside is mainly concentrated in relatively skill-intensive goods (ECLAC, 2015). This, in turn, favours skilled labour over unskilled labour and thus increases inequality” (Ing, 2009).

Unfortunately, not many studies are available to help us understand the implications of trade for inequality in a country based on the nature of its trading partners. Do the findings of Munoz et al (2019) also hold good for regional South-South trade in other regions, such as Africa and Asia? Further insights need to be derived from empirical analysis of the linkage between trade openness and inequality in the context of South-South trade and their value chains.

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## What History Tells Us

We would like to conclude this section by referring to a study by Fochesato and Bowles (2017), who dug into the archaeological data to make quantitative comparisons of the extent of redistribution. They found that in early “farming economies a significant amount of private between-household consumption smoothing occurred (Bogaard, Charles, Twiss and Fairbairn, 2009; Hodder, 2014) and existence of decentralized consumption smoothing institutions among mobile hunter gatherers”. It is noted that “in three Latin American and one African forager groups a mean of almost two-thirds (by calories) of the food acquired by an individual is consumed by those beyond his or her immediate family” (Fochesato and Bowles, 2015).

This was in the days before the advent of global trade, armed with the logical weapons of comparative or competitive advantage.

Fochesato and Bowles (2017) give a very lucid commentary on their understanding of history and raise a few pertinent questions and some possible answers. "Our data motivate two questions about the future trajectory of inequality in living standards under the influence of rapidly changing technology in the production and distribution of information and the changes in social structure and institutions likely to accompany this technological revolution. The first is: will the knowledge and service based economy now emerging in the high income economies represent a shift towards a system of production that is limited more by scarce human capabilities than by capital goods and other forms of material wealth? And, second, will the politics of this new technological and institutional environment sustain a substantial degree of egalitarian redistribution as has been the case in many democratic and capitalist nations over the past half century? Positive answers to both questions would lend support to Kuznet's conjecture of a possible future with reduced disparities in living standards (although on different grounds); while negative replies would support Piketty's contrary scenario."

With these questions in mind, in the next section we move on and examine an alternative solution for understanding the role played by South-South Cooperation (SSC) in the present context.

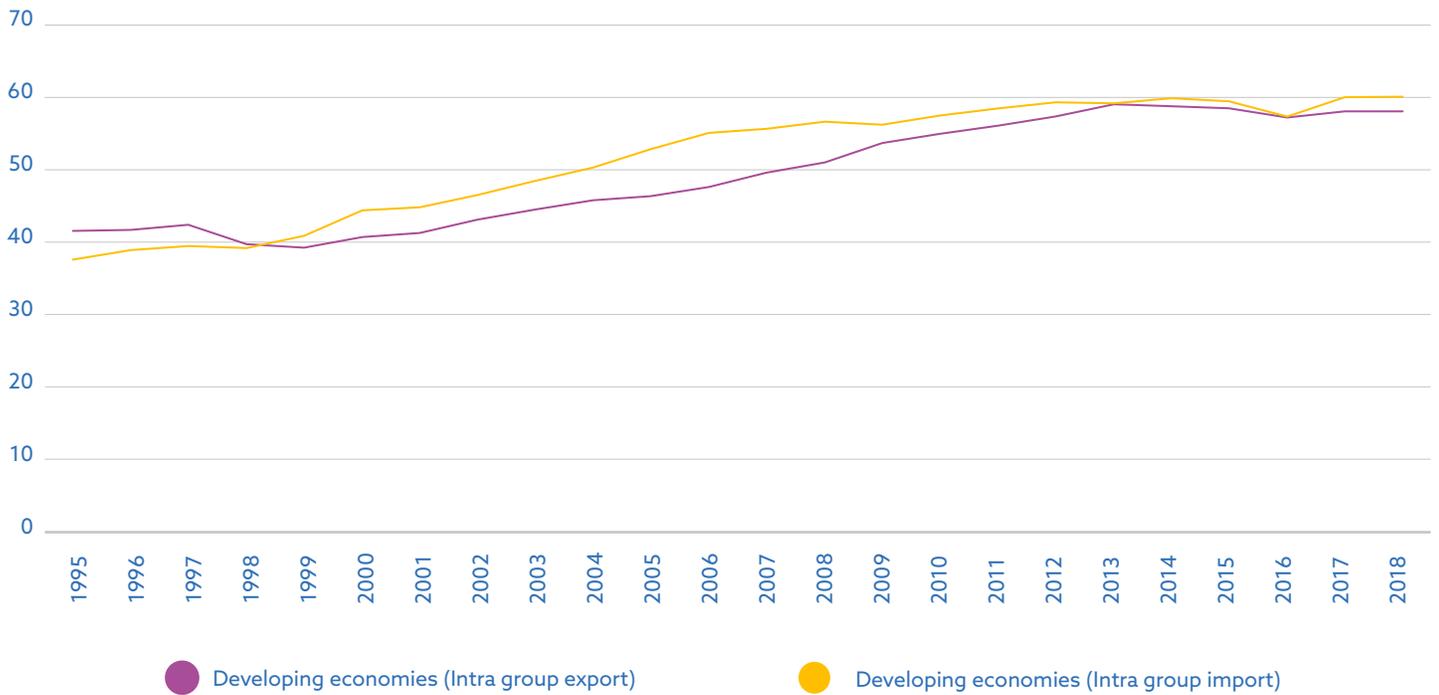
## 2. Trade and South-South Cooperation: Perspectives From Inequality

The direction of the flow of trade has undergone subtle changes over the last couple of decades. Data from UNCTADstat show that intra-group merchandise trade (both exports and imports) among Southern countries (commonly referred to as the South) has been steadily increasing (Figure 3). About 60% of the imports of the Southern economies were destined for other southern economies in 2018, compared to a little over 37% in 1995. Similarly, around 57.5% of the exports from the Southern nations were meant for other southern countries in 2018, compared to 41.6% in 1995. The share of the Global South in global service trade has also been increasing, while that for the developed world has been declining, even though there is still a considerable gap between the respective shares of developing and developed countries (Figure 3). These features raise some potential questions. Does South-South trade have the potential to contribute to reducing income inequality in Southern countries by emphasizing the importance of institutional perspectives with regard to trade and developing a normative model of exchange relationships among countries, as suggested by Kanbur and Stiglitz (2015) and Sraffa (1960) and mentioned in the previous section? If so, how? And what are the future pathways to facilitate this desired outcome?

This section seeks to present an argument that would possibly answer the first question in the affirmative. South-South trade has experienced robust growth over the last couple of decades. While this was largely contributed by China and some fuel and mineral-exporting developing countries, the gains from international trade have not been equitably distributed among the citizens of the countries in the Global South (Pavcnik 2017). We may argue that, in spite of a significant increase in the volume of South-South trade during the last few decades, the extent of North-South trade is still not insignificant. As of 2018, the total volume of North-South trade constituted 36% of global trade, at US\$6.9 trillion, compared to 28%, \$5.4 trillion for the share of South-South trade (UNCTAD, 2019a). The other 36% of global trade is among the Northern economies. Thus 72% of global trade flows are accounted for by partnerships involving at least one developed country. The rationale behind such trade relationships is very much dictated by the philosophy of competitive advantage. Another caveat is the lack of methodological clarity for separating out the contributions of North-South and South-South trade to inequality in developing countries.

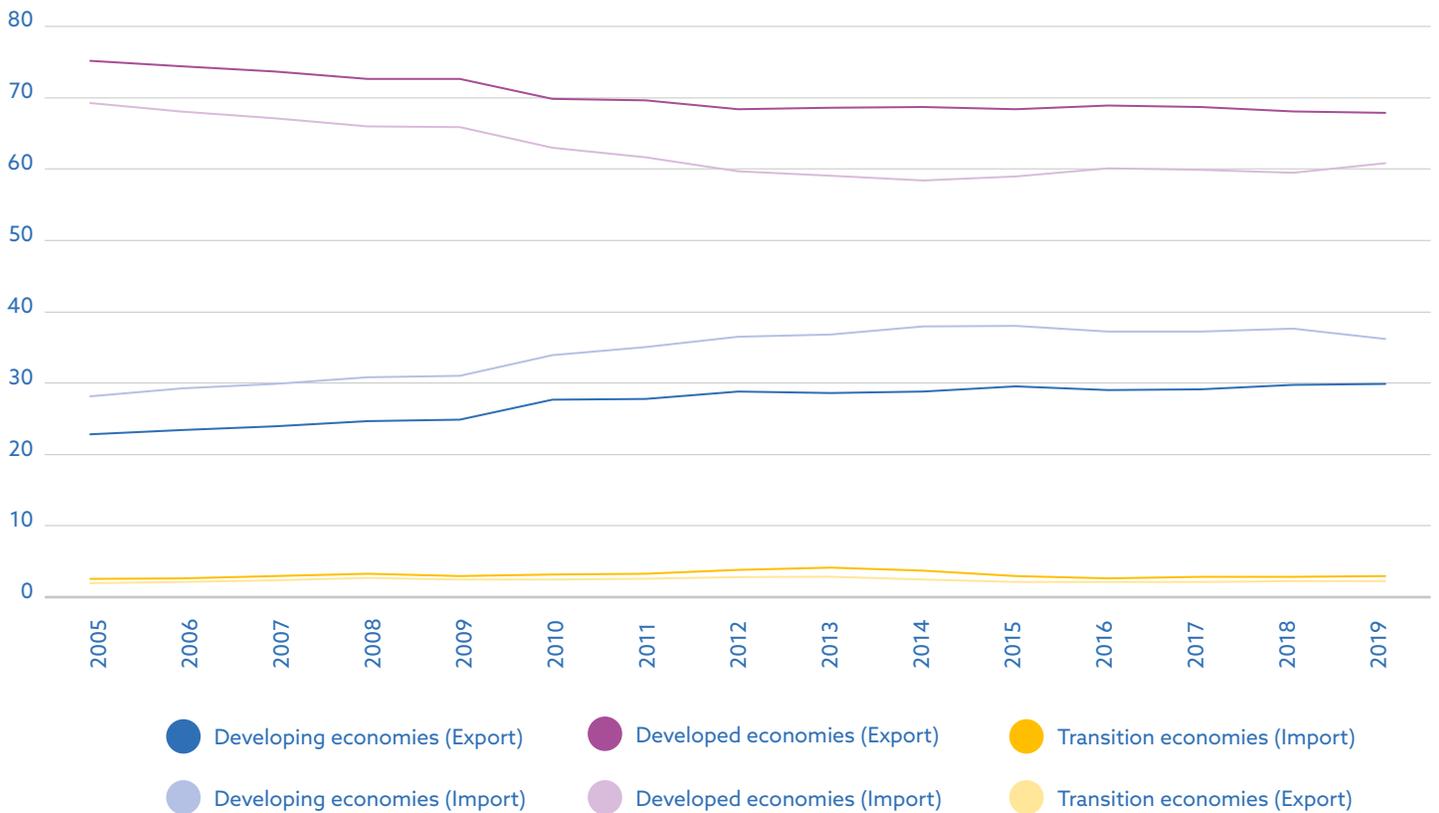
This paper attempts to provide a logical framework for South-South trade that may be used effectively to reduce intra-country, inter-South and global income inequality. The framework set out here is referred to as a “development compact”. The defining features of a “development compact” are identified in terms of its integrated handling of several components of development inputs, where the contributions of each component augment those of the others when applied in effective combinations.

**Figure 3: Intra-South Merchandise Exports and Imports as a Share of Total Merchandise Exports and Imports From Developing Countries.**



Source: Estimated from UNCTADstat, 2019.

**Figure 4: Share of Exports and Imports in Global Service Trade.**



Source: UNCTADstat, 2019.

## Development Compact: the Operational Model for South-South Cooperation

At the point in the history of development cooperation when the arguments of conditionality in development assistance gained prominence, a second strand of arguments in favour of South-South Cooperation (SSC) also entered the arena. Southern nations began to consider opportunities for enhanced economic cooperation among themselves. This approach was an extension of the spirit of the 1955 Bandung Conference and the resulting formation of the Non-Aligned Movement (NAM) in 1961 and the G77 in 1964, which mostly emphasized the need for political solidarity and social networking among newly independent colonies. The UN also played its role in helping form a platform for SSC with a clear focus on economic cooperation among Southern nations when it set up UNCTAD (1964) for cooperation in trade, UNFSTD for cooperation in science and technology, and Technical Cooperation between Developing Countries (TCDC) in 1974, for promoting technical and economic cooperation among Southern nations. However, SSC is yet to acquire a particular structural shape and it is still mostly influenced by policies and approaches identified by individual Southern countries participating in bilateral cooperation with each other. Some consensus about the guiding principles for SSC has obviously emerged. These are: respect for national sovereignty; national ownership; independence; equality; non-conditionality; non-interference; and mutual benefit.

The approach followed by the Southern nations in pursuing the SSC mission is referred to in the literature as a “development compact”. Even though there are varieties and variations in the approaches of individual country engaged in SSC, they can, mostly, be clubbed together under this central idea. The idea derives from an original proposal by Thorvald Stoltenberg in 1989 and subsequently articulated by Arjun Sengupta in 1993, arguing in the context of the hardship faced by developing countries in fulfilling their contractual agreements under the Structural Adjustment Programme (SAP), which emerged as the cornerstone of what was labelled the “Washington Consensus”. He proposed “that compacts (or agreements) be established between industrialized and developing countries to ensure that the latter received sufficient resources for development as they tried to reform their economies through programmes such as SAP, and in that way minimize the social costs of reform”.



Under the compact, developed countries and international organizations provide the assistance needed for the successful implementation of development plans in poor countries, while developing countries cooperate in the process through bold reform programmes in return.

According to Chaturvedi (2016), Sengupta’s concept of a development compact can be explained using the principles of “mutuality of obligation” and “reciprocity of conditionality”. Under the compact, developed countries and international organizations provide the assistance needed for the successful implementation of development plans in poor countries, while developing countries cooperate in the process through bold reform programmes in return. In the absence of appropriate capacity within a developing country, the developed countries are obliged to provide whatever assistance is necessary for the developing countries to achieve their targets. The development compact envisages a reciprocal obligation between developing countries and bilateral donors, international organizations and the UN system. As a result, this is a country-specific arrangement, instead of a traditional one-size-fits-all solution applied across the board to all of the problems of developing countries.

The 2003 UNDP Human Development Report further explained this proposition, defining the development compact as an arrangement based on a system of shared responsibility where all countries could orientate their efforts towards helping poor countries achieve their development goals. The compact allows poor countries to pitch for higher assistance and improved market access, while provider countries can demand better governance and accountability in return.

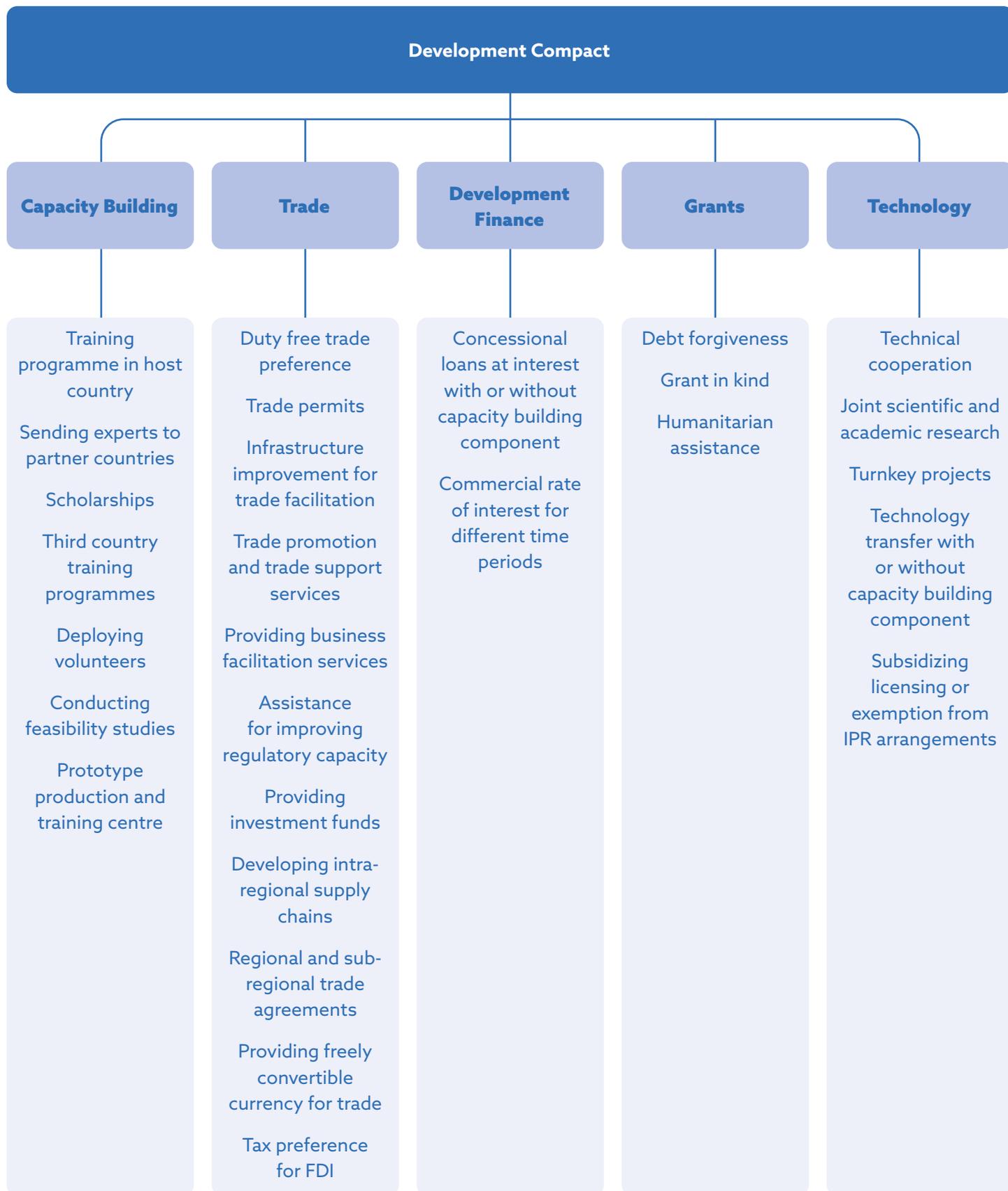
While Sengupta's call for a development compact emerged out of an understanding of North-South Cooperation (NSC), in the present context the term is linked to approaches followed in implementing SSC principles. This imposition of the concept to operationalize SSC, apparently coined in the context of NSC, is justified in terms of the principle of "mutuality of obligation" consciously followed in the case of the former. A development compact is visualized as comprising five distinct but highly interlinked components (Chaturvedi, 2016, p. 63). These are: capacity building, development finance (lines of credit), trade and investment, technology transfer and grants. The approach thus shifts from a "growth only" perspective of development with an intention to link the micro issues with the overall macro issues in mission mode (this is explained later).

We argue that the inherent theoretical framework in favour of strengthening SSC as an alternative approach to development, even though not as a complete substitute for NSC, focuses on taking advantages of the positive externalities or spillover effects of breaking the low-level equilibrium trap in a developing country (Chakrabarti, 2016). Such a framework of cooperation among developing countries creates an effective roadmap for development that is not only intended not to inflict any conditionality pain linked to internal structural reforms, but also aimed at generating "mutual benefits" for the partners engaged in the cooperation.

A perusal of the modalities of development cooperation through SSC reveals how these five components are being utilized effectively to contribute meaningfully to the development of partner countries without infringing on their sovereignty, while also generating mutual benefits for both countries. How do these efforts generate positive externalities for both partners? We shall briefly examine the capabilities of the components of development compacts in tapping positive externalities or spillover effects. The multiple sub-components identified in this context have been enumerated in detail elsewhere (Sachin Chaturvedi and Mohanty, 2016).

A schematic understanding of a development compact is provided in Figure 5.

Figure 5: Development Compact.



Source: Chaturvedi (2016).

The fundamental argument of development compacts is that these five modalities do not operate in stand-alone mode. Rather, they are often engaged as complements to one another. Support for technology sharing may be complemented by relevant capacity building components, thereby reducing the possibilities of increased skill gaps and consequent labour immobility. Trade support may also be provided to enable the partner country to access external markets to dispose of the excess product generated using the new technology. Necessary development finance at concessional interest rates is often arranged to facilitate investment in adopting the technology, while backward linkages through supply of the required inputs are arranged as needs arise. SSC also includes the provision of grants to partners to bridge gaps in their available funding. All of this support is provided without any conditions involving changing the domestic macroeconomic policies of the recipient countries.

There is an interesting case involving support from India to Mozambique for developing production facilities for solar panels. India provided technological support to produce the solar panels, backed by lines of credit to procure the necessary machines. Technicians from Mozambique were trained by Indian experts to ensure that the skills to operate the machines were available locally. Mozambique was also able to acquire the certification needed to expand its export market. The solar panel factory was launched in November 2013 and has received international TÜV certification from TÜV Rheinland, a German institution that is the global market leader in the testing and certification of photovoltaic modules. This certification is under the IEC 61215 (photovoltaic modules) and IEC 61730 (photovoltaic module safety) standards. For Mozambique's energy fund (FUNAE), a founding member of ALER and the entity responsible for rural electrification in Mozambique, this international certification acknowledges the quality of the modules produced in the first solar panel factory in Mozambique, under the financing agreement between the governments of Mozambique and India. With this international certification (TÜV), the photovoltaic modules produced in this plant meet the quality requirements for marketing in the international market, while contributing to the expansion of electricity in the country through clean, alternative sources.

The central motive behind such cooperation is the mutual benefit derived by both the partners in a spirit of solidarity. Being demand driven in nature, SSC support also does not impinge on the national priorities of the recipient countries. This ensures that there is no conflict between the external support and the domestic socio-economic structure in the recipient country. These SSC mechanisms are capable of emerging as a perfect foil for neutralizing the drivers identified as accentuating inequality in countries engaged in globalized trade and financial markets. Provision of duty- and quota-free market access for products from less developed countries also ensures a trading relationship that transcends the competitive basis of exchange to facilitate a cooperative model of support. The capacity-building component of development compacts also underscores the importance of sharing and creating knowledge in contributing to the development process for developing countries in a world that is becoming increasingly knowledge-driven.

Development compacts as an idea for channelling SSC share the structuralist view that macroeconomic management should address supply constraints. In developing countries, these constraints persist in agriculture, manufacturing, services, infrastructure and various social sectors. Individual countries have sector-specific

requirements. Partners in SSC must, therefore, address sector-specific, demand-driven needs according to their support capacity (Sachin Chaturvedi, 2012 and Fuchs and Vadlamannati, 2012).

The structuralist approach emphasizes income redistribution in the recipient economy as an important condition for growth. SSC has often been aimed at creating income in specific places, through small projects that may generate local employment. Employing appropriate technology in these projects leads to worthwhile jobs for local populations. Many of these projects occur in the social sector and other productive sectors, such as agriculture, industrialization and services. Experience from use of the India, Brazil and South Africa Facility for Poverty and Hunger Alleviation (IBSA Fund) may be cited as a current example of successful SSC intervention for the benefit of the neediest nations of the South. The fund is managed by the UN Office for South-South Cooperation (UNOSSC). Since its inception, the Fund has supported 31 development projects in 20 countries in the Global South, providing US\$39 million in support for fighting poverty and alleviating hunger in the spirit of SSC. The projects included aim to address all the Agenda 2030 Sustainable Development Goals (SDGs).

From the structuralist perspective, imposing conditionality does little to influence the growth prospects of a programme country. Therefore, development cooperation programmes with no conditionality (one of the fundamental principles of SSC) are very much consistent with the structuralist approach. For example, India's external economic engagement and integration strategies provide an important context for analyzing its development cooperation. India has adopted a multi-pronged strategy, connecting with recipient countries through trade and investment as well as cooperation policies. In order to enhance mutual gains, India seeks to bolster trade activities with improved bilateral cooperation and through further engagement with partner countries through free-trade agreements. Other trade engagement enhancements include improved trade financing, lines of credit and easier terms for bilateral cooperation (Sachin Chaturvedi, 2012). Engagement in trade cooperation differs from one emerging country to another, further demonstrating assumptions closer to the structuralist position than the monetarist one. For example, China finances infrastructure projects in recipient countries but uses barter-trade in settling loans with these countries. Instead of recovering loans in monetary terms, China prefers to accept equivalent amounts in goods such as minerals.

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## Mission Approach and Development Compacts

The theoretical underpinnings of “development compacts” reflect the experience of many Southern countries as aid recipients, stressing ‘win-win’ partnerships that encompass shared challenges but distinct national priorities. The mission centres on empowering developing countries and supporting them in their efforts to emerge from deprivation and engage in long-term, sustained development. This long-term development cooperation strategy has often been referred to as the “mission approach” (Mohanty, 2015). Conceptually, the mission approach aims to identify a set of growth drivers that support a partner’s development efforts, setting them on a high-growth path. Technically, an understanding of the economic conditions (based on macroeconomic paradigms) in partner countries helps identify these economic drivers and key growth sectors. This might also help in devising a roadmap for providing consistent and predictable resources to selected areas, without conditionality and in the spirit of the partnership principle.

Some of the salient features of the “mission approach” draw on past Southern initiatives to support developing countries in securing independence and in their post-independence reconstruction efforts, and their attempts to resume steady progress during plan periods (Chaturvedi, 2016; Mohanty, 2015). For example, India has been engaged with Bhutan since 1955, starting to extend yearly financial support to it in 1960. In 1972, India also supported the establishment of two industrial estates in Nepal (Nepalganj and Dharan) and provided financial support for promoting Nepalese cottage industries between 1968 and 1973. As a follow up action, India also agreed to fully support the country’s national five-year plans (Chaturvedi, 2016). The ‘mission’ thus looks beyond debt servicing and undoubtedly faces challenges in constantly raising resource flows, a pressing issue for Indian development cooperation in its present form.

We should also address the prevalent understanding of other dominant approaches to development cooperation. Japanese economist T. Yanagihara has evolved a comparative analysis to distinguish between approaches to cooperation. He identifies two broad types of engagement: the “framework” approach and the “ingredient” approach. According to his definition, the framework approach represents the “rules of the game”: economic agents make decisions and take action in an economy, itself conceived in terms of the functions of its institutions and mechanisms, thereby underscoring the need to enforce conditionality. By contrast, the ingredient approach refers to tangible organizational units such as enterprises, official bureaus and industrial projects, and their aggregations in industries, sectors and regions. Wonhyuk Lim ascribed the framework approach to North-South engagements and the ingredient approach to South-South engagements (Lim, 2012).

The “mission approach” pursued in SSC differs distinctly from the “framework approach”, but some of its elements are similar to those of the “ingredient approach”. It favours defining development cooperation as demand-driven, impelled by requests from the partner countries to respond to their urgent needs. In this view, development cooperation should adopt sector-support programmes, based on specific projects, rather than providing broader budgetary support. These projects may not be highly capital-intensive but should cover several desired sectors, depending upon the partner country’s request. These projects should also aim to improve supply

conditions in these countries. The mission approach thus emphasizes sectors such as agriculture and manufacturing, which create substantial forward and backward linkages in the partner country (Mohanty, 2015).

With the detailing of delivery approaches at the practical level, the broad goals of the “mission approach” dovetail with the “development compact” strategy. As mentioned earlier, this “compact” rests on five action pillars: capacity-building and skills transfer, concessional finance (further divided into grants and lines of credit), preferential trade, investment and technical cooperation. It implicitly depends on the principle of fair access to trade, investment and technology in SSC initiatives. India’s deployment of a broad portfolio of approaches allows for flexibility that makes it much more attractive and appropriate for partner countries in the South. As Chaturvedi (2015) argues, India and other emerging (BRIC) donors have a broader concept of development support that goes beyond giving hand-outs, generating economic activity in the recipient country. Significantly, this “compact” rests solidly on the concept of mutual gain. A “development compact” is, therefore, something less than the articulated policies of the Development Assistance Committee (DAC) members, but more than a string of unrelated aid programmes; it is and intimately related to the broader economic strategies of the recipient country.

In short, we can see the “mission approach” as articulating the broad theoretical basis of development cooperation under the SSC rubric, while the “development compact” represents the broad strategies flowing from that approach.

# 3. Conclusion

The mission approach to SSC and its strategic implementation through development compacts is perhaps an alternative way forward to rid the world of the scourge of increasing inequality. It replaces the notion of competitive advantage as the basis for trade – the long standing moral and philosophical foundations of arguments for trade in the developed world - with a call for cooperative advantage that would generate mutual benefit as the *raison d'être* for trade. This notion of trade can help shatter the new core-periphery model of trade identified by Krugman (1991a).

To summarize the main arguments developed in this paper, we observe that inequality and its growing global incidence may be attributed to globalization characterized by a trade regime based on: competitive advantage; financial deepening accompanied by contingent conditionality in terms of changes in the domestic policy architecture of individual countries; the emergence of technology as the principal arbiter of competitiveness and its unequal distribution thanks to the stringent intellectual property rights (IPR) regime; and the resulting unequal access to the basic minimum requirements for augmenting the quality of human capital, such as health services and education. However, the philosophical approach to development in the SSC concept is an effort to: make use of shared technology; provide access to basic resources to augment the human capital of the partner countries; avoid interference in domestic policy architecture; and exchange (trade) goods and services among partners in a framework of cooperation. It would be worthwhile to initiate a research agenda to examine the primary question of whether such a pathway could be effective in reducing inequality across the globe. Some tentative candidate research questions to be tested empirically include:

- Does South-South trade contribute to reducing intra-country and inter-country inequality?
- Is bundling of trade with other approaches to SSC effective in moderating the scourge of inequality?
- Does South-South trade contribute to mutual benefits for the partner nations? Does the benefit-sharing process differ from that for trade based on competitive advantage?

Some theoretical issues that require urgent attention include:

- The implications of unequal distribution of natural resources in determining the basis, direction and gains from trade;
- Incorporating involuntary unemployment and the consequent migration and trade-balance effects in the face of financial deepening into a conceptual framework of international trade theory;
- Introducing the environmental and ecological distortionary effects of trade in the theoretical framework.

One is reminded of Polanyi's statement that market institutions and political institutions are inseparable. The recent emergence of neo-liberalism, calling for the elimination of artificial barriers in the form of state intervention, to facilitate the spontaneous and self-regulating functions of the market, conflicts directly with the idea of shaping the economy in accordance with social objectives through the exercise of political will. Galbraith (2012), Rodrik (2012) and Stiglitz (2012) point to the problems of market failure, such as rampant rent-seeking behaviour and externalities. They identify the dilemmas of the globalized world, including widening inequality and the incompatibility of democracy and globalization. They note that markets are embedded in social institutions and the ways such institutions both respond to markets and shape market outcomes. They have opened our eyes to the need to appreciate the complementarities that bind the market to social institutions and political processes.

Polanyi (1944), while giving a commentary on the rise of capitalism in England, highlights the need for a strong state and a market economy to be in a symbiotic relationship with each other, creating a unified entity. Polanyi argued that the most crucial aspect of the institutional setting of a market economy is the conceptualization of labour, land and money as commodities. Recently, "knowledge" may also be considered to have been added to this category. Incidentally, none of these are produced for sale. This conceptualization is entirely fictitious. But this fiction enables the organization of the markets for labour, land and money, and even knowledge, as central components of a market society. According to Polanyi, this economic organization could not be sustained without institutional support, because "to allow the market mechanism to be the sole director of the fate of human beings and their natural environment, indeed even of the amount and use of purchasing power, would result in the demolition of society" (Polanyi, 1944, P 73).

The neoliberal assumption that markets can exist in a vacuum and can function in a perfect manner even in the absence of supporting social and political institutions is a recipe for disaster, as economic crises and social instability follow. Attempts to dismantle the institutions that both support markets and mitigate their most negative effects are the root cause of the present crises of increased inequality and the resultant calls for populist nationalism across the globe. The conscious effort by SSC, through its mission approach accompanied by the development compact strategy, tries to ensure that the fissure between socio-political institutions and the operation of markets is not allowed to widen, with political-social solidarity institutions supporting the existence and sustenance of the markets. That is why, from a Sraffian perspective, SSC does seek to reach equilibrium in a neo-classical sense as per the monetarist view, but to gravitate around a normal position through effective manoeuvring of social and political processes (see Martins, 2019, for a discussion on Sraffian perspectives on equilibrium and gravitation).

In a little known paper, Ben-Porath (1980) deciphered a common linkage among three words beginning with F: families, friends and firms. These three entities all engage in the allocation of resources based on the identity of the people engaged. Such identities in a transaction create a sense of solidarity among the agents involved and are a major determinant of the institutional mode of the transaction. Such transactions can take place only between mutually or unilaterally identified parties on the basis of diffuse reciprocity. "Investment in resources specific to a relationship between

identified parties can save transaction costs and stimulate trade”, argues Ben-Porath. SSC, despite being a misfit as it does not begin with the letter F, is based purely on identity-induced transactions that cannot and do not operate in an institutional vacuum, thereby creating the necessary scaffolding for the markets to operate.

SSC calls for the replacement of the competitive advantage-based trade architecture married to a market-based solution that is steadily captured by monopoly elements in an environment of increasing returns to scale. SSC’s version of trade is dictated by the spirit of sharing in facilitating solidarity that generates mutual benefit, while helping partner countries through the enhancement of human capital, technology sharing and the flow of cheap and unconditional credit, all complementing each other, to ensure holistic development. This gives trade based on development compacts the potential to facilitate equitable development among all the partners engaged in such cooperative relationships with each other.

The literature on the implications of South-South trade is scanty. The need for intensive research to disaggregate the impact of solidarity-based trade between southern partners from that of the extant competition-based model of global trade cannot be over emphasized, if we are to ascertain whether the former has the potential to contribute to inclusive and sustainable development of the global community. A theoretical “development compact” model has already been developed. The next step would be to empirically verify the validity of the concept and enquire as to whether the fundamental ideas behind the “development compact” and its underlying logic of sharing are effective in handling the scourge of inequality in a meaningful manner.

The purpose of this paper is to offer a future research agenda for analyzing the relationship between south-south trade and intra-country inequality. The final section identifies some potential items for the research agenda. Having reviewed the literature to identify the linkage between inequality and trade, this paper does not intend to offer any policy recommendations, other than suggesting some potential areas for research. The findings of such research would fill the knowledge gap and help to add to the emerging policy debate around South-South trade.

A recent report from UNCTAD (2020) notes that the flow of South-South trade has shown a higher level of resilience compared to the performance of developed regions even during the COVID period. It is imperative that an analytical perspective is developed to understand the nature and causes of the resilience observed in South-South trade.

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