

# International Journal of **Supply Chain and Logistics**

(IJSCL)

**An Overview of Colonization of Supply Chain and its Ugly Smile**



**CARI**  
**Journals**

## An Overview of Colonization of Supply Chain and its Ugly Smile



<sup>1\*</sup>Dr. Ahmed Deif, <sup>2</sup>Audrey Bergener

<sup>1,2</sup>Industrial Technology & Packaging: Orfalea College of Business

California Polytechnic State University

<https://orcid.org/0000-0003-3203-0581>

Accepted: 29<sup>th</sup> October, 2025, Received in Revised Form: 10<sup>th</sup> November, 2025, Published: 18<sup>th</sup> November, 2025

### ABSTRACT

**Purpose:** This paper reframes contemporary supply-chain “best practices” through a decolonial lens. It explains how value capture mechanisms—offshoring, arm’s-length contracting, intellectual-property (IP) control, and audit-led compliance—reproduce colonial power asymmetries and produce the ‘Ugly Smile’ in value distribution across global value chains.

**Methodology:** Conceptual–analytical synthesis of historical and contemporary literatures on colonialism, global value chains (GVCs), and social sustainability; brief scoping of supply-chain/operations scholarship; illustrative case logic on consumer electronics (Apple iPhone) to exemplify value allocation patterns.

**Findings:** Interacting modes—unequal exchange, labor arbitrage with arm’s-length contracting, IP-centric control, compliance cascades, and raw-materials extraction—systematically depress midstream capture while concentrating rents upstream (design/IP) and downstream (branding/retail). Recent governance shifts (e.g., EU Corporate Sustainability Due Diligence Directive) move firms beyond tier-1 audits toward risk-based responsibility and access to remedy.

**Unique Contribution to Theory, Practice and Policy:** Proposes a consolidated frame that links ‘Ugly Smile’ value distribution to identifiable institutional mechanisms; articulates a forward agenda combining value re-allocation, worker-voice governance, longer-term contracting, open-licence technology, incentive-compatible public procurement, and fair-value metrics to operationalize decolonization in supply chains.

**Keywords:** *Decolonization, Supply Chain, Fair Value Distribution*



## 1. BACKGROUND

Colonial dynamics did not end with formal decolonization; they were reconfigured through trade rules, corporate governance, IP regimes, and platformized supply networks. What appears as neutral optimization—flexibility, speed, and low unit cost—often embeds power asymmetries that shift risks and social/environmental costs to producer regions while concentrating monetary returns elsewhere. This section contextualizes the term colonization, its evolution and its global classification.

### 1.1 What is Colonization

The terms colonization and decolonization, often used to reference diverse circumstances and relationships, are key concepts relating to the power dynamics of global resource appropriation. The Stanford Encyclopedia of Philosophy's definition of colonialism describes the ideology as, "domination, which involves the subjugation of one people to another" (Kohn et al., 2022). This definition takes into consideration the historical literary use of the term, as well as the etymology of the word. The Latin root "colony" or "colonus" refers to the act of transferring a population from a land of origin to a new territory connoting farming, permanent settling, and caretaking of the new area. While this breakdown includes portions of modern connotations, it lacks the implied power structures and abuse that are commonly significant in situations that this term is used to describe. This association—of power and exploitation—aligns closer to the etymology of the word imperialism.

Looking at both definitions and origins, these words begin to describe the pattern of value flow in global industries and value chains. Large multinational and transnational corporations embody the colonialist and imperialists of modern day through the control and power dynamics hidden in many supply chain strategies. Common performance indicators favoring quick flexibility of suppliers, maximal efficiency, or minimal labor costs, may indicate the presence of these harmful power dynamics. Many value chain strategies are ways that large companies—which often originate in countries with long histories of colonialism—have appropriated value from countries that make up midstream nodes. This paper focuses on capturing these colonization dynamics currently disguised as efficient supply chain management, focusing on structural and practical elements.

### 1.2 Evolution of Colonization

Throughout history, colonialism has favored patterns highly reflective and influenced by global economic trends and evolving technology. The most distinct trends summarized by Nancy Shoemaker in *A Typology of Colonialism* include Settler, Planter, Extractive, Trade, Transport, Imperial Power, Not-in-My-Backyard, and Legal Colonialisms (Shoemaker, 2015). Settler and Planter Colonialism are classic depictions of colonial acts; these encompass the practice of an outside population claiming territory and attempting to validate claims by becoming the majority population inhabiting the desired area. This was often accomplished by designing communities economically centered around a single crop (historic cash crops include cotton, coffee, sugar,

tobacco, etc.) while forcing out the previous or indigenous inhabitants of the territory. One example of this colonialism is the European colonization of North America and the displacement of the native population. Extractive, Trade, and Transport Colonialism involve the appropriation of value and value-adding activities rather than the appropriation of territory for permanent settlement. This appears in the form of profiteering raw materials and resources (including labor), unequal trade and exchange relationships, and occupation of locationally prime territory to be used as trade hubs or depots to expedite travel. This type of colonialism was common in instances such as the Dutch East India Company's colonization of Indonesia's spice industry among other resources, extensive imperialism of European countries in Africa including the trading of over 12 million African slaves (Mintz, 2020), and sugar cane plantations created in Hawaii. This form of colonialism is comparable to the inequalities in industry today where these same countries that benefited in abusive power dynamics have maintained a colonist presence in global value chains today. These colonizers may also fall under the category of Rogue Capitalism, meaning the appropriation or exploitation is at the hands of corporations and monopolies rather than by states or national governments. The final pattern of Imperial Power is Not-in-My-Backyard, and Legal Colonialism which entails profiteering and self-interest through expansionism guise as diplomacy, global power struggles, or transference of less desirable activities to be shouldered by a separate territory (such as waste disposal, experimental testing sites, and even penal colonies).

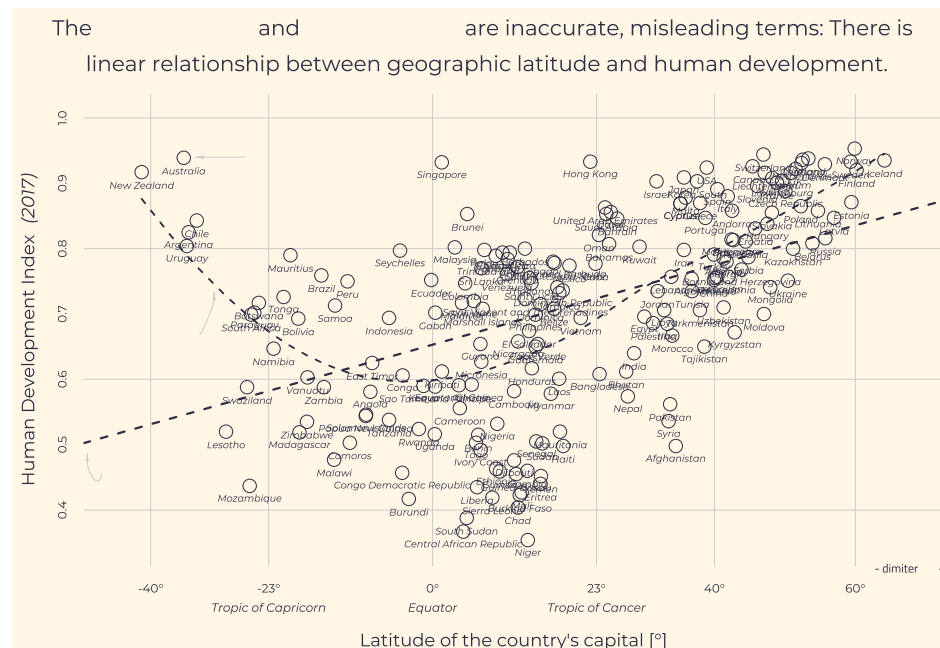
### 1.3 Global Classifications

It is important to consider the array of terms used in global dynamics literature and the connotations these categorizations hold. Many terms currently used to describe dynamics of development, wealth, or other global metrics may be loaded with inaccuracies and harmful tones. These attributes do not accurately reflect the relationships and dynamics of global affairs. Terms such as underdeveloped, least developed, periphery, non-west, or third world place the majority of the world's population in a hierarchy based on scales created by global colonizers and capitalists. The global groups which are dignified as first world, most developed, and core (who make up about 15-20% of global population) were only able to advance because of reliance on tactics of colonization, exploitation, and subjugation. In addition to the fallacy of these immoral economic advantages, the metrics determining whether a territory is developed, or core are based on the cultural philosophies of historic colonizers. These values are deeply rooted in capitalism. These capitalistic ideals dictating these categorizations are innately tied to colonialism due to the complementary core characteristic of maximizing profit through industry and trade tactics, often control, exploitation, and acquisition of territory. A list of some of the popularly used terms in this context is listed in table 1 and are geographically depicted in figure 1.



**Table 1. List of classifications and terms used in the context of colonization and global dynamics; definitions (Silver, 2015)**

First and Third World, Periphery & Core Countries	Connotes a global divide in value, importance, or superiority
Less/Underdeveloped and More Developed	Based off a capitalistic sense of development, non-inclusive of differing cultural developmental values
Global North and Global South	A global divide of North and South does not accurately capture the geographic locations of the two groups of countries (distributions are shown in figure 1)
Majority and Minority	A more appropriate term, simply refers to the fact that most of the world's population exist in main-stream countries and the minority in side stream, imperialist countries

**Figure 1. Countries' capital cities plotted by geographic latitude displaying the non-homogenous grouping of Global North and South, (Toshkov, 2018)**

To remove confusion surrounding connotation, we propose in our analysis of supply chain colonization to use the term “mainstream” to refer to areas where the most visible, physical, and labor-intensive value is added to commodities. Mainstream areas are these colonized and controlled nodes of upstream or midstream global value chain activities like raw material sourcing

or manufacturing. The “sub-stream” will refer to areas and groups providing more service-based and non-physical value.

## **2. SUPPLY CHAIN COLONIZATION MODES**

Using Shoemaker’s colonization typology, this paper’s emphasis will be on export, trade, and transport colonialism (Shoemaker, 2015), modes that best capture the dynamics of colonization in the global supply and value chain strategies. This type of colonialism refers to the practices of non-equity modes of production used by sub-stream actors in global supply and value chains. Non-equity modes of production encompass tactics such as intellectual property, offshoring, contractual enforcement, flexibility demands, labor arbitrage, and risk management to name a few. These practices yield significant economic benefit for these sub-stream players by exchanging value provided by mainstream actors for a fraction of the revenue generated. This inequity is made possible through power dynamics set and reinforced by classic colonial policies and practices. This section will expand on these modes of supply chain colonization.

### **2.1 Historical Overview of Supply Chain Colonization**

Before elaborating on the different modes of supply chain colonization, this section aims to stage this discussion with a historical overview. The history of modern supply chain colonization can be understood in the context of two main events. The first event is the colonization of the imperial forces to the mainstream regions, and the second event is the evolution of the industrial revolution. Both events are tightly related to each other as well as to the structure of many modern chains.

Many countries and regions subject to unequal value distribution of modern supply chain dynamics (mainstream) have long yet recent histories of being colonized and controlled by more wealthy countries (sub-stream) (Lenin, 2012). The oppressive involvement of these foreign governments in many cases created institutions and normalized practices that would shape local economies and industry. By molding economies and industries to fit their needs and benefit their home or permanently settled territories, colonizers use methods of power (economic leverage, militaristic, etc.) to devalue and demote local interests. This colonialism, often posed as civilizing, advancing, or missionary campaigns created permanent dynamics which are solidified by less obvious indirect mechanisms of power such as trade, transport, and extractive colonialism seen in modern value chains (Oto-Peralias and Romero-Avila, 2016). Present-day acts of colonialism share with classic colonialism the same goal of procuring and removing value from foreign areas but are done by more indirect and disguised mechanisms of international trade and business development models.

The industrial revolution became a key turning point for local economies and the roles of small-scale local production for craftsmen, artisans, and some farmers. As large-scale industrial production became increasingly productive as well as widespread throughout the world, the market for small craftsmen was captured by lower costs and therefore prices of efficiently made goods. Samir Amin explains that the capture of craftsman capital is not a result of “inadequacy of the home market”, but a result of industrialized productivity forcing local producers to work for

foreign monopolies and at much lower wages (Amin, 2018). This trend mirrors Marx's predictions and explanations of laborer exploitation as the value created by workers is continuously appropriated by capitalist colonizers, however, this concept can be broadened to include the appropriation of many other resources in addition to labor (Marx and Engels, 2001). This unequal exchange of value, according to Marx, results from the inequality between nodes or branches of supply chain which we can trace and attribute to colonization, inequitable global power structures, and indirect methods of control as we will explain next.

## **2.2 Unequal exchange of value**

Unequal exchange is a key way that modern appropriation appears in global value chains. Many assume colonialism only means direct control like occupation or slavery, but today's global trade allows historic colonizers to maintain dominance through indirect means, often hidden in standard market practices.

These evolved exchanges occur between wealthy, historically colonizing countries and poorer, often former colonies. Hickel (2022) estimates that in 2015 alone, \$10.8 trillion worth of raw materials, land, energy, and labor were extracted from developing regions and transferred north, resources great enough to end poverty many times over.

Modern supply chain management strategies can enable such unequal exchanges and reinforce global power imbalances. This raises the question of whether "value chain" better describes fair value addition or highlights the lasting issue of inequitable value distribution.

## **2.3 The Notion of Exploitation (A Marxist Perspective)**

Marx and related philosophers describe modern colonialism and imperialism as outcomes of advanced capitalist economies. Through the lens of historical materialism, Marx and Engels identified capitalism itself as source of ongoing unequal value exchanges in today's supply chains.

Marx argued that capitalism divides society into two main groups: the bourgeoisie (owners, monopolists, and colonizers) and the proletariat, or working class. Engels described the proletariat as those who live by selling their labor, with no profit drawn from capital. This arrangement results in workers producing more value for the bourgeoisie than they receive in wages, creating a surplus that enriches capitalists.

Today, the global working class—the modern proletariat—still consists largely of workers from mainstream (often formerly colonized) countries. Transnational corporations, as the new bourgeoisie, have leveraged historic power imbalances to make whole regions serve as the world's labor force. While not all workers in wealthy countries enjoy fair conditions, wage and labor exploitation is most extreme in the global majority, reflecting enduring legacies of colonialism adapted to modern capitalism.

## **2.4 Global Trade and Who Defines It**

Beyond management and business strategies, global trade policies and the organizations behind them strongly favor sub-stream countries with powerful economies in today's supply chain. The World Trade Organization has been accused by multiple groups for creating and maintaining rules which clearly benefit sub-stream economies over mainstream economies. Since the WTO's Uruguay Round agreements, developing countries have been further handicapped developmentally as various conditions were placed in front of market access for exports (Wallach and Woodall, 2004). These new commitments handed to mainstream countries included aspects like intellectual property and services while the sub-stream importing countries were granted reduced importing restrictions in addition to export and production subsidies (Finger, 2001). These aspects among other dynamics lead to increased negotiation power and trade benefits for many historic colonizers. Martin Khor claims the WTO "has in fact become the main vehicle of choice of industrialized countries for organizing and enforcing global economic governance" (Khor, 1999). He references the role trade regulations, or lack thereof, play in allowing transnational corporations to take advantage of the low labor standards of areas and ensuring this opportunity by ensuring these workers and countries hold little to no bargaining power; Khor claims many WTO members of mainstream countries are purposefully left out of meetings, councils, committees, and negotiations as well as most votes and even vetoes belonging to global minority countries (Khor, 1999). Ricci draws attention to the parallel between rise in international trade and global income inequality (Ricci, 2021). Ricci references a 362 percent growth in volume of international trade in 17 years from 1990-2007 alongside geographical location accounting for over half of global income variances (Rici, 2021). This brings the deceiving reality of free trade and its relationship to unequal exchange. Unequal exchange, in Rici's words, is defined as "spatial production of value is disjointed from its geographical distribution", which has become exponentially more abusive through international, free trade and neglected power dynamics of the modern market (Rici, 2021).

## **2.5 Intellectual Property & Foreign Direct Investment: Maintaining technology gap**

IP debates are riddled with conflicting development metrics. In a postcolonial lens, strong IP rules can function as tools for sub-stream (wealthy) countries and multinationals to retain leverage over mainstream economies. The WTO's TRIPS Agreement (effective 1995) unified and strengthened IP protection, with documented links to FDI, trade, innovation, and public health outcomes.

FDI often arrives through long-term facility and technology investments in mainstream countries, and is praised for transferring know-how. Yet critics see it as a modern extension of imperial control, replacing formal colonial rule with corporate dominance. In palm oil, large commodity firms continued post-decolonization expansion across Africa and Southeast Asia, sustaining exports while entrenching unequal value exchange.

Globalization via FDI can hollow out domestic industries. While some manufacturing jobs appear, intensified multinational competition may yield net losses in local employment and capabilities in mainstream economies. Empirical work ties stronger IP regimes to higher prices and constrained access in sensitive sectors, notably medicines.



A historic innovation gap compounds these effects. Sub-stream countries industrialized earlier and now sit at the technology frontier, leaving mainstream countries to choose between costly domestic R&D or technology transfer. When imitation or reverse engineering is restricted by tighter IP, dependence on licensing grows, reinforcing the patent holder's power to set value shares, segment markets, and control price and quantity.

Pharmaceuticals illustrate these dynamics. Stronger IP protections can deter generics, push prices up, and redirect production toward sub-stream markets, limiting local access in lower-income regions. During COVID-19, India and South Africa proposed a TRIPS waiver in October 2020; over 100 countries expressed support, but the eventual WTO outcome was a narrow exemption that critics said largely reiterated existing flexibilities.

Overall, robust IP and FDI frameworks can deliver technology and investment—but they can also cement unequal bargaining power, constrain local innovation catch-up, and perpetuate uneven value distribution along global supply chains.

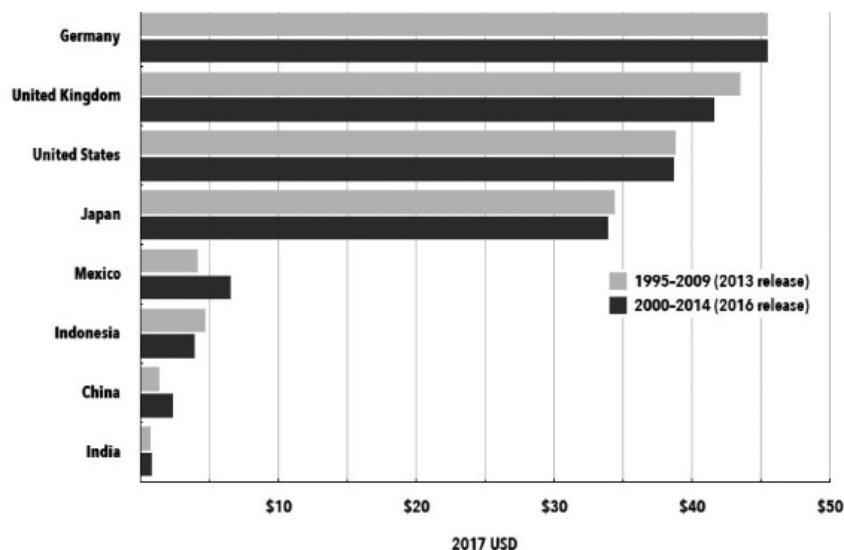
## **2.6 Raw Materials Exploitation**

Many historically colonized areas were targeted not only for the prospects of low cost or slave labor but also for the richness of natural resources. Many of these countries continue to be the largest exporters of many raw materials and commodities in today's supply chain with minimal exchange of value to them (Schandl et al., 2017). The issue of unequal exchange is brought into this scope as this value is transferred to sub-stream countries as the materials flow through supply chains. As highlighted by Hausman and Ricardo's research, raw materials such as minerals like diamonds or iron, cash crops like cocoa or coffee, and many other key materials to nearly every commodity, are produced and exported by economically poor countries in raw states (Hausman and Ricardo, 2014). When exported, these materials may not be geographically located in rich, sub-stream countries, but they are often purchased and owned by large multinational corporations. Additional value is often added to these materials in other mainstream countries where labor or a different material may be less costly (Hausman and Ricardo, 2014). Diamond and precious stones supply chains demonstrate this process well; according to NS energy, Africa has been the leading producer of gem-quality stones since the 1870s and specifically Botswana being the top diamond-producing country (Besta, 2020). After raw stones are sold to manufacturers, many end up in India, Belgium, China, Israel, Russia, and the United States to be cut and refined, as explained in the article *A Diamond's Journey*, with more than 60% of the value distributed among manufacturers and selling corporations (Hussain, 2006).

## **2.7 Labor arbitrage, Arm's Length Contracting, and Offshoring**

Many of the previous modes of supply chain colonization led to or based on this specific mode. Labor arbitrage is a term referring to the offshoring or outsourcing of laborious activities to utilize cheaper unit labor costs in less economically stable countries, directly correlated to the overarching trend of globalization in value chains. Financial advantages such as reduced taxes, minimum wage

laws, and work condition regulations compel corporations to pursue impoverished areas for manufacturing and processing to essentially get more labor out of less funds. One essential aspect of this colonization mode is described by Miszczynski, who outlined the social reality behind the practice of labor arbitrage in his report on a mobile phone plant in Romania. Miszczynski explained the issues behind the mobility of the modern industrial workplace and the issues this creates for global workforces. The locational shift in manufacturing from industrialized, historical colonizer countries into less capitalistically advanced countries has become a social issue above all else (Miszczynski, 2016). This offshoring, as Miszczynski explains, creates surplus wealth and benefits for organizations, rather than countries or employees as countries selected for these steps in value chains require the least investment, wages, taxes, and worker rights (Miszczynski, 2016). The lack of control and widely varying costs of production results in cost price competition between suppliers often at the expense of worker's wages to drive prices lower. The case of the Romanian mobile phone plant brings up other issues such as foreign investment and the constant search for lower costs as this production facility was abruptly closed and relocated to China for lower labor costs. This quick relocation disrupted the economic structure of the small village by abruptly leaving workers, many of which left other industries or locations for these opportunities, jobless. This demonstrates the reality of the shortening cycles of foreign investments, which appear as quickly as they disappear, creating disrupting waves in small local economies, leaving them at times dependent and waiting on the next investment to come.



**Figure 2: Average Hourly Compensation in Manufacturing, 2017 in USD (Suwandi, 2019)**

Variance in global wages and differences in unit labor value illustrate structural exploitation and underdevelopment. Suwandi (2019) argues that shifting global production to mainstream countries isn't progress; rather, it continues imperialistic dynamics under a new guise. The move has brought more jobs to the mainstream world, but persistent power imbalances sustain appropriative, exploitative relations.

Low unit labor costs and extreme buyer-supplier power gaps create wage inequalities, fueling poverty and stifling development. Suwandi highlights a root cause: capital moves freely across borders, but labor cannot. This enables firms in sub-stream countries to source cheap labor abroad, turn it into high-value products, and reap profits at home, while the value transferred far exceeds wages paid in the mainstream countries.

Offshoring magnifies corporate power and supplier dependence. As Dyer et al. (1998) describe, “arm’s length” strategies—rotating, non-exclusive supplier relationships with minimal commitment—allow buyers to minimize costs and responsibility, suppress wages, and avoid broader social obligations. The BBC’s coverage of Apple Inc. showed that after public scandals, multinationals can swap suppliers and publish workplace standards, yet violations persist—showing how distance shields corporations from real accountability.

These dynamics incentivize perpetual cost-cutting and drive down labor standards. Rather than manufacturing directly, transnational corporations orchestrate global production networks to extract value while evading fair wage obligations. Advances in digital supply chain management now allow sub-stream companies unprecedented visibility and control—even from afar. This enables ultimate efficiency and cost minimization, but it does so by intensifying exploitation within mainstream-country industries.

## **2.8 Operation Excellence via Efficiency and Flexibility**

Flexibility and Efficiency are top performance indicators in different facets of most supply chains, especially with the rising focus of importance of supply chain resilience post the COVID 19 pandemic. The emphasis placed on these operation excellence metrics reflect the capital impact through cost reductions that these goals can achieve. Flexibility and efficiency are not often viewed from the lens of the worker, thus missing the abusive impact these goals can have on those in the center nodes of supply chains mainstream. As Suwandi explains, flexibility directly correlates to the exploitation of the labor process especially when this flexibility is targeted towards unit labor costs (Suwandi, 2019). A modern example is the trend of reducing the number of full-time employees in favor of contract or part time contingent workers. This differentiation allows flexibility for the manufacturer or further the transnational corporation by allowing job instability and insecurity to manipulate global workers into unsafe, power abusive, and poorly compensating work environments (Suwandi, 2019). Any positive productivity metrics resulting from worker satisfaction or fair work environments are trumped every time by the reduction of fixed costs for variable costs and the flexibility and cost savings that result from the ability to manipulate labor forces easily and timely. The increase not only in job insecurity but also increasingly poor working conditions and job competition is noted as a side effect of seeking efficiency and risk management by transnational supply chains (Mosoetsa and Williams, 2012). Part of this phenomenon is defined as informalization of production which refers to the growing instability the global worker faces.

In addition to job insecurity, flexible manufacturing can also cause a deskilling of workers through the segmentation of tasks. By separating processes and assigning workers repetitive, low skill jobs there is less time spent on training workers making them even more replaceable. These unskilled workers then must perform to reach planned quotas as the only metric of their performance, which will further be the only metric securing their employment and wages. This adds an additional layer to an already imbalanced work environment as the value of a hyper flexible and efficient node may incentivize working overtime or even working unpaid hours to fight competition for employment.

### **3. SUPPLY CHAIN COLONIZATION WITHIN THE SCM AND OM RESEARCH LITERATURE**

This section gives a brief look at how supply chain colonization is treated within SCM and OM research. Most literature is not from a decolonization lens, and this is not a comprehensive review—rather, it’s a quick scan of major themes and gaps.

Most SCM and OM journals prioritize efficiency, margin growth, and competitiveness, reflecting existing power dynamics that favor sub-stream economies. Much of the literature addresses ways to cut labor costs, often viewing workers as variables, not people. Numerous case studies highlight offshoring, outsourcing, and low-cost country sourcing as key management tools, but rarely examine the negative impacts on labor conditions.

Efficiency is another dominant subject. Supply chain optimization, mass customization, and quantitative performance metrics are emphasized for their business benefits. However, literature rarely grapples with how these models, while delivering low cost and high service, often lead to worker exploitation and job insecurity. Only a handful of works critique how flexible and temporary labor arrangements disproportionately affect vulnerable worker groups.

The topic of social sustainability is gaining ground as supplier relationships, community well-being, and ethical sourcing receive more attention. Recent scholarship explores socially responsible supplier selection and corporate social responsibility as part of sustainability. But few studies confront the root causes of exploitation, with most buyer-centric recommendations focused on compliance rather than systemic change.

Global value chain (GVC) research has more directly confronted power inequalities. Newer work empirically links GVC participation to ecological and labor-based unequal exchange, and explores enforceable due diligence and worker voice mechanisms. Other studies connect digitization and circular supply chains to sustainability.

In summary, although some research now addresses supplier justice and social sustainability, there remains a large gap surrounding systemic inequality and the indirect, persistent control built into “best practice” SCM. Future research must move beyond incremental reforms and begin analyzing these issues as central elements of global trade and value creation.

#### **4. THE UGLY SMILE (THE CURRENT VALUE CHAIN)**

Each supply chain decolonization modes discussed so far, in addition to many more industry specific dynamics, plays a part in reducing the cost of manufacturing, sourcing, or any other node located in a mainstream country. By reducing the cost of activities in these countries, the supply chain surplus wealth can be distributed and reinvested into sub-stream economies in activities far up and downstream. Such uneven distribution led to the development of what is now known as the new “Smile” value chain dynamics shown in figure 3, where most of the value (mainly monetary value) extraction is dominated by upstream and downstream activities with the least passed on to the midstream activities. This shape of the value chain is contrasting with what one expects from a fair value chain where this smile should be more a leveled straight line among different supply chain stages. Using their power difference, transnational corporations promote their narrative for justifying such uneven distribution by claiming that upstream and downstream activities add (from a customer perspective) more value to the product and thus deserve more of the generated monetary value. Such a claim and the magnitude of its associated unevenness of value distribution should be more investigated by the supply chain researchers and practitioners’ communities.

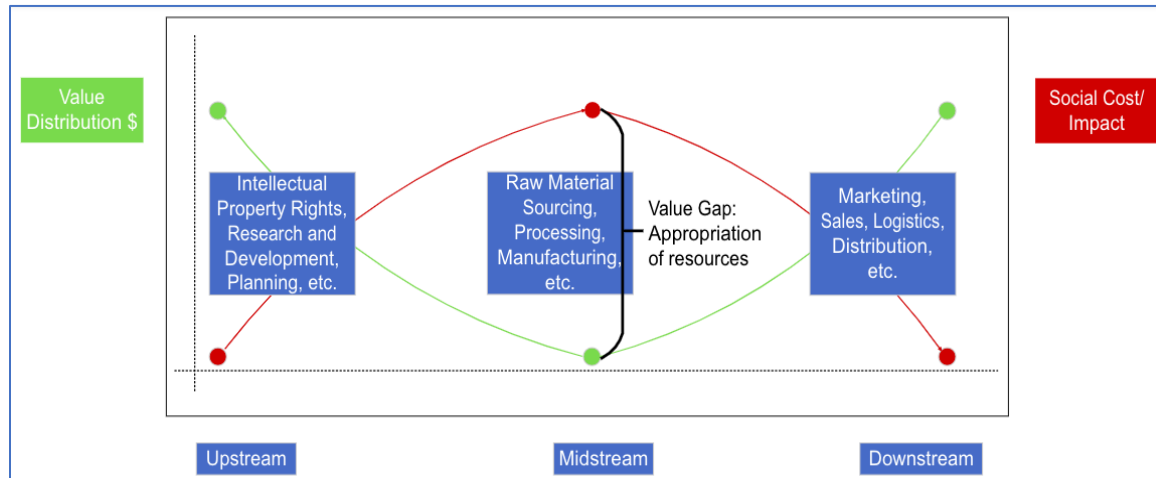
Upstream activities located largely in the sub-stream world include research and development, planning, and procurement. Downstream activities in the sub-stream world include mainly marketing, sales, logistics, inventory management, and other financial service-based roles. The concentration of the technology parks and R&D centers in rich sub-stream countries did not evolve into such clustering by chance. The smile-like value chain distribution generated by the colonization modes is a clear driving force behind that. Similarly, the fact that the top financial centers of the world, of which New York City and London top the list, are in sub-stream countries is another evidence for such supply chain colonization dynamics. Thus, these industries located in sub-stream countries perpetuate the gap in global income, technology, and knowledge and by design increase the distance between usefulness of commodities and their subsequent exchange value. So, while industries like research and development and marketing drive exchange value higher, the mid-stream, in mainstream countries, and providers of nearly all resources flowing into the global value streams see not only none of this surplus profit but not even a living wage due to this smile-like distribution. It is this unfair distribution that makes this smile an ugly smile.

The ugliness of such smile-like value curve is further demonstrated by depicting, on the same supply chain axis, the social impact curve. Opposite to the distribution of value, the negative social impact in the form of environmental damages of different forms, social strains at various levels and other negative outcomes are highly localized in mainstream countries while far less witnessed in upstream and downstream countries. Such contrast between smiley and sad curves highlights what can be seen in figure 3 as value unfairness gap. This gap should be a main driver for supply chain decolonization efforts.

The value gap is indeed the accumulation of centuries of power, control, and financial abuse that sub-stream corporations have recently disguised as increasing efficiency and flexibility. Analyzing

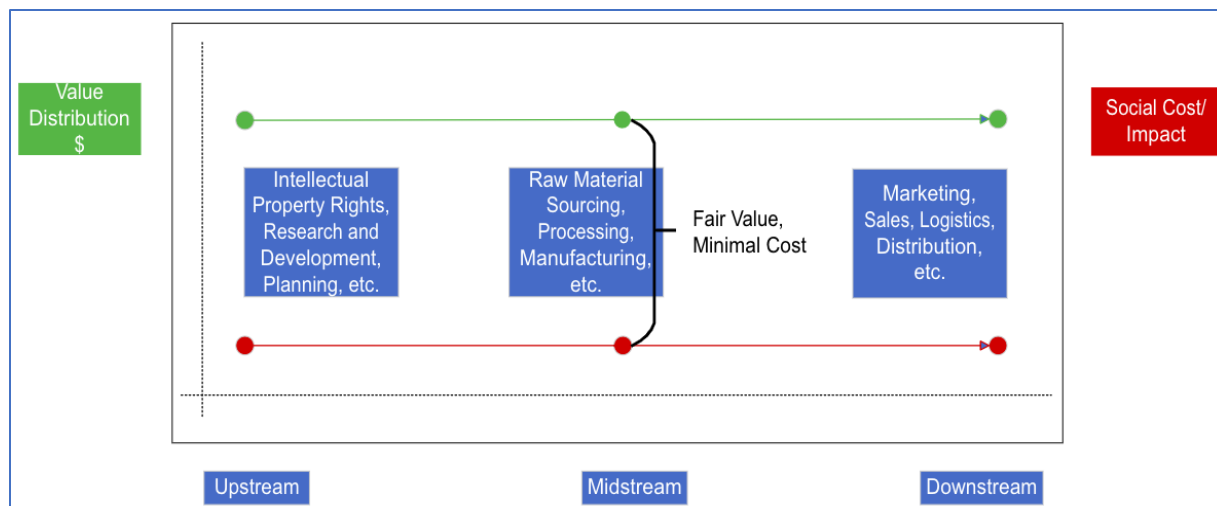


these strategies, the appropriation of resources and market control paint a serious picture of the oppressing hold that the sub-stream minority still claims over the mainstream majority of the world's population and resources.



**Fig 3. The “Smile” and “Sad” curves of the contemporary value chain**

Contrasting figure three, figure four depicts an envisioned fair distribution curve of value between all nodes of a value chain. Value distribution should allow more money to flow to activities in midstream and therefore to mainstream economies and workers. The objective is to ensure every participant of global supply chains are able to earn living wages, and to distribute fair compensation for the value transferred from mainstream to sub-stream. At the same time the social impact of value chain activities should also be reduced to the minimum across all nodes or echelons of the same value chain leading to the eradication of the value unfairness gap discussed earlier.

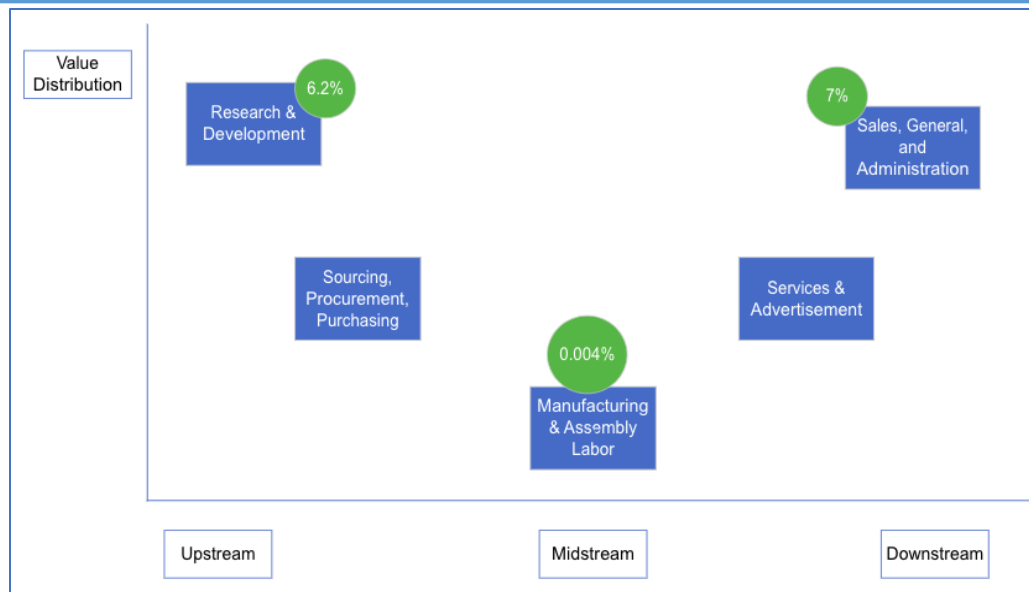


**Figure 4. Ideal flattening of the contemporary value chain**

Again, it is the interaction between SC colonization modes that contributes to the inequitable value capture: (1) unequal exchange in trade/value chains; (2) labor arbitrage and arm's-length contracting that suppress bargaining power; (3) IP-centric control of technology and design rents; (4) compliance cascades (audit/standards) that offload costs upstream; (5) extraction of raw materials under volatile prices. Together, these explain the 'Ugly Smile': high margins at innovation/branding and retail/after-sales (sub-streams), with a trough at production (mainstream)—an institutionally produced, not technologically fixed, distribution

To demonstrate the current value chain with their associated "ugly smile" dynamics, we discuss the case of Apple Inc.'s value chain and profit allocation. In the creation of many Apple products, specifically the iPhone, it follows this "ugly smile" where large allocations focused on far upstream and downstream activities largely centered in the US are made possible by suppressing costs attributed to value in midstream. Areas like research and development, marketing, and services receive a large percentage of funding compared to the extreme cost cutting that occurs for activities centered outside of the US (Kraemer et al., 2011). This is clearly seen in the wage disparity manufacturing and assembly workers earn as compared to Apple employees within sub-stream countries. According to BBC, when compared to their competitor Samsung, Apple can reach higher profits while selling less phones due to the large gap between sales price and production cost (*BBC News*, 2015). While Apple undoubtedly attempts to limit costs all throughout their value chain, the extent that social sustainability is neglected to sustain absolute minimal cost and maximum flexibility in offshoring activities is disproportionate.

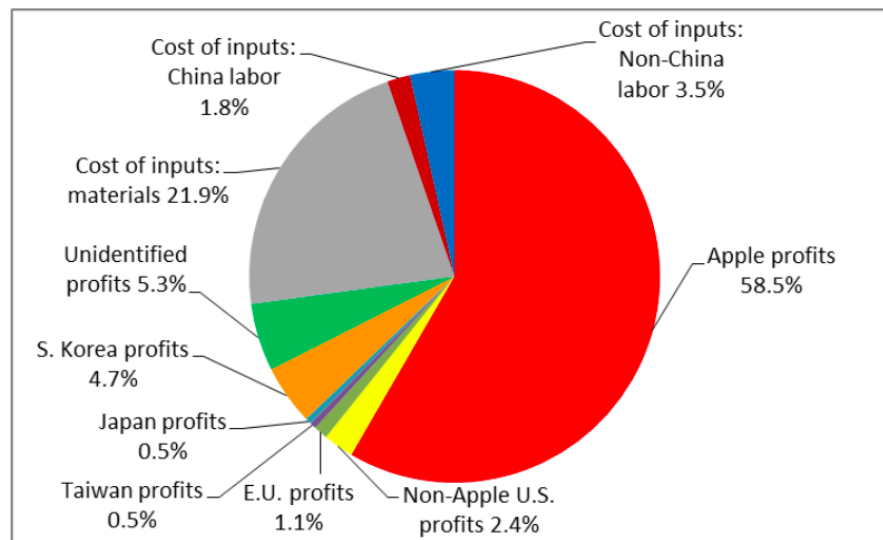
In Apple's upstream value chain, the research and development stage of production is well supported by the corporation. In 2019, 6.2% of 2019 sales revenue was allocated towards the development of new products and features, roughly a \$12 billion increase from 2009 according to CNBC (Laricchia, 2022). Apple's marketing is another node of the value chain receiving funds to support careers well above living wages of midstream echelons. In 2015 (the last year of ad spending made public by the company), advertising costs alone rose 50% to \$1.8 billion (O'Reilly, 2016). Selling, general, and administrative spending made up 7% of net sales totaling \$14.1 billion in 2015 (O'Reilly, 2016).



**Figure 5. Estimate of value distribution as a percentage of initial iPhone 6 sales price**

When it comes to activities occurring in midstream countries, Apple takes a much different approach to cost allocation. Figure 5 displays estimations of gross profit allocation, showing small portions dedicated to mainstream countries. Most of Apple's manufacturing and assembly occurs through offshoring and outsourcing with Chinese suppliers. At these factories, low labor costs and poor social sustainability often lead to manipulation of workers and poor working conditions. According to a 2014 SACOM investigation, Apple supplier factories during peak production workers at Pegatron, one of Apple's top Chinese suppliers, often must work assembling iPhones for long periods (up to 10 weeks) without rest days in addition to working 12-to-18-hour workdays (*Green America*, 2014). The low wages in addition to strict shift schedules, unpaid work, demand for flexibility, and demanding quotas encourages and at times requires workers to remain working far overtime. According to a BBC study, at certain Apple suppliers, overtime work is enforced instead of voluntary, and work-related meetings occurring before and after shifts were often required to attend without payment (Bilton, 2014). Green America estimates labor cost per assembled iPhone to be around \$0.27 (which constitutes 0.004% of the selling price of that model), just \$0.36 under what would allow assembly workers to earn a living wage (*Green America*, 2014). This underpayment of employees adds up to a large sum when considering these final assembly workers alone make up one third of the 1.5 million workers across Apple's supply chains.

A further illustration of the value fairness gap in the case of Apple iPhone is shown in figure 6 through the geographical distribution of profit (monetary value) and how it is concentrated in upstream and downstream which are mainly sub-stream countries.



**Figure 6. Geographical distribution of gross profits received by first-tier suppliers or the value distribution of iPhone, 2010 (Kraemer et al., 2011)**

## 5. DISCUSSION

Addressing decolonization of supply chains is complex, demanding clarity about what historical patterns can truly be changed. Debate persists between those preferring incremental reforms and those advocating for more radical restructure. Any concrete progress also requires an agreed ethical foundation, which still lacks broad consensus in the field. Despite these challenges, it remains urgent to propose a roadmap focused on structural reforms, practical initiatives, and a fresh research agenda.

Structurally, efforts should target a fairer distribution of value across supply chain echelons. This means addressing distortion in current value allocation and determining just ways to value both resources and social costs. Essential steps include new trade models, broader technology transfer, risk-sharing, and linking monetary returns to true value-added activities. Including mainstream voices in global rule-setting bodies—and reforming these institutions—is vital for greater fairness, along with stronger alliances among mainstream countries to promote less extractive, more equitable supply network patterns.

Policy and practice must empower ethical and sustainability-oriented investors, using government incentives and consumer support to encourage responsible models. Governments can promote more internal value retention through support for local clusters, fair credit, and infrastructure. They should also back the development of social and solidarity economy solutions—new paradigms for ethical and inclusive supply chains. Activist and civil efforts should be led by representatives of affected regions, pushing for transparency, real living wages, and more ethical sourcing. Social awareness initiatives to reduce mass consumerism, though challenging, are necessary for lasting change.

On the research front, the supply chain and operations management community should quantify the scale and impact of supply chain colonization and identify effective models for value chain fairness. Future studies need to analyze how new technologies affect supply chain power, and explore ethical frameworks for balancing values and efficiency. This includes drawing on decolonial philosophies like 'Buen Vivir' and 'Ubuntu' in developing alternative, inclusive supply network models.

A forward agenda should focus on changing how value is distributed and governed. This means piloting living wage premiums, adopting worker-led governance over audit-only systems, moving to long-term contracts, enhancing south-south technology sharing, using public procurement for fairness, and embedding metrics for equitable value capture. Supply chain decolonization is not about abandoning operational excellence, but about rebalancing who benefits and whose voice matters. With enforceable due diligence and stronger worker-centered governance, supply chains can move from critique to genuine, inclusive redesign. This paper aims only to start that broader conversation, calling all SCM stakeholders to recognize and address their role in decolonization.

## REFERENCES

- Acosta, A. and Abarca, M. (2019), “Buen Vivir: an alternative perspective from the peoples of the global south to the crisis of capitalist modernity” in *The Climate Crisis* Eds. By: Satgar, V. pp. 132-147. *Wits University Press*.
- Amin, S. (2018), *Modern Imperialism, Monopoly Finance Capital, and Marx’s Law of Value: Monopoly capital and Marx’s law of value*, NYU Press.
- Anisa (2022) “Governments Must Break Big Pharma-WTO Stranglehold on Access to Medicine by Taking Immediate Action to Prioritize Human Lives Over Pharmaceutical Monopolies”, *Focus on the Global South*, 17 June.
- Attinasi, M.-G., Böckelmann, L., & Meunier, B. (2023). “Friend-shoring global value chains: A model-based assessment”. *ECB Economic Bulletin*, Iss 2/2023.  
[https://www.ecb.europa.eu/press/economic\\_bulletin/focus/2023/html/ecb.ebbox202302\\_03~d4063f8791.en.html](https://www.ecb.europa.eu/press/economic_bulletin/focus/2023/html/ecb.ebbox202302_03~d4063f8791.en.html)
- Battle, M. (2009), *Ubuntu, I in you and you in me*, New York: Seabury Books.
- Bannock, I., & Timoshenko, O. (2023). “Corporate social responsibility along the global value chain”. *Journal of International Economics*, 143, 103759.
- BBC News* (2015), “Apple posts the biggest quarterly profit in history”, 28 January.
- Bessa, I. and Tomlinson, J. (2017), “Established, accelerated and emergent themes in flexible work research”, *Journal of Industrial Relation*, Vol. 59 Iss. 2, pp. 153-169.

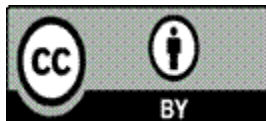


- Besta, S. (2020) "Top Five Diamond Mining Countries in the World", *NS Energy*, 24 March.
- Bhawna, P. S., Kang, S. K., & Sharma, M. (2024). "Bridging the gap: a systematic analysis of circular economy, supply chain management, and digitization for sustainability and resilience". *Operations Management Research*, 17, 1039–1057.
- Bilton, R. (2014) "Apple 'failing to protect Chinese factory workers'", *BBC News*, 18 December
- Busse, C., Meinlschmidt, J. and Foerstl, K. (2016) "Managing Information Processing Needs in Global Supply Chains: A prerequisite to sustainable supply chain management", *Journal of Supply Chain Management*, Vol. 53 Iss. 1, pp. 87-113.
- Butt, N., Lambrick, F., Menton, M. & Renwick, A. (2019). "The supply chain of violence." *Nature Sustainability*, Vol. 2 No. 8, pp.742-747
- Carballa-Smichowski, B., Clement, M., & Rochat, D. (2023). "Ecologically unequal exchange and uneven development patterns along global value chains". *World Development*, 170, 106083. <https://archive-ouverte.unige.ch/unige%3A169878>
- Chamanara, S., Goldstein, B. & Newell, J.P. (2021). "Where's the beef? Costco's meat supply chain and environmental justice in California." *Journal of Cleaner Production*, Vol. 278, pp.12-37.
- DeBerge, N. (2024). "Mandatory due diligence legislation: A paradigm shift for the governance of sustainability in global value chains?" *Journal of Intl. Business Policy*, Vol. 7, pp. 359–373
- Deif, A. and Cochran, L. (2022) "A Values-Based Approach for Development: An Islamic Perspective", *Journal of Islamic Ethics*, Vol. 6, pp. 1-26.
- Dyer, J.H., Cho, D.S. and Cgu, W. (1998) "Strategic Supplier Segmentation: The next "best practice" in supply chain management", *California Management Review*, Vol. 40 Iss. 2, pp. 57-77.
- Engels, F. (1914) *The Principles of Communism*, Eduard Bernstein in the German Social Democratic Party's *Vorwärts!*.
- Farrell, D. (2005) "Offshoring: Value Creation Through Economic Change", *Journal of Management Studies*, Vol. 42 Iss. 3, pp. 675-683.
- Finger, J.M. (2001) "Implementing the Uruguay Round Agreements: Problems for Developing Countries", *The World Economy*, Vol. 24 Iss. 9, pp. 1097-1108.
- Grazzi, M., & Tommaso, S. (2024). "Corporate power and global value chains: Current approaches for understanding power". *Journal of Industrial and Business Economics*, 51, pp. 615–640
- Green America (2014) "Apple Profits Soars, Workers Suffer", *Green American Magazine*.

- Harrison, T.P., Lee, H.L. and Neale J.J. (2005) *The practice of supply chain management: Where theory and application converge*, Springer Science & Business Media.
- Hassan, E., Yaqub, O. and Diepeveen, S. (2010) *Intellectual Property and Developing Countries: A Review of the Literature*, RAND.
- Hausmann, Ricardo (2014) "Why Raw Materials Are a Dangerous Distraction," World Economic Forum: Financial and Monetary Systems.
- Hickel, J., Dorminger, C., Wieland, H. and Suwandi, I. (2022) "Imperialist appropriation in the world economy: Drain from the global South through unequal exchange", 1990–2015, *Global Environmental Change* 73.
- Hussain, Sadat (2006) "A Diamond's Journey: On the cutting edge", *NBC News*.
- Khor, M. (1999) "Why the South is Getting a Raw Deal at the WTO", *Views from the South: The effects of globalization and the WTO on Third World countries* 7, pp. 47.
- Kohn, Margaret, Reddy (2022) "Colonialism", *The Stanford Encyclopedia of Philosophy*.
- Kraemer, K.L., Linden, G. and Dedrick, J. (2011) "Capturing value in global networks: Apple's iPad and iPhone", *Research supported by grants from the Alfred P. Sloan Foundation and the US National Science Foundation (CISE/IIS)*.
- Laricchia, F. (2022) "Apple: Expenditure on research and development 2007-2022", *Statista*, 9 December.
- Lemos, M. H., Barbour, F., & Hickel, J. (2024). "Unequal exchange of labour in the world economy". *Nature Communications*, 15, 6402. <https://www.nature.com/articles/s41467-024-49687-y.pdf>
- Lenin, V.I. (2012) "Imperialism, the Highest Stage of Capitalism", *Conflict After the Cold War*, Routledge.
- Mallampally, P. and Sauvart, K.P. (1999) "Foreign Direct Investment in Developing Countries", *Finance & Development*, Vol. 36, pp. 34-37.
- Marx, K. (1972) "On Colonialism: Articles from the New York Tribune and other writings", *New York: International Publishers*.
- Marx, K., and Engels, F. (2001) "The German Ideology Part One, with Selections from Parts Two and Three, together with Marx's 'Introduction to a Critique of Political Economy'", *New York: International Publishers*.
- McWilliams, A., and Siegel, D. (2001) "Corporate Social Responsibility: A theory of the firm perspective", *Academy of Management Review*, Vol. 26 Iss. 1, pp. 117-127.

- Mintz, S. (2020) "Historical Context: Facts about the Slave Trade and Slavery", *The Gilder Lehrman Institute of American History*.
- Miszczynski, M. (2016) "Labour Arbitrage: The lifecycle of a global production node", *Journal of Organizational Ethnography*, Vol. 5 Iss. 2, pp. 106-122.
- Mosoetsa, S. and Williams, M. (2012) *Labour in the Global South: Challenges and alternatives for workers*, International Union Rights, Vol. 19 Iss. 3.
- Nakamba, C.C., Chan, P.W. and Sharmina, M. (2017) "How does social sustainability feature in studies of supply chain management? A review and research agenda", *Supply Chain Management: An International Journal*, Vol. 22 No. 6, pp. 522-541.
- Narasimhan, R. and Talluri, S. (2009) "Perspectives on risk management in supply chains", *Journal of Operations Management*, Vol. 27 Iss. 2, pp. 114-118.
- Oto-Peralias, D. and Romero-Ávila, D. (2016) "The Economic Consequences of the Spanish Reconquest: The long-term effects of medieval conquest and colonization", *Journal of Economic Growth*, Vol. 21, pp. 409-464.
- O'Reilly, L. (2016) "Apple Mysteriously Stopped Disclosing How Much It Spends on Ads", *Business Insider*, Vol. 24.
- Pinker, E.J. and Larson, R.C. (2003) "Optimizing the use of contingent labor when demand is uncertain", *European Journal of Operational Research*, Vol. 144 Iss. 1, pp. 39-55.
- Rashied, N. and Bhamjee, M., (2020) "Does the Global South Need to Decolonize the Fourth Industrial Revolution?", *The Disruptive Fourth Industrial Revolution: Technology, Society and Beyond*, pp. 95-110.
- Ricci, A. (2021) *Value and Unequal Exchange in International Trade: The geography of global capitalist exploitation*, Routledge, 19 May.
- Roy, N., Komma, V.R. and Kumar, J. (2013) "Mass customization in supply chain management environment: A review", *International Journal of Industrial and Manufacturing Engineering*, Vol. 7 Iss. 2, pp. 249-254.
- Schandl, H., Fischer-Kowalski, M., West, J., Giljum, S., Dittrich, M., Eisenmenger, N., Geschke, A., Lieber, M., Wieland, H., Schaffartzik, A. and Krausmann, F. (2018) "Global Material Flows and Resource Productivity: Forty years of evidence", *Journal of Industrial Ecology*, Vol. 22 Iss. 4, pp. 827-838.
- Schneider, V. (2020) "How the Legacy of Colonialism Built a Palm Oil Empire", *Mongabay Series*.
- Shoemaker, N. (2015) "A Typology of Colonialism", *American Historical Association Perspectives on History*.

- Silver, M. (2015) "If You Shouldn't Call it the Third World, What Should You Call It?", *National Public Radio*.
- Sinnig, J., & Zetzsche, D. A. (2025). "The EU's Corporate Sustainability Due Diligence Directive: From disclosure to mandatory prevention of adverse impacts in supply chains". *European Journal of Risk Regulation*, 16, Iss 2, pp. 628–652..
- Soundararajan, V., Wilhelm, M.M. and Crane, A. (2021) "Humanizing Research on Working Conditions in Supply Chains: Building a path to decent work", *Journal of Supply Chain Management*, Vol. 57 Iss. 2, pp. 3-13.
- Stephens, N., Reinecke, J., & Donaghey, J. (2024). "Theorizing worker voice for supply chain justice: Communication, representation, and recognition". *International Journal of Operations & Production Management*, 45 Iss. 3, pp. 653–678.
- Suwandi, I. (2019) *Value Chains: The new economic imperialism*, Monthly Review Press
- Thornton, L.M., Autry, C.W., Gligor, D.M. and Brik, A.B. (2013) "Does socially responsible supplier selection pay off for customer firms? A cross cultural comparison", *Journal of Supply Chain Management*, Vol. 49 Iss. 3, pp. 66-89.
- Toshkov, D. (2018) "The 'Global South' is a terrible term. Don't use it!", *Re-Design*, 11 November.
- Turker, D. and Altuntas, C. (2014) "Sustainable Supply Chain Management in the Fast Fashion Industry: An analysis of corporate reports", *European Management Journal*, Vol. 32 Iss. 5, pp. 837-849.
- Wallach, L. and Woodall P. (2004) "Whose Trade Organization?: The comprehensive guide to the WTO", *The New Press*, Public Citizen.
- Yawar, S.A. and Seuring, S. (2017) "Management of Social Issues in Supply Chains: A literature review exploring social issues, actions and performance outcomes", *Journal of Business Ethics*, Vol. 141, pp. 621-643.
- Yusuf, Y.Y., and Adeleye, E.O. (2010) "A comparative study of lean and agile manufacturing with a related survey of current practices in the UK", *International Journal of Production Research*, Vol. 20 Iss. 17, pp. 4545-4562.



©2025 by the Authors. This Article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>)