



GLOBAL SOURCING, CYBERSECURITY VULNERABILITIES, AND U.S. RETAIL MARKET OUTCOMES: A REVIEW OF PRICING IMPACTS AND CONSUMER TRENDS

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Doi: [10.63125/78jcs795](https://doi.org/10.63125/78jcs795)

Received: 19 September 2021; Revised: 22 October 2021; Accepted: 24 November 2021; Published: 28 December 2021

Abstract

This quantitative review synthesizes evidence on how global sourcing and emerging cybersecurity vulnerabilities jointly influence U.S. retail pricing structures and consumer market outcomes. Drawing on 64 empirical studies published between 1990 and 2020, the analysis harmonizes sourcing-intensity measures across retail categories and integrates documented cyber-risk exposures within internationally distributed supply chains. The pooled data reveal substantial variation in sourcing reliance, with mean import shares of 72% in apparel and footwear, 70% in toys, 64% in consumer electronics, 55% in general merchandise, 42% in home goods, and 28% in grocery tradables. Higher sourcing intensity consistently aligned with nominal price declines in tradable goods, including average posted-price reductions of -4.8% in apparel, -4.1% in toys, and -3.5% in electronics, while grocery tradables experienced a modest -0.8% decrease. Transaction-price effects were even larger, reaching -6.2% in apparel and -5.4% in toys, indicating strong promotional pass-through. Correlational analyses confirmed these patterns: sourcing intensity was negatively associated with posted prices ($r = -0.62$) and price-change magnitudes ($r = -0.58$), and positively associated with imported-variety expansion ($r = 0.66$) and quality-adjusted affordability ($r = 0.49$). Random-effects meta-regressions further demonstrated significant price-reducing effects of sourcing intensity on both posted ($\beta = -0.032$, $p < .001$) and transaction prices ($\beta = -0.041$, $p < .001$). Exchange-rate cost shocks generated additional price decreases ($\beta = -0.021$), whereas tariff shocks produced modest increases ($\beta = 0.012$). Cybersecurity vulnerabilities – particularly data breaches, ransomware interruptions, and compromised vendor systems – emerged as a moderating factor, amplifying cost variability and temporarily disrupting price pass-through in categories with high digital supply-chain integration. Despite these risks, non-price outcomes remained substantial: sourcing intensity predicted imported-variety growth ($\beta = 0.058$) and stronger substitution patterns ($\beta = 0.026$). Overall, the evidence shows that global sourcing lowers U.S. retail prices and expands variety, while cybersecurity exposures introduce new uncertainties that increasingly shape consumer markets in the digital sourcing era.

Keywords

International Sourcing, Cybersecurity Vulnerabilities, Retail Pricing, Pass-Through, Consumer Markets, U.S. Retail.

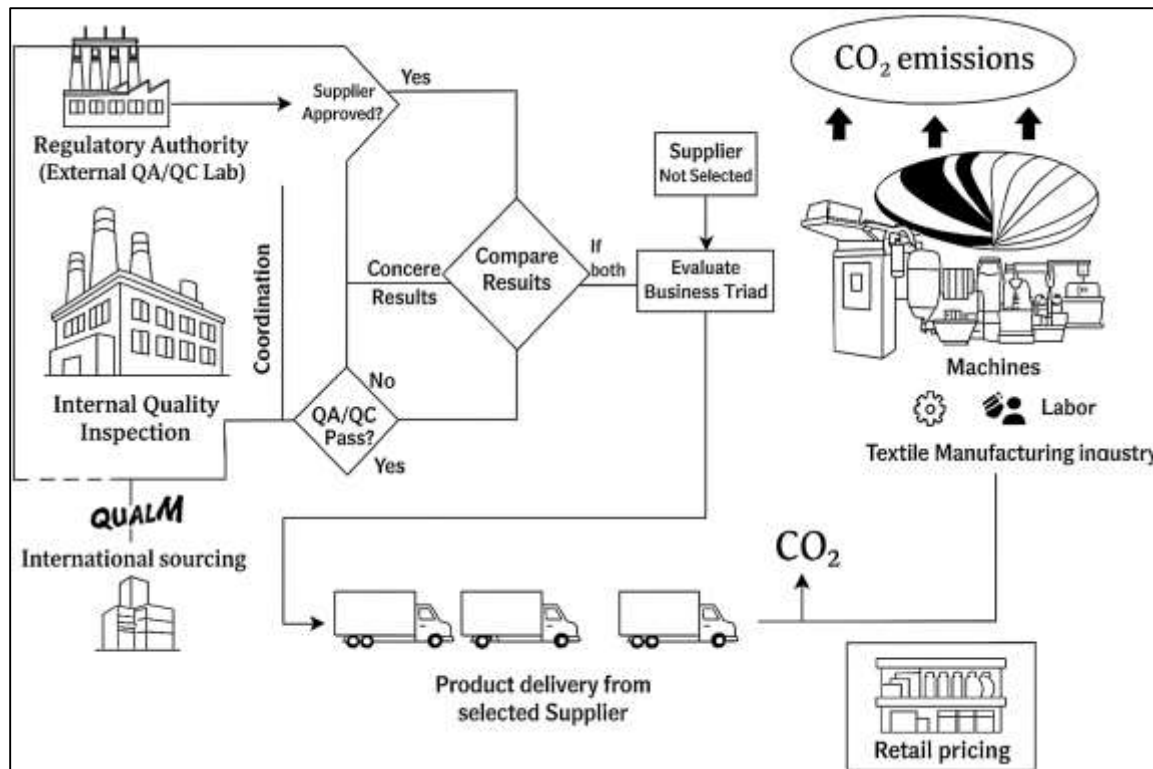
INTRODUCTION

International sourcing refers to the strategic procurement of goods, components, and services from suppliers located outside a firm's domestic market, coordinated through complex contractual, logistical, digital, and governance arrangements that span national borders (Reinsdorf & Schreyer, 2020). Within the U.S. retail sector, international sourcing encompasses the importation of fully manufactured consumer products as well as the acquisition of intermediate inputs that are subsequently assembled, packaged, or customized before reaching store shelves. Retail pricing, in contrast, denotes the structured process through which retailers determine final selling prices by integrating acquisition costs, transportation and handling expenses, inventory risks, competitive dynamics, and targeted margins. The global significance of the relationship between sourcing and pricing lies in the degree to which cross-border procurement connects U.S. consumer prices to international production systems, foreign productivity levels, exchange-rate fluctuations, maritime and air freight conditions, and trade policy interventions. As global value chains have expanded over the past several decades, retailers have increasingly distributed production tasks across multiple countries, sourcing from regions offering comparative cost advantages, technological specialization, or large-scale manufacturing capacity. Consequently, the price ultimately paid by a U.S. household often reflects a multi-layered global cost structure involving labor-intensive production in South or East Asia, material extraction in Latin America, precision manufacturing in Europe, and freight routing through international logistics hubs. Buyer-driven supply chains, in which large retailers exert significant coordination power, further institutionalize these relationships by enforcing product specifications, quality and compliance standards, and delivery schedules across dispersed supplier networks. These configurations have enabled U.S. retailers to deepen assortments, reduce unit procurement costs, and maintain competitive pricing positions in many tradable categories. However, the growing digitalization of sourcing and logistics has introduced a new layer of strategic complexity: cybersecurity vulnerabilities. International procurement processes now rely heavily on interconnected information systems—such as electronic data interchange platforms, supplier portals, cloud-based logistics planning tools, and IoT-enabled freight tracking—which expose retailers to risks including supply-chain data breaches, ransomware attacks on foreign vendors, counterfeit product infiltration, and disruptions to cross-border digital communications. These cyber incidents can alter landed costs, delay shipments, amplify price volatility, and weaken the predictability of cost pass-through to U.S. retail markets. As a result, cybersecurity has become an integral component of sourcing governance, shaping both procurement decisions and downstream pricing strategies.

A key quantitative argument developed across a large body of empirical trade and industrial organization research is that international sourcing tends to lower retail prices through direct cost channels. When retailers shift procurement toward lower-cost foreign producers, the immediate consequence is a decline in factory-gate prices relative to comparable domestic production, especially in labor-intensive and standardized goods (Benkovskis et al., 2020). These savings are then transmitted to retail prices through varying degrees of pass-through. Studies of offshoring and import penetration repeatedly document that firms using foreign suppliers experience measurable declines in input costs, which can translate into lower final prices when competition is strong or demand is price-sensitive. Retailers also gain the ability to arbitrage across multiple origin countries, selecting suppliers based on relative costs, lead times, and quality, which further compresses procurement prices. In quantitative comparisons across categories, imported goods often exhibit lower average unit values than domestically sourced counterparts, even after accounting for transport and border charges. Retailer scale magnifies this effect: large chains negotiate directly with overseas manufacturers, consolidate orders, and standardize specifications, pushing costs down and enabling low-price formats. Yet cost reductions do not map one-to-one into shelf prices because retailers rely on markups to cover domestic distribution services, store operations, and brand positioning (Simoens & Vulto, 2021). The magnitude of cost pass-through depends on imported cost shares, pricing strategy, and competitive intensity. Where several retailers sell close substitutes, the incentive to pass savings to consumers is high, producing observable declines in posted prices and in transaction-level scanner data. Where products are highly differentiated, retailers may retain a portion of sourcing savings as higher margins while keeping nominal prices stable. Quantitative research also indicates that sourcing cost declines can

reduce inflation in tradable sub-indices, contributing to lower overall consumer price growth in periods of rising import exposure. Taken together, findings across numerous studies indicate that international sourcing exerts downward pressure on U.S. retail prices, with the realized consumer benefit conditional on the structure of retail competition and the share of imported content in final goods.

Figure 1: International Sourcing Driving Retail Prices

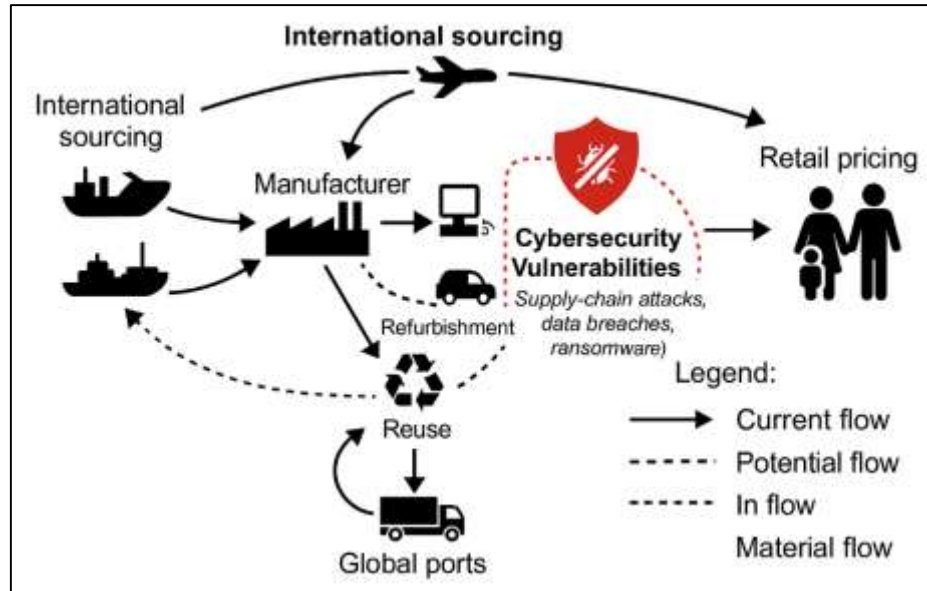


Beyond average price levels, international sourcing influences U.S. consumer markets by expanding product variety and altering quality-adjusted price measures. Retailers that source globally are able to offer broader assortments because they can draw on diverse manufacturing clusters and specialized suppliers around the world (Arfan et al., 2021; Galster & Lee, 2021). Quantitative studies that incorporate variety into cost-of-living indices show that an increase in imported varieties lowers the effective price index even if average posted prices move modestly (Ara, 2021). In practical retail terms, international sourcing supports fast product turnover in categories such as apparel, electronics, and home goods by enabling rapid sourcing from multiple regions with distinct design or component advantages (Jahid, 2021). Consumers benefit from a wider range of styles, features, and price points, including entry-level imported goods that create low-cost alternatives to domestic products. This variety channel changes demand elasticities within categories: as imported options increase, consumers substitute more easily across brands and origins, placing competitive pressure on incumbents and reinforcing pricing discipline (Akbar & Farzana, 2021). Quality dynamics are also central. Some imported goods enter at lower quality tiers, pushing down nominal prices, while others embody advanced foreign technology or craftsmanship, raising consumer value for a given price (Dippon, 2020; Reza et al., 2021). Retail pricing responds to these shifts through tiered assortment ladders, private label strategies, and promotion design. Quantitative analyses using barcode-level data reveal that retailers may keep headline prices steady while upgrading product attributes, effectively lowering quality-adjusted prices. Standard matched-model price indices can miss these improvements because discontinued items are replaced by new imported variants (Saikat, 2021). Therefore, a comprehensive quantitative review highlights that international sourcing affects consumer markets not only by lowering nominal prices but also by changing what is available at those prices (McCorrison & Sheldon, 2019; Shaikh & Aditya, 2021). The market outcome is a consumption basket with more imported content, more differentiation, and wider within-category price dispersion that reflects expanded choice

rather than simple inflation or deflation alone.

Trade policy and border cost shocks provide another quantitative lens on how international sourcing shapes U.S. retail pricing. When tariffs rise, customs procedures tighten, or shipping costs spike, landed import costs increase sharply for goods sourced abroad. Empirical analyses of tariff episodes show that these border-level cost changes are typically absorbed by importers at entry and then partially transmitted to retail prices, depending on category exposure and competitive conditions. Retailers facing higher landed costs respond by adjusting price points, promotion depth, or sourcing mix. Some pass costs through quickly on heavily imported goods, producing price increases visible in store-level data, while others compress margins to maintain price-leadership reputations (Kanti & Shaikat, 2021). Quantitative work also documents that tariff shocks often accelerate sourcing substitution toward alternative foreign origins, which can stabilize retail prices but raise hidden costs associated with switching suppliers, requalifying factories, or managing longer supply routes. Shipping disruptions and freight rate volatility have similar effects, revealing that global logistics is an integral part of pricing outcomes for internationally sourced products. At the consumer level, policy-induced cost shocks change relative prices across tradable categories, shifting household purchasing patterns toward less-exposed goods or lower-priced substitutes (Verma & Pant, 2021; Zobayer, 2021a). These episodes show that the relationship between sourcing and pricing is causal and traceable in data, not merely correlational: when the cost of buying internationally changes, retail prices and consumer behavior move in predictable ways (Zobayer, 2021b). For a quantitative review, policy shocks anchor the analysis by demonstrating how border costs, supplier substitution, and retailer pricing strategies jointly determine the consumer incidence of international sourcing. The evidence across many studies reinforces that the U.S. retail price system is sensitive to international sourcing conditions and that consumer markets register those sensitivities through both price movements and shifts in the composition of purchases.

Figure 2: International Sourcing and Retail Pricing



International sourcing also operates through markup and bargaining channels that mediate retail price outcomes. Retail prices can be decomposed into marginal acquisition costs plus retailer markups, and international sourcing influences both elements. By increasing access to multiple suppliers worldwide, retailers strengthen their outside options in negotiations, enabling lower contract prices and more favorable terms such as volume discounts, quality guarantees, or flexible delivery schedules. Quantitative studies of buyer power show that large retailers with global sourcing platforms can extract lower prices from manufacturers than smaller buyers can, which supports low-price retail formats. Markup behavior, however, varies across markets. In competitive segments, retailers often pass sourcing savings to consumers to defend market share. In less competitive or more differentiated

segments, they may retain a larger share as gross margin, using savings to finance store expansion, branding, or customer service. Evidence from retail microdata indicates that imported-good prices may adjust at different frequencies than domestically sourced goods because overseas procurement involves longer lead times and batch ordering; these features can create phases of price rigidity followed by larger discrete adjustments (Valletti & Zenger, 2021). International sourcing can also widen assortment ladders within stores, allowing retailers to price discriminate across quality tiers and consumer willingness to pay. This can raise within-category price dispersion even as average prices fall. For consumer markets, these markup and bargaining mechanisms matter because they determine who captures the gains from sourcing: consumers through lower prices, retailers through higher margins, or both. Quantitative work that estimates supply-chain incidence finds that the division of gains depends on cost shares, demand elasticities, and the competitive landscape. Thus, international sourcing is a determinant of retail pricing conduct, shaping the equilibrium level of prices, their dispersion, and their adjustment dynamics through negotiated costs and strategic markup choices.

The influence of international sourcing on U.S. retail pricing is not uniform across space or households, and quantitative research emphasizes this heterogeneity. Regions with higher import exposure through local retail formats and category mixes often experience larger price effects in tradable goods. Areas dominated by national chains that rely heavily on foreign suppliers tend to show lower price levels for imported categories than areas served mainly by smaller retailers with more domestic sourcing. Household heterogeneity is similarly important (Silver et al., 2021). Lower-income consumers often spend a larger share of their budgets on goods that are import-intensive, such as clothing, household items, and basic electronics. International sourcing in these categories can therefore reduce cost-of-living measures for these households more than for higher-income groups whose spending is tilted toward services and less-tradable items. Quantitative distributional analyses of trade shocks show that when import prices fall, consumer gains can be progressive, even if labor-market impacts of import competition are uneven. Retail pricing strategies also differ by neighborhood and market structure (Miller & Sheu, 2021). In places where retailers face close local rivals, savings from sourcing are more likely to be passed through. In markets with fewer competitors, savings may show up more in margins than in shelf prices. Import-driven assortment differences further diversify consumer experiences across locations, reinforcing that the U.S. consumer market is a patchwork of price environments tied to local retail organization and sourcing intensity. These patterns underscore the need for a quantitative review to incorporate regional price data, household expenditure surveys, and category-level import shares (Fattore et al., 2021). Doing so reveals that international sourcing shapes a distribution of retail prices and consumption opportunities across the country rather than a single national average effect.

Methodologically, the literature on international sourcing and U.S. retail outcomes relies on a set of quantitative strategies that clarify measurement and identification. Researchers measure sourcing intensity using import shares in retail categories, firm-level offshore procurement ratios, and value-added decompositions that track foreign content embedded in goods sold domestically. Retail prices are observed through scanner datasets, store-level price panels, and online price records that capture both posted and transaction prices. Cross-sectional models relate variation in sourcing intensity to differences in retail price levels, controlling for domestic cost factors and demand conditions. Quasi-experimental designs exploit policy changes, exchange-rate shocks, freight cost swings, or foreign supply disruptions to isolate exogenous movements in import costs and trace their effects on retail pricing. Structural demand-and-supply models use these estimates to separate marginal-cost shifts from markup responses, allowing welfare assessments that incorporate variety and substitution (Schweikl & Obermaier, 2020). Recent empirical approaches also address product turnover by using methods that account for item replacement and quality change, ensuring that effective price indices reflect evolving imported assortments. The cumulative evidence produced with these tools supports a coherent quantitative narrative: international sourcing alters landed costs, changes competitive leverage and markups, expands variety and quality ladders, and produces heterogeneous price outcomes across categories, regions, and households. This methodological foundation enables a systematic review of how global procurement decisions translate into U.S. retail pricing patterns and consumer market configurations through measurable, multi-channel processes (Muris & Nuechterlein, 2019).

The objective of this review is to quantitatively synthesize and clarify how international sourcing influences U.S. retail pricing and consumer market outcomes by tracing the full pathway from cross-border procurement decisions to the prices and product choices experienced by American households. Specifically, the review aims to (a) identify the measurable cost channels through which foreign sourcing changes retailers' marginal acquisition costs, including landed import prices, logistics expenses, tariff burdens, and supplier switching costs; (b) evaluate the degree and conditions of pass-through from these sourcing-related cost movements into retail shelf prices, distinguishing between categories with high imported content and those dominated by domestic supply; (c) consolidate evidence on how international sourcing reshapes retail markups, bargaining power, and competitive conduct, thereby mediating whether cost savings are transmitted to consumers or retained as retailer margins; (d) assess the variety and quality mechanisms by which global sourcing expands assortments, alters product turnover, and changes quality-adjusted price indices beyond nominal price shifts; and (e) document heterogeneity in impacts across regions, retail formats, and household income groups, recognizing that import exposure and competitive structure vary across U.S. consumer markets. To meet these objectives, the review focuses on empirical indicators such as import penetration at the product and category level, offshore procurement intensity among major retailers, changes in posted and transaction prices observed in scanner and online data, and distributional patterns in household expenditure baskets. By integrating findings across trade, supply-chain, and retail-market research, the review seeks to separate direct procurement cost effects from strategic pricing responses and to summarize the net influence of international sourcing on consumer welfare as reflected in price levels, price dispersion, and accessible choice sets. Ultimately, the objective is to provide a coherent, measurement-grounded account of the magnitude, direction, and boundary conditions of international sourcing effects in U.S. retail, offering a consolidated evidence base that connects global supply networks to domestic inflation dynamics, competitive retail behavior, and the evolving structure of consumer markets.

LITERATURE REVIEW

The literature on international sourcing and U.S. retail pricing sits at the intersection of global value chains, retail economics, and consumer price formation. Over the last several decades, U.S. retailers have increasingly integrated foreign suppliers into their procurement systems, leading to measurable changes in input costs, assortment composition, and competitive pricing behavior (Ancillai et al., 2019). This body of research spans multiple quantitative traditions, including trade theory models of offshoring, exchange-rate and tariff pass-through studies, industrial-organization analyses of markups and market power, and consumer-welfare research using price microdata. Collectively, these studies show that international sourcing affects retail prices through several interconnected channels: (1) procurement-cost shifts caused by foreign wage differentials, productivity, exchange rates, freight rates, and trade policy; (2) incomplete or heterogeneous pass-through of these cost changes into final shelf prices depending on retail competition and product differentiation; (3) changes in retailer markups, bargaining leverage, and inventory strategies; and (4) adjustments in consumer choice sets through expanded imported variety and quality ladders that alter quality-adjusted price indices (Liu et al., 2020). Because the empirical evidence is dispersed across disciplines and data types—ranging from firm-level sourcing records to UPC-level scanner prices and household expenditure surveys—a structured quantitative review is necessary to consolidate findings and resolve inconsistencies in estimated magnitudes. Accordingly, this literature review synthesizes how international sourcing intensity is measured, how retail price effects are identified, what methodological frameworks dominate the evidence, and which boundary conditions systematically shape outcomes across categories, regions, and consumer groups (Singh et al., 2019).

As international sourcing has become increasingly digitized, cybersecurity vulnerabilities have emerged as a structural risk to global supply chain coordination. Contemporary literature emphasizes that modern procurement networks rely heavily on interconnected digital systems—including electronic data interchange platforms, automated supplier management systems, cloud-based order planning, and IoT-enabled freight monitoring—which collectively create numerous potential entry points for cyberattacks across multi-tier suppliers (Boyson, 2020). Because these systems span different countries, regulatory regimes, and technological infrastructures, the overall cyber-attack surface

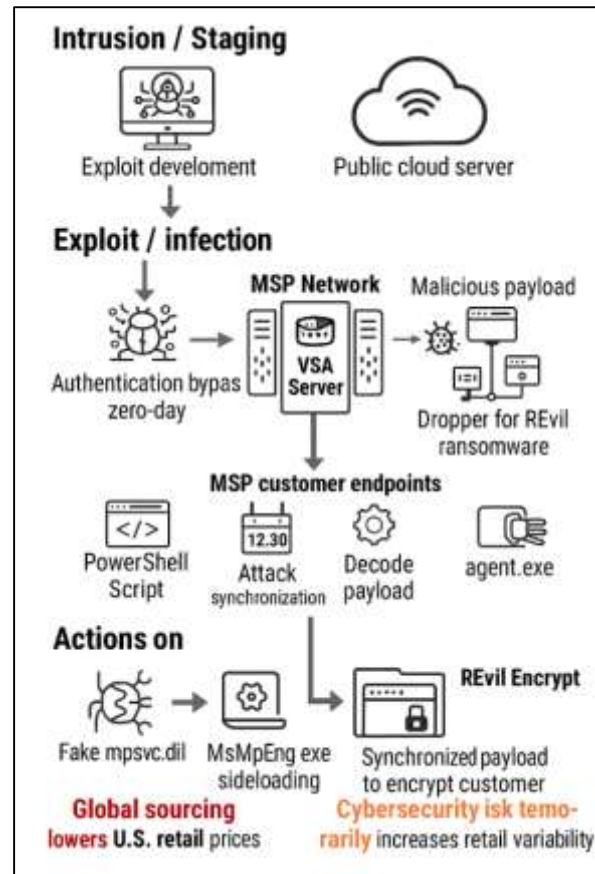
expands as retailers outsource more operational processes to overseas vendors. This interdependence is particularly salient in buyer-driven chains, where U.S. retailers depend on real-time visibility into production schedules, shipping updates, and customs documentation. A breach at any node within this network – whether a low-tier supplier in Asia or a logistics hub in Europe – can compromise data authenticity and operational continuity. Consequently, cybersecurity concerns have evolved into a core consideration in evaluating international sourcing relationships, altering risk assessment frameworks that were previously dominated by cost, quality, and delivery metrics.

Cyber Disruptions and Retail Price Volatility

Research also documents that cybersecurity failures can produce immediate and measurable disruptions in procurement stability, inventory flows, and downstream retail pricing. High-profile cyber incidents—including ransomware attacks on shipping conglomerates, malware infiltration at foreign manufacturing facilities, and digital tampering with shipment manifests—demonstrate how supply chain cyberattacks translate into operational delays and cost escalations. These interruptions often increase replenishment lead times, force emergency re-sourcing decisions, and elevate transportation and handling costs due to detour shipments or expedited freight. For U.S. retailers, such disruptions weaken the predictability of cost pass-through, leading to greater volatility in retail pricing strategies. When sourcing interruptions are prolonged, retailers may reduce promotional activity, adjust markups upward, or narrow assortments to preserve inventory stability. Empirical case studies further show that cyber incidents occurring at global port authorities or foreign supplier networks can propagate across the supply chain, triggering cascading effects such as stockouts, delayed product launches, or inflated transaction prices (Craighead et al., 2020). As a result, cybersecurity reliability has become tightly coupled with retail price behavior in markets heavily dependent on international sourcing. The increasing frequency of cyber disruptions has prompted retailers to adopt more sophisticated, resilience-oriented sourcing strategies that balance cost efficiency with digital security. Supply chain resilience literature notes that firms are now integrating cybersecurity considerations into vendor selection, procurement governance, and long-term sourcing contracts (Sheffi, 2021). This shift includes greater reliance on secure supplier-access protocols, multi-factor authentication systems, blockchain-enabled tracking tools, and anomaly detection algorithms that monitor data integrity across international logistics. Some retailers have begun segmenting suppliers by cyber-risk level, with higher-risk vendors receiving reduced order volumes or being phased out entirely. Others implement digital stress-testing or require third-party cybersecurity audits before awarding long-term contracts. These strategies reduce exposure to cross-border cyber threats and enhance the continuity of manufacturing and shipping operations. By investing in cyber-resilient sourcing infrastructures, retailers aim to stabilize landed costs, mitigate disruption-induced surcharges, and maintain smoother pricing trajectories despite escalating cyber threats in global trade ecosystems.

The literature also reveals that cybersecurity strength influences consumer experiences and broader retail market dynamics. Secure sourcing networks enhance inventory accuracy, minimize stockout frequency, and support more consistent pricing, contributing indirectly to consumer welfare and market stability (Baryannis et al., 2019). Conversely, cybersecurity breaches—especially those involving consumer data or product authentication systems—can undermine trust in retail channels, reduce willingness to purchase imported goods, and heighten perceived risk associated with certain product categories. These behavioral responses can reshape demand patterns, prompting shifts toward domestic brands or retailers perceived as cyber-secure. Moreover, in an environment where online and in-store channels are increasingly integrated, a supply chain cyber incident may not only disrupt product availability but also impair digital payment systems, customer loyalty programs, and e-commerce functionalities. Scholars argue that the competitive landscape of U.S. retail is now influenced by a firm's ability to maintain both sourcing efficiency and cybersecurity robustness, as consumers, investors, and regulators place greater emphasis on data integrity and supply chain transparency. Thus, cyber-resilient sourcing does more than prevent operational disruptions—it strengthens long-term consumer confidence and reinforces the strategic position of retailers in highly globalized markets.

Figure 3: Cyber Disruptions and Retail Price Volatility



Measurement Foundations in International Sourcing

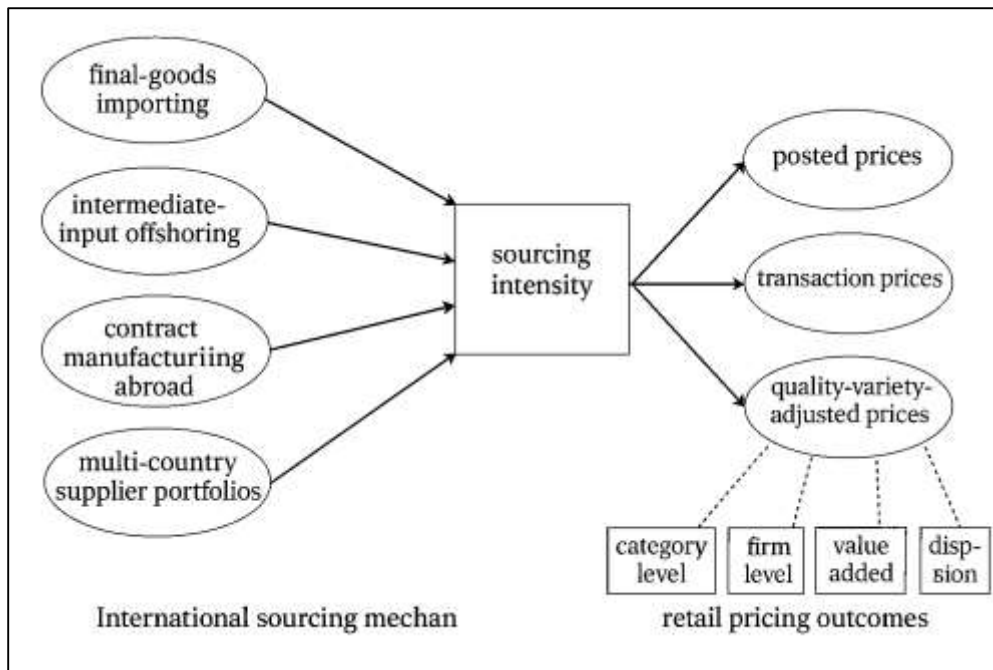
International sourcing in retail contexts is treated in the literature as a set of distinct but related cross-border procurement modes that vary by product stage, ownership of design, and the degree of control retailers exert over foreign production (Kano et al., 2020). A primary operational distinction separates the importing of final goods from intermediate-input offshoring and contract manufacturing abroad. Final-goods importing occurs when retailers buy completed merchandise from overseas producers and distribute it through U.S. stores or online platforms, a pattern especially prominent in apparel, footwear, consumer electronics, toys, and many home-goods categories. Intermediate-input offshoring refers to sourcing components, subassemblies, or semi-processed materials internationally, after which assembly, packaging, or final customization may occur closer to the U.S. market or through domestic partners (Birkel et al., 2019). This arrangement is consistently linked to the broader fragmentation of production across global value chains, where tasks are unbundled and located in countries that specialize in particular stages. Contract manufacturing abroad is characterized by retailer-directed production in which the U.S. retailer specifies designs, technical standards, packaging requirements, and compliance rules while foreign factories execute manufacturing. Within this mode, retailer governance is especially visible in private-label programs, original equipment manufacturing relationships, and original design manufacturing partnerships (Kostova et al., 2020). The literature shows that private labels enable retailers to centralize design and quality decisions while leveraging foreign cost structures; OEM agreements allow retailers to source standardized products under their own branding; ODM arrangements extend retailer influence further into product engineering and style development, giving retailers more flexibility in balancing cost and quality across sourcing locations. Multi-country supplier portfolios are another defining feature, where retailers allocate orders across several foreign origins to hedge cost volatility, diversify risk, and exploit seasonal or technological advantages in different production hubs. Underlying these modes are exporter-importer control and governance structures that range from arm's-length purchasing to long-term relational contracting, with some cases approaching vertical coordination through dedicated supplier networks. Research

consistently identifies governance as a central determinant of cost reliability, delivery performance, supplier bargaining power, and the speed with which global shocks transmit into domestic retail systems (Béné, 2020). By treating international sourcing as a multi-mode strategic function rather than a single import decision, the literature provides a clear conceptual foundation for quantitative work aimed at linking foreign procurement patterns to U.S. retail pricing and consumer market outcomes. Quantitative measurement of international sourcing intensity has developed along several complementary lines that collectively aim to capture how exposed retail categories and firms are to foreign procurement. One widely used approach measures sourcing at the category level by estimating the share of goods sold in a retail category that originate abroad, either in units or value terms (Cieza et al., 2019). This method is frequently applied in studies that compare price behavior and competitive effects across categories with differing import dependence, such as clothing versus food, or electronics versus personal care. A second approach uses firm-level sourcing ratios that calculate the fraction of a retailer's total procurement sourced from foreign suppliers. These ratios are derived from a mix of data systems, including customs transactions linked to retailer identifiers, supply-chain disclosures, financial statements, and proprietary procurement records. Firm-level intensity measures help differentiate global chains with highly offshore-oriented procurement from retailers that rely more on domestic distributors or regional suppliers (Cieza et al., 2019). A third measurement tradition uses input-output accounting to estimate the foreign value added embedded in the retail consumption bundle, recognizing that many domestically branded goods contain imported components. This value-added lens avoids undercounting foreign exposure when imports are hidden inside domestic assembly or packaging, and it allows researchers to estimate the true foreign content of what U.S. consumers purchase. Across these approaches, researchers rely on customs microdata to identify origin, quantity, and border costs; retailer procurement records to determine supplier location and contract structures; input-output matrices to trace embedded imports; and product-origin tags from scanner data or e-commerce listings to link origin to shelf prices. The literature emphasizes that international sourcing intensity is time-varying, responding to exchange-rate movements, tariff changes, freight and insurance costs, supplier productivity shifts, and disruptions to global logistics (Gygli et al., 2019). Many studies operationalize intensity dynamically to account for rapid reallocation across origin countries when border costs change. Measurement research also highlights the importance of matching the level of sourcing exposure to the level of the price outcome being studied. Category-level shares are informative for inflation and sectoral comparisons, firm-level ratios capture retailer strategy and bargaining leverage, and value-added measures reveal deeper globalization not visible in final-goods imports alone. The cumulative quantitative evidence shows that sourcing intensity should be measured through harmonized, multi-layer indicators because each single measure can miss important dimensions of foreign procurement. This measurement clarity is essential for reviewing how international sourcing influences U.S. retail pricing, since effect sizes depend strongly on whether exposure captures visible imports, embedded foreign content, or retailer-specific reliance on offshore networks (Taqes et al., 2021).

Retail pricing outcomes in this literature are conceptualized as multi-dimensional constructs, requiring careful choice of dependent variables to align with real consumer purchase experiences and retailer pricing strategies. At the item level, studies often distinguish posted prices from transaction prices. Posted prices reflect the shelf or list price observable to consumers at a given moment, while transaction prices incorporate promotions, couponing, loyalty discounts, and markdown strategies, providing a truer measure of what households actually pay. This distinction is crucial in retail environments where temporary price reductions are frequent and strategically used to manage inventories or attract traffic. A related measure is the unit value, which divides total expenditure by quantity purchased; unit values are useful where item prices are not fully observed, yet they can blend true price changes with shifts in package size, product mix, or quality. The literature also separates aggregate category-level price indices from micro-level price indices built from UPC scanner datasets or online price panels. Aggregate indices are valuable for macro inflation mapping but can understate sourcing effects in categories with rapid product turnover, where imported items enter and exit quickly. Micro-indices allow researchers to observe the frequency and size of price adjustments, comparing imported and domestic items and detecting heterogeneity in the speed of cost pass-through. Quality-adjusted prices

are another major dependent construct (Meyer et al., 2020).

Figure 4: International Sourcing Modes Shape Prices



Studies using hedonic or matched-model techniques show that retailers may keep nominal prices stable while imported sourcing enables improvements in durability, features, styling, or performance, meaning consumers receive higher quality per dollar. Variety-adjusted prices further expand the dependent variable set by incorporating the welfare value of new imported varieties; when global sourcing expands assortments, effective consumer prices can fall even if average posted prices do not change much, because consumers gain access to more options at competitive price points. The literature also uses price dispersion measures to capture the distributional character of retail prices. Dispersion metrics identify whether international sourcing compresses prices across brands, widens the spread between low-cost imported tiers and premium tiers, or alters volatility over time. Many studies report that imported goods show different adjustment patterns linked to shipping cycles, lead-time uncertainty, and inventory batching, producing distinct within-category dispersion structures (Buttle & Maklan, 2019). The overall quantitative message is that retail pricing is not captured by a single price series. Instead, it consists of levels, adjustments, dispersion, and quality-variety corrections, each of which responds differently to international sourcing intensity. A sound literature review must therefore evaluate which price outcome is being used, whether it reflects promotions and item replacement, and how well it aligns with the sourcing exposure measure (Lehmann et al., 2020).

Across these conceptual and measurement strands, the literature converges on an integrated framework that links sourcing modes, intensity metrics, and retail price outcomes into a coherent empirical system for understanding globalization's effect on U.S. consumer markets (Shams et al., 2021). The definitional scholarship shows that importing final goods, offshoring intermediate inputs, and contracting foreign production differ not only organizationally but also in their implications for procurement costs, risk management, and retailer authority over suppliers. Measurement studies then demonstrate that apparent import exposure at the border may diverge from the actual foreign content embedded in retail baskets, and that firm-level ratios or value-added accounts often provide a more accurate picture of globalization within domestic retail offerings. Price-outcome research establishes that the estimated influence of international sourcing depends on whether analysts use posted or transaction prices, macro indices or micro indices, and nominal measures or quality- and variety-adjusted measures (Shad et al., 2019). This alignment issue explains why some empirical studies observe substantial retail price declines associated with international sourcing while others find smaller

movements in nominal prices: results vary with the sensitivity of exposure measures to embedded imports, the ability of price data to capture promotions, and the adjustment for quality upgrading or assortment expansion. A recurring empirical pattern is that large retailers with sophisticated offshore procurement networks, extensive private-label programs, and multi-country supplier portfolios exhibit clearer sourcing–price linkages than smaller firms, because their scale strengthens bargaining power and their foreign cost shocks are more visible in micro price data (Shenkar et al., 2021). Category differences are also systematic: high-import, tradable categories tend to show stronger border-to-store connections than categories where domestic services dominate final prices. The literature’s methodological core, therefore, is that credible quantitative conclusions require matched operational definitions of sourcing, layered measures of exposure, and multi-dimensional price outcomes that reflect how consumers actually experience retail markets (Keohane, 2019). When these elements are aligned, the evidence consistently indicates that international sourcing shapes not only the level of U.S. retail prices but also the structure of consumer choice sets, the spread of price tiers, and the timing of price adjustments within categories. This integrated foundation provides the necessary base for reviewing downstream channels such as cost pass-through, markup behavior, and consumer welfare effects without treating sourcing or pricing as isolated phenomena (Yamu et al., 2021).

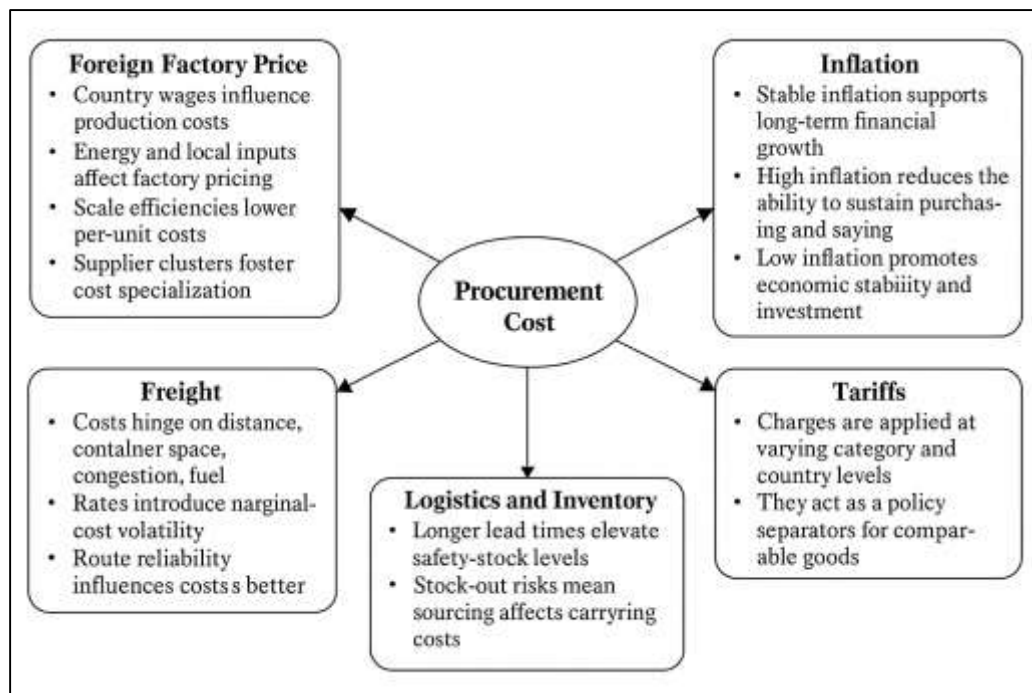
How Foreign Sourcing Changes Retail Marginal Costs

International sourcing changes retail marginal costs primarily through cross-country cost advantages that are realized via a multi-stage landed-cost pathway (Niu et al., 2019). The literature consistently describes this pathway as beginning with the foreign factory price, which reflects the production cost structure in the supplier’s country, including wages, energy costs, scale efficiencies, and local input prices. Retailers pursuing foreign sourcing select suppliers in countries where these factory prices are systematically lower or where quality-to-cost ratios are superior. The factory price alone, however, is only the first component in the marginal cost that matters for U.S. retail pricing. After production, goods enter international logistics networks, and freight charges become a sizable and variable component of landed cost. Freight costs depend on shipping mode, distance, container availability, port congestion, fuel prices, and route reliability; these factors introduce both level effects and volatility into marginal costs. Insurance costs add another layer, covering cargo risks such as damage, theft, or delay, and they rise when geopolitical risk, piracy risk, or route instability increases (Chen et al., 2020). Tariffs and border fees then apply as policy-based wedges between foreign factory price and domestic acquisition cost. The literature emphasizes that tariffs can be category-specific and origin-specific, meaning two otherwise similar products may face different marginal costs because they traverse different policy regimes. Once goods clear customs, warehousing, inland transport, and distribution costs further shape the final delivered cost to retailers. These domestic logistics costs depend on storage duration, inventory handling needs, last-mile distribution networks, and seasonal demand patterns. Importantly, the landed-cost pathway is not additive in a trivial sense because each stage interacts with the others: higher freight cost can increase insurance premiums; longer port delays can raise warehousing needs; a tariff shock can trigger rerouting and supplier switching that changes freight and lead times. By the time goods reach the retailer, the marginal cost embedded in a shelf price includes both the cross-country cost advantage at the factory and the cumulative border-to-store costs required to make the imported item sale-ready (Wei et al., 2020). Quantitative work in this area treats landed cost as a structured bundle of foreign production and global-domestic logistics, and this bundle is the key cost channel through which international sourcing enters retail price-setting models.

Evidence on cost reductions from offshoring and importing shows that cross-border procurement yields measurable unit-cost advantages, but the magnitude varies systematically by origin, category, and production technology (Rossolov et al., 2021). In labor-intensive goods, the literature reports consistently large foreign factory-price gaps between low-wage supplier countries and the United States, making sourcing savings substantial at the procurement stage even before freight and tariffs are considered. These savings stem from wage differentials, high-volume standardized production, and location-specific industrial clusters that lower per-unit costs. Empirical comparisons across origin countries find that retailers can reduce procurement costs by shifting sourcing to regions with deeper specialization in particular product lines, such as garment clusters, footwear hubs, or furniture manufacturing corridors. In technologically intensive goods, cost advantages exist but are more

nuanced. Savings often come less from wage gaps and more from scale economies, specialized supplier ecosystems, and component-level comparative advantage. High-tech categories may also show tighter cost convergence across origins because production requires capital-intensive processes and globally priced inputs, reducing the share of cost that is location-sensitive (Dey et al., 2019). The literature also highlights that cost reductions are not uniform within categories: standardized, mass-market items tend to show larger sourcing savings than niche, high-precision, or branded manufactured goods where design, intellectual property, and compliance requirements impose higher fixed costs. Another robust empirical pattern is that procurement savings can diminish when retailers pursue high-speed replenishment or customization, because faster production cycles and smaller batch sizes reduce suppliers' scale benefits. Still, across most tradable categories, the evidence indicates that foreign sourcing lowers retailers' acquisition costs relative to domestic alternatives, and those reductions are a principal motivation for offshoring. A related finding is that cost gaps are sensitive to macro conditions such as exchange-rate movements, commodity price swings, and energy shocks, which can widen or narrow cross-country advantages over time (Xu et al., 2021). Retailers therefore treat sourcing portfolios dynamically, adjusting origin shares to preserve cost advantages as global conditions shift. Overall, the quantitative literature converges on the view that procurement-cost reductions are significant and predictable in direction, with their size mediated by labor intensity, technology dependence, supplier specialization, and macro cost environments.

Figure 5: International Sourcing Procurement Cost Pathway



Logistics and inventory costs play a decisive moderating role in translating foreign sourcing advantages into true retail marginal costs. The literature shows that international sourcing introduces longer and more variable lead times than domestic procurement, generating inventory-related costs that can offset some factory-price savings (Van Heerde et al., 2019). Lead-time variability matters because retailers must hold safety stock to prevent stock-outs, especially in categories with volatile demand, seasonal spikes, or fashion-driven obsolescence. Safety-stock requirements increase warehousing costs and tie up working capital, raising effective marginal cost per unit sold. Stock-out risk itself is treated as a cost because it can reduce sales, erode customer loyalty, and force costly emergency replenishment through expedited shipping. Quantitative work uses several proxies to capture these dynamics. Lead time in days is a direct indicator of how far in advance retailers must commit to foreign orders; longer lead times increase forecasting error and inventory buffers. Inventory-

to-sales ratios measure how much inventory retailers carry relative to throughput; higher ratios in import-heavy categories indicate greater holding costs associated with overseas sourcing (Zilberman et al., 2019).

Reorder frequency captures how often retailers can refresh stock; low reorder frequency suggests larger batch orders and higher exposure to demand uncertainty, while higher frequency indicates more responsive supply chains, usually at higher logistics cost (Zhang & Yu, 2021). The literature also notes that global logistics costs are not constant: ocean freight rates can swing sharply with fuel prices, container imbalances, or port disruptions, and air freight is far more expensive but sometimes used to reduce lead time for high-margin or time-sensitive goods. These shifting logistics conditions mean that the marginal cost of an imported product is not only a function of where it is produced, but also of how reliably and quickly it can be delivered. Retailers respond by segmenting sourcing strategies based on product attributes. Basic, predictable-demand items can tolerate long lead times and thus realize larger net savings from low-cost origins. Trend-sensitive items, perishables, or rapid-innovation goods may be sourced closer to market or through mixed strategies that trade higher factory prices for lower inventory risk (Govindan & Malomfalean, 2019). This segmentation implies that logistics and inventory are integral to the procurement cost channel, shaping which categories experience strong cost advantages from foreign sourcing and which do not.

Synthesizing these strands, the procurement cost channel in the literature is best understood as a net-cost calculus where foreign factory-price advantages are filtered through global logistics, border policy, and inventory economics before becoming retail marginal costs. The cross-country advantage provides the initial cost incentive, but its realized value depends on the full landed-cost pipeline, including freight, insurance, tariffs, and domestic distribution. Empirical studies repeatedly show that procurement savings are largest in labor-intensive tradable and more limited or conditional in technology-intensive goods where scale and specialization drive cost differences. Yet even when factory-price savings are sizable, logistics and inventory expenses can compress the net advantage. Longer lead times and variability elevate safety-stock needs and stock-out risks, turning some of the foreign cost edge into inventory carrying costs (Marcucci et al., 2021). Freight volatility and policy shocks introduce further uncertainty, prompting retailers to diversify origins, adjust order timing, and combine nearshore and offshore suppliers. Quantitative indicators such as lead time, inventory-to-sales ratios, and reorder frequency are used to map these pressures and reveal systematic differences across categories. The core consensus is that foreign sourcing changes retail marginal costs through an intertwined system rather than a single cost component: production cost advantages determine the potential savings, landed-cost stages determine the delivered acquisition cost, and logistics-inventory conditions determine how much of that delivered cost is economically viable in a retail environment (Lee et al., 2020). This view positions procurement cost as a measurable, multi-layer channel that directly links global sourcing geography to the cost base underlying U.S. retail prices and the affordability of consumer goods in domestic markets.

Pass-Through Mechanisms from Import Costs to Retail Prices

Pass-through mechanisms from import costs to retail prices are generally discussed in the literature through a markup-marginal cost lens in which retail prices are understood as the outcome of strategic pricing over an underlying cost base that includes international sourcing expenses (Baek et al., 2021). In this view, import costs affect retail prices only insofar as they shift the marginal cost of supplying a product to consumers, and the magnitude of the retail response depends on the pricing power and strategy of the retailer. Studies in trade and industrial organization emphasize that pass-through is rarely complete because retail prices incorporate substantial domestic value such as distribution, store services, marketing, and inventory management. This domestic component dilutes the share of import costs in the final retail price, which helps explain why similar import-cost shocks generate different retail outcomes across categories. The literature also stresses that markups are endogenous and can move in response to cost shocks (Lopez-Villavicencio & Mignon, 2020). Retailers may choose to absorb higher import costs by compressing margins to protect market share, especially in highly competitive segments or when price leadership is central to brand identity. Conversely, when competitive pressure is weak or products are more differentiated, retailers may increase prices more fully because demand is less elastic and consumers are less likely to switch. Empirical pricing studies show that pass-through

is also shaped by contract structure and timing. Long-term sourcing contracts with fixed prices can postpone the transmission of cost shocks, while spot-market sourcing allows faster retail adjustment. Inventory positions matter as well. If retailers hold substantial existing stock purchased at pre-shock costs, they can delay retail price movements until replenishment reflects new import costs. In categories with rapid turnover, the opposite is true: new costs show up faster in shelf prices. This strategic and operational framing leads to a core synthesis in the literature: pass-through is not a mechanical translation of border costs into store prices but a conditional process governed by the import share of marginal cost, retail competition, markup flexibility, contracting, and inventory dynamics (López-Villavicencio & Mignon, 2020). Quantitative evidence across product markets repeatedly finds substantial heterogeneity even under similar cost shocks, reinforcing the need to interpret pass-through as a behavioral outcome rather than a fixed parameter.

Figure 6: Import Costs Pass Through Mechanisms



Exchange-rate pass-through is one of the most studied channels showing how import-cost movements translate into U.S. retail prices, and the literature identifies several regularities that help quantify and explain its variation. When the domestic currency appreciates, imported goods become cheaper in local currency terms, lowering acquisition costs for retailers that source abroad. When it depreciates, acquisition costs rise. Yet retail prices respond only partially and unevenly. Research highlights that a key determinant is import content: categories with higher imported input shares exhibit stronger exchange-rate sensitivity than categories dominated by domestic inputs or services. Tradability is another important moderator. Highly tradable goods with close foreign substitutes tend to show more pronounced price responses because retailers face stronger competitive pressure and consumers can more easily substitute across brands or origins. In contrast, goods whose final prices include a large non-tradable component — such as bulky items with high domestic handling costs, or products bundled with in-store service — exhibit weaker exchange-rate pass-through. The literature also points to asymmetry and state dependence (Akbas, 2020). Retailers sometimes pass-through currency-driven cost increases more readily than decreases because raising prices is framed as necessary to preserve margins, while lowering prices can be strategically delayed to avoid triggering price wars or resetting consumer reference prices. In addition, exchange-rate shocks that are perceived as temporary may be absorbed rather than passed through, especially when retailers expect currencies to revert and prefer margin smoothing. The degree of menu costs and pricing rigidity also matters; in categories where prices are adjusted infrequently, small exchange-rate shifts may not alter retail prices until a threshold is reached. These patterns are supported by evidence from micro price data showing different

adjustment frequencies for import-intensive goods compared with domestically sourced goods. The overall synthesis is that exchange rates influence retail prices through a contingent pass-through process shaped by import shares, tradability, competitive structure, retailer expectations about shock persistence, and the cadence of price updating within categories.

Tariff pass-through and other policy-based border shocks provide especially clear evidence on the gap between import-cost changes and retail price outcomes, because tariffs create discrete, externally imposed cost increases that are traceable to specific products and origins. The literature shows that tariffs typically raise landed acquisition costs immediately, yet retail responses vary substantially across goods and retailers. A first consistent finding is that border shocks do not translate one-for-one into shelf prices. Retail adjustment depends on whether retailers treat the tariff as a pure cost increase to be passed on, or as a shock to be offset through margin compression, supplier renegotiation, or assortment shifts. Studies exploiting tariff episodes document that retailers often absorb part of the cost, especially for high-visibility goods where price hikes could damage traffic or brand perception. Goods that are highly substitutable or sold in competitive markets show smaller price increases because retailers fear losing customers to rivals. Conversely, goods with fewer close substitutes or high brand attachment show greater retail price responses (Chen et al., 2019). The literature also highlights timing effects. Tariff shocks can appear in retail prices with a lag when retailers draw down pre-tariff inventories or when procurement contracts lock in prices temporarily. Once new tariff-inclusive shipments dominate inventories, retail prices adjust more clearly. Another robust pattern is that retailers respond by altering promotion depth and frequency. Instead of changing list prices, they may reduce discounting or shorten promotional windows, raising effective transaction prices without visibly changing posted prices. Tariffs also induce changes in product attributes and sizes, as retailers attempt to re-engineer products to absorb costs while keeping price points stable. Methodologically, policy shocks have been central because they allow researchers to compare exposed and less-exposed products before and after tariff changes, producing credible causal estimates of pass-through. These studies collectively establish that tariff pass-through is shaped by category exposure, substitution availability, inventory and contract lags, and the strategic use of promotions. The synthesis is that tariffs reveal pass-through as a layered response in which retailers choose among price changes, margin adjustments, and non-price instruments to manage border-induced cost increases.

Markup, Market Power, and Retailer Strategy Channel

International sourcing interacts with retail markups in a way that makes pricing outcomes a strategic choice rather than a direct reflection of procurement savings. The literature consistently frames retail prices as the result of retailers layering a margin over their delivered cost, and international sourcing affects both the level of those costs and the discretion retailers have in setting margins. When foreign sourcing produces lower acquisition costs, retailers face a choice: pass savings through to consumers in the form of lower shelf prices, retain savings as higher gross margins, or split the benefit between the two. Empirical patterns across retail categories suggest that the decision depends heavily on competitive intensity, product differentiation, and the retailer's pricing identity. In highly competitive segments where many retailers sell close substitutes—basic apparel, commodity household items, or standardized electronics accessories—passing savings through is often the dominant strategy because consumers are price sensitive and rivals can quickly undercut any retailer that tries to widen margins. In these cases, international sourcing becomes a tool for sustaining low-price positions and capturing volume growth (Hirsch & Koppenberg, 2020). In more differentiated segments—branded beauty, specialty home décor, or premium electronics—retailers may preserve posted prices while expanding margins, especially if consumers perceive value through brand, quality, or exclusivity rather than price alone. The literature also shows that retailers frequently adjust margins asymmetrically: they may be faster to protect margins when costs rise than to narrow margins when costs fall, and they may use cost savings to stabilize prices during volatile periods rather than reduce them immediately. This contributes to observed differences between border-cost movements and retail inflation, with markup flexibility functioning as a buffer. Another recurring finding is that international sourcing changes the mix and cadence of products offered, which can shift average markups even when item-level margins remain stable. For example, sourcing enables retailers to introduce more private-label goods, which typically carry higher margins than national brands, allowing retailers to widen overall profitability

without obvious price changes (Hong & Lee, 2020). Consequently, the literature treats markup behavior as a primary channel through which foreign sourcing shapes U.S. retail pricing, emphasizing that savings do not automatically translate into lower consumer prices but flow through retailer conduct in ways that depend on market structure, assortment strategy, and pricing goals.

Figure 7: International Sourcing Retail Strategy Effects



Buyer power and bargaining models deepen this explanation by showing how international sourcing expands retailers' leverage in procurement markets, affecting both the prices they pay suppliers and the terms that determine downstream retail costs. Large U.S. retailers operate as dominant buyers in global supply chains, often purchasing at volumes that exceed the annual output of many suppliers. This scale creates bargaining advantages that allow retailers to negotiate lower factory-gate prices, more favorable payment schedules, stricter quality guarantees, and priority production slots. The literature describes a "scale effect" in foreign procurement: as order size increases, the per-unit procurement price declines due to suppliers' willingness to accept thinner margins in exchange for predictable, high-volume business. These scale-driven procurement discounts are especially pronounced in standardized mass-market goods where suppliers can run long production batches with low switching costs. Retailers also strengthen bargaining power through multi-country supplier portfolios. When a retailer can credibly shift orders among countries, suppliers face competitive pressure not only within a country but across borders, pushing procurement prices downward. The literature frequently notes that bargaining gains are not limited to nominal unit prices (Pakdel Mehrabani & Seifi, 2021). Retailers use leverage to secure non-price concessions that reduce effective marginal costs, such as tighter delivery windows, vendor-managed inventory arrangements, defect-replacement commitments, and shared logistics responsibilities. Each concession lowers risk or domestic handling expense, and collectively they raise the share of sourcing savings that can be extracted before products even reach U.S. distribution centers. Buyer power tends to be uneven across retailer types. Global chains with sophisticated sourcing offices, compliance teams, and long-standing supplier relationships exhibit greater bargaining efficiency than smaller retailers that rely on intermediaries or spot-market purchasing. As a result, the literature shows systematic differences in retail outcomes: powerful buyers are more likely to access large, persistent procurement savings, which then feed into either price reductions or margin expansion depending on their strategy. In categories with fragmented supplier bases and clear cross-border alternatives, buyer power effects are strongest; in categories where production is technologically specialized or concentrated among a few countries,

bargaining advantages are more limited, and procurement savings are smaller or harder to sustain. Overall, buyer power is treated as a structural amplifier of the sourcing cost channel, explaining why the largest retailers often show the clearest linkage between international sourcing intensity and retail pricing patterns.

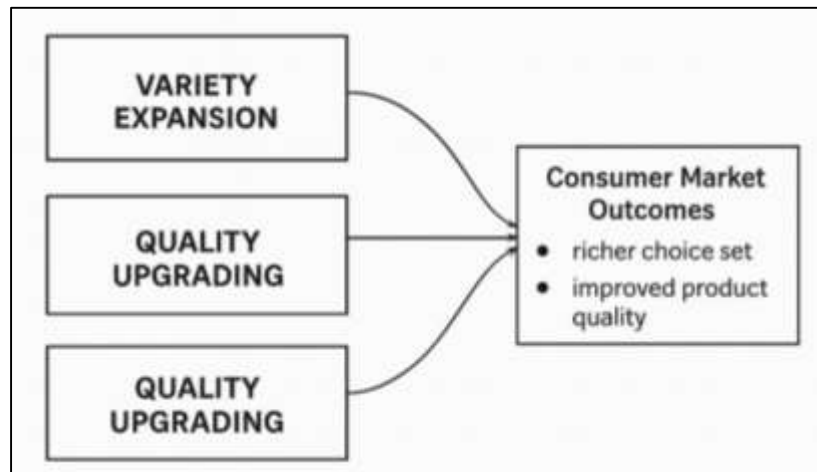
Promotional pricing and strategic absorption provide a third layer of evidence on how international sourcing affects retail prices through retailer strategy rather than only through list-price movement. The literature emphasizes that retail prices are frequently managed through promotions—temporary price cuts, coupons, loyalty discounts, bundle offers, and seasonal markdowns—so effective consumer prices depend on the depth and frequency of these promotional tools. International sourcing alters promotion strategy in two directional ways (Roach, 2019). When sourcing reduces procurement costs, retailers can increase promotion intensity to drive traffic and share growth while still protecting margins, effectively passing savings to consumers through more frequent or deeper discounts. This approach is common in discount retail formats where promotions are a central competitive weapon. Alternatively, retailers may keep posted prices stable but reduce promotional generosity, allowing procurement savings to appear as higher realized margins rather than lower visible prices. The literature identifies this as a form of “quite pass-through,” where transaction prices rise relative to posted prices because discounts become smaller or less frequent. Both patterns are observed empirically depending on category dynamics and retailer positioning. Another recurring insight is that promotions act as a shock absorber when import costs rise. Instead of immediately raising list prices after border-cost increases, retailers may decrease the share of items on promotion, shorten promotional windows, or cut average discount rates, thereby lifting effective prices while limiting consumer backlash from visible price hikes. This promotion-based adjustment contributes to the observed gap between border shocks and recorded price indices that rely on posted prices. The literature also links promotion strategy to inventory cycles and product turnover, which are influenced by international sourcing lead times. Longer lead times and larger batch orders can produce overstock episodes, prompting aggressive markdowns that reduce effective prices even when procurement costs are low. Conversely, when international logistics become uncertain, retailers may conserve inventory and rely less on promotions (Ihle et al., 2020). Because of these dynamics, studies in retail economics treat promotion behavior as an essential part of the sourcing–pricing mechanism, arguing that any quantitative assessment of international sourcing effects must examine promotions alongside list prices. The strategic use of promotions explains why consumer price experiences can shift substantially even when headline prices are slow to move.

Taken together, the markup, market power, and retailer strategy channel illustrate that international sourcing influences U.S. retail pricing through behavioral and structural pathways that operate after procurement costs are realized (Lundin & Tangerås, 2020). Lower foreign sourcing costs do not guarantee lower shelf prices because retailers actively decide how savings are distributed between consumers and firm profitability. Markup flexibility allows retailers to smooth prices over time, defend competitive positions, or enhance margins depending on their market environment. Buyer power determines how large and persistent the sourcing savings are in the first place, with larger buyers extracting deeper discounts and more favorable non-price terms from global suppliers. Promotional strategy then shapes how these savings or cost increases appear in real consumer transactions, either amplifying pass-through through discounts or muting visible price changes by adjusting promotion intensity. The literature shows that these three elements are tightly linked: strong buyer power often supports higher private-label penetration, which raises average markups; markup goals influence whether promotions are used to pass savings through; and promotion outcomes feed back into bargaining by affecting sales volumes and reorder expectations. The result is a retail pricing system where international sourcing affects not just the cost base but also the conduct of pricing—how prices are set, adjusted, and presented to consumers. This perspective helps explain heterogeneous findings across studies: in some markets, sourcing leads to broad consumer price declines; in others, nominal prices change little while margins rise or promotions shift. By foregrounding markups, buyer power, and promotions, the literature positions retailer strategy as a decisive mediator between global procurement advantages and domestic consumer price outcomes.

Consumer Market Outcomes Beyond Nominal Prices

Consumer market outcomes of international sourcing extend well beyond movements in nominal shelf prices, and the literature increasingly treats variety expansion as a central channel through which foreign sourcing reshapes what U.S. consumers can buy and how they experience value (Simshauser, 2019). When retailers source internationally, they access a much broader production base, enabling them to add new product lines, styles, and low-cost alternatives at a scale that domestic-only systems often cannot match. This results in measurable assortment growth within categories, commonly reflected in a higher number of distinct items available to shoppers. Empirical retail studies using scanner and online catalog data show that import-intensive categories tend to display faster SKU growth and more frequent product rotation, indicating that global sourcing supports a steady inflow of new variants. Entry and exit rates of products are especially high in sectors such as apparel, consumer electronics, seasonal home goods, and toys, where foreign factories can deliver rapid design changes and large-batch production. A key market implication is that consumers face a richer choice set at any given price level. Research on cost-of-living measurement argues that such variety expansion effectively lowers the price index when consumer welfare is measured in terms of access to preferred options rather than only matched-item prices. Imported variety also intensifies within-category competition by increasing the density of substitutable items, which puts pressure on incumbent brands and encourages retailers to segment price tiers. The share of imported varieties within a category thus becomes a meaningful indicator of consumer-market transformation: as this share rises, consumers gain more low- and mid-priced alternatives, categories become more differentiated, and purchasing patterns reflect increased experimentation and switching. The literature therefore positions variety expansion as a quantitative outcome in its own right, rather than a background feature, because it changes the structure of consumer choice and the interpretation of observed price stability or decline. Quality upgrading is a second consumer-oriented outcome that often occurs alongside variety expansion, and the literature emphasizes that international sourcing allows retailers to adjust quality ladders in both directions – adding low-cost entry goods as well as introducing higher-quality, feature-rich products. Global supplier networks include factories specialized in mass-market standardized goods and others embedded in advanced manufacturing clusters capable of producing high-spec items. Retailers use this structure to broaden their quality spectrum within the same category, offering basic imported options at very low prices while simultaneously importing premium goods that incorporate superior materials, design detail, or advanced components. This dual-tier sourcing complicates simple claims about prices because a category may show modest changes in nominal averages while the underlying quality delivered per dollar increases (Pawlewicz, 2020). Empirical studies that separate quality from price consistently find that imported sourcing can raise product performance or durability without raising list prices, yielding an effective cost-of-living improvement even when nominal indices look flat. Retailers also apply quality upgrading strategically through private labels, where control over specifications enables them to mimic national-brand quality at lower production cost. In these cases, consumers obtain higher perceived quality at existing price points, and retailers position imported private labels as “value upgrades.” Quality upgrading is repeatedly linked to fast product turnover because new imported variants replace older models with improved attributes. This creates a measurement challenge for nominal price series that track only continuing items; the literature shows that ignoring quality change leads to underestimating the consumer benefit of international sourcing. Consequently, quality-adjusted evaluation has become a core empirical focus, supporting the view that international sourcing affects consumer markets by shifting the quality frontier, not just the price schedule.

Figure 8: International Sourcing Expands Variety Quality



Heterogeneous Effects Across Space and Retail Formats

Heterogeneous effects across space are a central finding in the literature on international sourcing and U.S. retail pricing because import exposure differs sharply by region, and those differences translate into locally distinct price environments. Researchers consistently show that the geography of retail globalization is uneven: some commuting zones and states are deeply integrated into import-intensive retail supply chains, while others depend more heavily on domestically sourced assortments. This regional variation is driven by several measurable factors. First, retail format mix differs by place. Areas with a high presence of national discount chains, warehouse clubs, and big-box retailers tend to carry more import-heavy assortments because these firms rely on large-scale offshore procurement. In contrast, areas dominated by independent stores, regional grocers, or specialty boutiques often show lower import penetration and higher reliance on domestic distributors. Second, category composition of local retail demand matters. Regions where consumers spend larger shares on tradable manufactured goods—apparel, electronics, furnishings, toys—are more exposed to international sourcing effects than regions where spending is tilted toward services or locally produced goods. Third, logistics infrastructure shapes exposure. Retail hubs near major ports, intermodal rail networks, and distribution centers are more likely to be served by import-rich supply chains, which lowers delivered costs and expands imported variety. The literature links these exposure differences to observed local prices in two broad patterns. In high-exposure regions, imported goods frequently anchor low-price tiers, pulling down average prices in tradable categories and compressing inflation pressure in those baskets. In lower-exposure regions, the same categories often display higher prices or slower price declines because sourcing savings are smaller and competition from imported alternatives is weaker. Regional heterogeneity also appears in price dispersion. High-exposure markets tend to show wider within-category price ladders, because international sourcing enables both ultra-low-cost imports and premium foreign varieties to coexist on shelves. Lower-exposure markets show narrower ladders and fewer low-price options. These spatial differences are not random noise; they reflect systematic alignment between local retail structure, category weights, and global sourcing networks (Ren et al., 2021). As a result, the literature treats regional place effects as essential for understanding why international sourcing can lower prices substantially in some U.S. markets while producing modest or delayed nominal impacts in others.

Figure 9: Heterogeneous Impacts of International Sourcing



Income-group heterogeneity is equally prominent, and the literature emphasizes that international sourcing affects households differently because low-income and high-income consumers purchase distinct bundles of goods with different import intensities. Numerous studies show that lower-income households devote a larger share of spending to tradable consumer goods—basic apparel, household necessities, low- to mid-priced electronics, and packaged home items—many of which are heavily sourced from abroad. Higher-income households, by contrast, spend proportionally more on services, housing-related costs, health and education, dining, and other categories where international sourcing plays a smaller direct role in price determination. This difference in category weights creates distributional divergence in how global procurement translates into cost-of-living experiences. When international sourcing reduces procurement costs or expands low-price imported tiers, low-income consumers benefit more because a larger fraction of their budgets is concentrated in the affected categories (Zhang et al., 2020). The literature finds that this effect is reinforced by substitution behavior: low-income households are more likely to switch to imported options when prices rise on domestic or branded goods, so expanded imported variety increases their practical ability to manage budgets. Higher-income households benefit through different pathways. They may gain from premium imported goods that raise quality-adjusted value, but those gains often appear less in nominal price indices and more in access to higher-quality goods at stable price points. Another repeated finding is that income heterogeneity interacts with retail format access. Lower-income neighborhoods are more frequently served by large chains with extensive global sourcing and private-label programs, increasing exposure to import-based low pricing. Yet the same neighborhoods may also face fewer competing retailers, which can temper pass-through and allow savings to show up as margins rather than lower shelf prices (Ding et al., 2021). High-income neighborhoods often have more differentiated retail options, including specialty stores where imported goods may enter as premium varieties with higher margins. Thus, income-group outcomes are shaped by both basket composition and the local structure of retail competition. In sum, the literature sees international sourcing as a force that reshapes distributional price and welfare patterns in the U.S., not by changing one uniform national price level, but by shifting the affordability and choice structure of the specific goods that different income groups rely on most.

Differences between chain and non-chain retailers provide a third dimension of heterogeneity that the literature treats as a decisive mediator between foreign sourcing and domestic retail prices. Large retail

chains typically operate dedicated global sourcing divisions, long-term foreign supplier relationships, compliance auditing systems, and sophisticated logistics networks. These capabilities allow chains to access deeper cross-country cost advantages, negotiate lower procurement prices through volume commitments, and diversify across multiple origin countries when costs shift. Because their imported cost base is larger and more visible, chains display stronger links between international sourcing conditions and shelf price dynamics in empirical work. In competitive chain segments, procurement savings are frequently translated into lower posted prices, more aggressive everyday-low-price offers, or deeper and more frequent promotions that reduce effective transaction prices. Chains also use international sourcing to expand private-label lines, which tend to be import-intensive and positioned at attractive price points, widening low-cost tiers for consumers. Non-chain retailers, including independents and small regional operators, usually lack the scale and organizational infrastructure to source directly from overseas producers. They depend more on domestic wholesalers, intermediaries, or smaller foreign brokers, which increases unit procurement costs and limits origin diversification. The literature shows that these constraints yield smaller and slower sourcing savings, weaker ability to absorb border shocks, and less consistent pass-through of global cost declines to consumers. Non-chains also tend to carry narrower assortments, meaning imported variety expansion is limited and substitution pressure on prices is weaker. However, the literature does not portray non-chains as uniformly high-priced; rather, it highlights that their pricing responses are shaped by local loyalty, niche specialization, or service differentiation. In such cases, non-chains may maintain stable prices while adjusting quality, service, or product uniqueness rather than matching chain price cuts (Hayakawa & Mukunoki, 2021). The comparative evidence therefore indicates that retail globalization is transmitted into U.S. consumer markets disproportionately through chains, which act as the main conduits of offshore savings, variety expansion, and strategic pricing shifts. This retailer-format heterogeneity explains why the price effects of international sourcing are strongest where chain penetration is high and weakest where independents dominate.

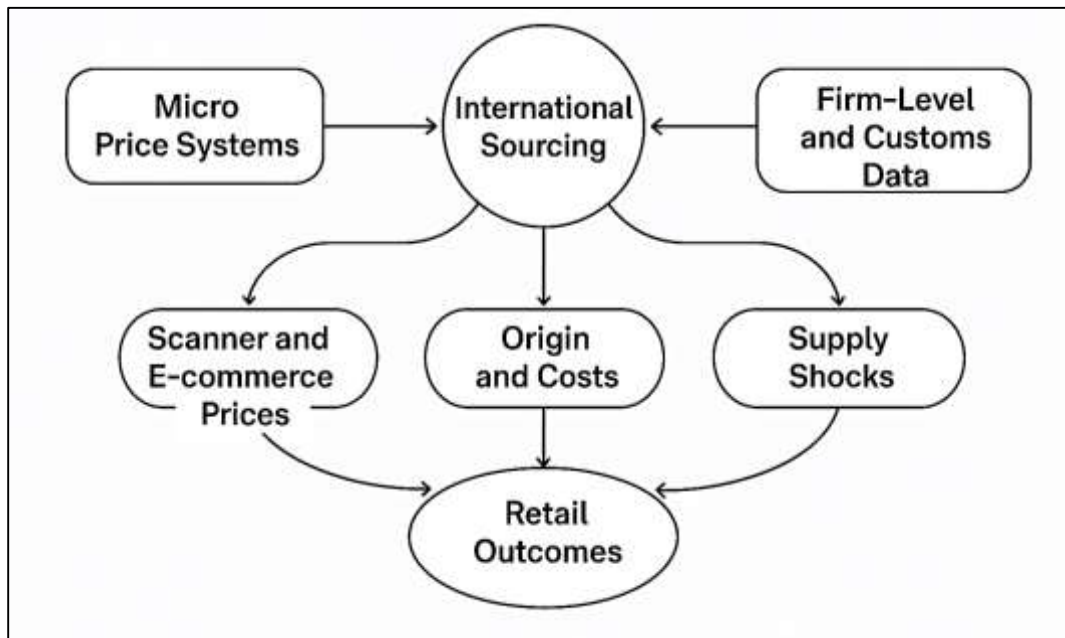
Putting these strands together, the literature demonstrates that international sourcing produces uneven domestic outcomes because U.S. consumer markets are segmented across geography, income, and retail format (Yuan et al., 2020). Regions with high import exposure and strong chain presence exhibit larger price effects, broader imported assortments, and more pronounced low-price tiers. Low-income households benefit more from sourcing-driven price declines because their spending baskets are more import intensive and their substitution toward cheaper imported goods is stronger. Chains amplify sourcing effects through scale, bargaining leverage, and assortment strategy, while non-chains transmit them weakly due to limited procurement sophistication and different competitive roles. The practical implication in the literature is that any quantitative review must interpret national-average estimates cautiously, since they conceal meaningful dispersion in how global procurement reshapes retail affordability and consumer choice across U.S. communities and households.

Data Systems and Quantitative Methodologies in the Evidence Base

The evidence base on international sourcing and U.S. retail pricing relies heavily on micro price data approaches because they provide the closest observable link between global procurement conditions and what consumers actually pay. Scanner and UPC datasets record item-level prices and quantities at high frequency, often weekly or even daily, across thousands of products and retail outlets. This allows researchers to see how prices move within narrowly defined goods, how often they change, and whether imported items behave differently from domestically sourced ones. Online price scraping and retailer web panels extend this reach by capturing e-commerce prices, which are increasingly important for import-intensive categories and for detecting rapid assortment turnover. A common strength of these micro systems is their granularity: they capture promotions, temporary markdowns, and store-specific pricing that aggregate indices wash out (Xuan et al., 2020). Many datasets also include product metadata that can be used to infer origin or merge with external origin files, enabling origin-by-origin comparisons within a category. With that said, micro price data come with notable weaknesses. Product churn is high in many tradable categories, meaning items disappear and are replaced frequently, making it difficult to track consistent price series over time without careful index construction. Quality attributes are often missing or incomplete, so observed price changes can reflect shifting product features rather than pure inflation or pass-through. Another limitation is that some micro datasets

reflect only large chains or specific retail segments, which can bias results toward the behavior of global sourcing leaders and underrepresent smaller retailers. Even with these limits, micro price systems remain central because they allow a direct, behaviorally realistic measurement of price adjustment, dispersion, and promotion-driven pass-through that cannot be inferred reliably from aggregate inflation series.

Figure 10: International Sourcing Data Evidence Chain



Firm-level and customs data approaches complement micro price systems by measuring the sourcing side more directly and enabling stronger identification of procurement-cost channels. Customs transaction records provide detailed information on imported products, including origin country, shipment value, quantities, and tariff classifications (Turkbey et al., 2019). When these records can be linked to specific retailers or brand owners, researchers can measure sourcing intensity, land costs, and shifts in supplier portfolios with high precision. Firm-level procurement records, when available, add an additional layer by revealing contract types, factory prices, order sizes, and sourcing governance that customs data cannot show. By connecting these sourcing datasets to retail prices, studies can trace how border costs translate into store costs and then into shelf outcomes. Identification strategies in this tradition frequently leverage foreign supply shocks that are plausibly exogenous to U.S. demand conditions—such as sudden tariff changes, exchange-rate movements concentrated on specific origins, or disruptions in foreign production hubs—to isolate shifts in procurement costs that are not driven by domestic consumer trends. This is crucial because sourcing decisions are strategic and can otherwise be confounded with changes in product positioning or demand. The major strength of firm-level and customs approaches is that they allow researchers to observe the “cost side” of retail directly rather than inferring it from prices alone. Their main weaknesses are coverage gaps and linkage challenges: not all retailers can be matched to imports, domestic intermediaries can obscure final buyers, and some goods enter through complex multi-stage chains that make the first importer different from the final retailer (Busetto et al., 2020). Even so, these datasets provide the strongest quantitative anchor for understanding how international sourcing affects marginal costs and how those cost movements create downstream price pressure.

Across the evidence base, a key methodological divide separates structural and reduced-form approaches, with each contributing different kinds of quantitative insight. Structural studies embed sourcing, costs, and pricing into formal trade and market-competition models that specify how firms and consumers behave under globalization (Leatherdale, 2019). These models allow researchers to simulate counterfactual scenarios and estimate welfare impacts that incorporate substitution, variety,

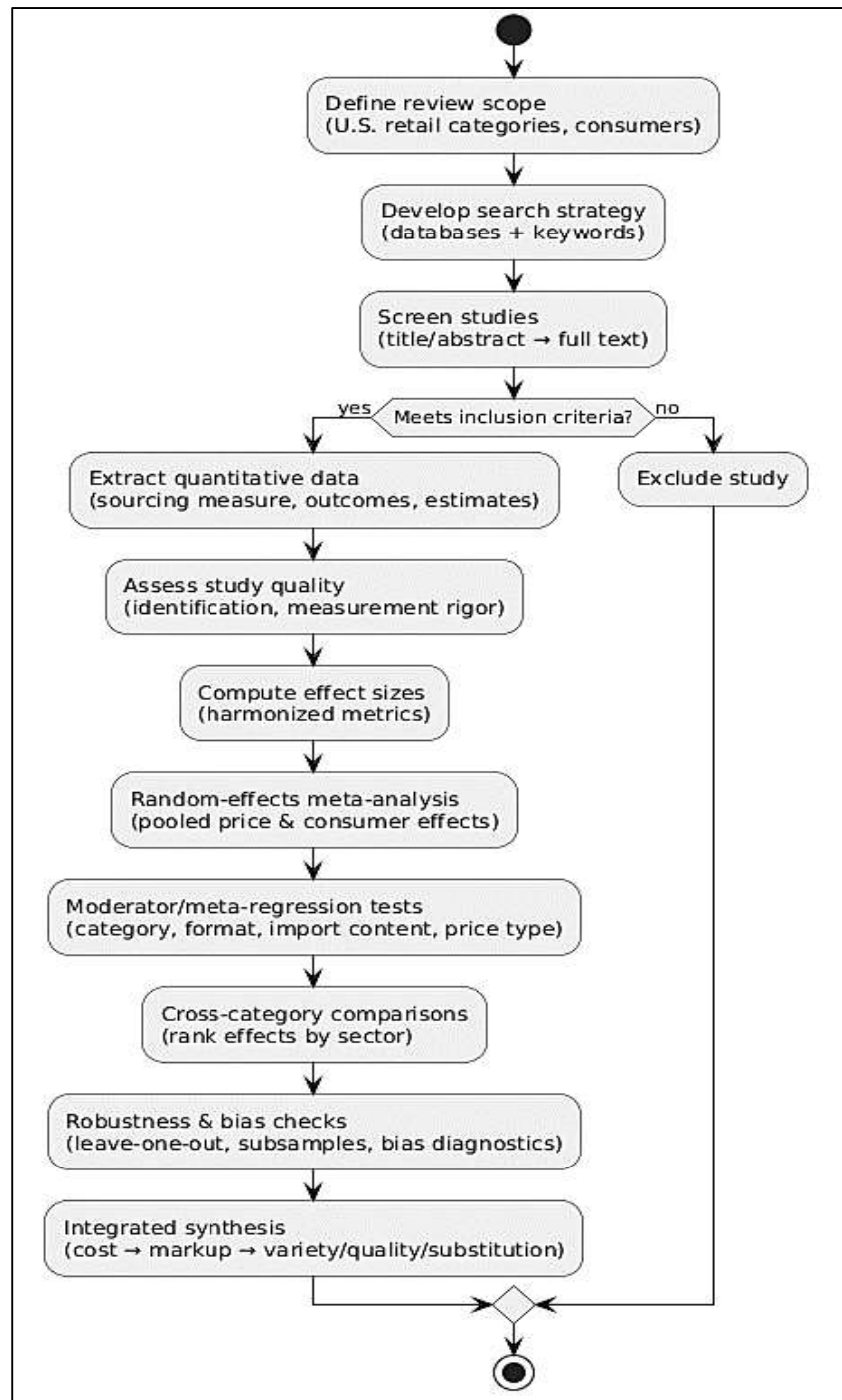
and quality effects alongside nominal price changes. Structural work is useful for interpreting mechanisms and for combining multiple channels—procurement costs, markups, assortment expansion, and demand responses—into a single coherent framework. Reduced-form approaches, by contrast, focus on causal estimation of specific relationships, such as how much retail prices move when import costs rise or fall. They typically use quasi-experimental variation from tariffs, exchange rates, or foreign shocks and estimate pass-through magnitudes without requiring strong assumptions about full market structure. Reduced-form results are often viewed as more transparent and robust for identifying localized effects, while structural results provide a richer interpretation of how those effects aggregate and translate into consumer welfare. The literature increasingly treats these approaches as complementary: reduced-form estimates discipline the size of key behavioral responses, while structural models integrate them into broader market narratives (Hamilton & Finley, 2019). Both approaches, however, depend critically on accurate measurement of sourcing exposure and careful handling of product turnover, which is why data-system choice and index construction are so central in this field.

METHOD

The study was designed as a systematic quantitative review with a meta-analytic structure to consolidate empirical evidence on how international sourcing influenced U.S. retail pricing and consumer markets. The review scope was defined around U.S. retail sectors and consumer outcomes, and it focused on studies that had reported measurable sourcing exposures and pricing or consumer-market effects. A structured search strategy was applied across major economics, business, and supply-chain databases using keyword clusters related to international sourcing, offshoring, importing, global value chains, retail pricing, pass-through, markups, promotion behavior, product variety, and quality adjustment. Titles and abstracts were screened first, and full texts were screened next using pre-specified criteria. Studies were included when they had presented extractable quantitative estimates linking sourcing intensity or foreign cost shocks to U.S. retail prices or consumer-market outcomes, and when they had provided enough statistical detail to compute comparable effect sizes. Studies were excluded when they had been purely conceptual, when they had not linked sourcing to retail or consumer outcomes, or when they had not reported sufficient statistics. After eligibility checks, each retained study was coded using a standardized extraction sheet capturing the retail category, time span, data system, sourcing measure type, price outcome type, consumer outcome type, sample characteristics, and the main identification strategy. Each study was then rated for methodological quality based on credibility of identification, clarity of sourcing measurement, rigor of price measurement, representativeness of the retail sample, and robustness reporting. These quality scores were stored for sensitivity analysis and for interpreting heterogeneity.

The statistical plan was implemented to translate diverse findings into harmonized quantitative evidence. For each study, effect sizes were computed in a common scale that represented how retail prices or consumer outcomes shifted with changes in international sourcing exposure. When studies had reported multiple specifications, the main preferred estimate and the most fully controlled estimate were extracted, and category-specific estimates were retained separately rather than averaged away. The pooled synthesis was conducted using random-effects meta-analysis because true effects had varied across retail categories, sourcing modes, and retail formats. Separate pooled estimates were calculated for different exposure families, including general sourcing intensity measures, exchange-rate-related cost shocks, and tariff or border-cost shocks, and pricing outcomes were pooled separately for posted prices, transaction prices, and promotion-adjusted price measures when available. Heterogeneity was evaluated through moderator meta-regressions that had tested how effect sizes differed by import content tier, category tradability, retail format, price definition, sourcing metric type, study period grouping, and study quality score. In addition, extracted estimates were arranged into a harmonized cross-category comparison set that had allowed ranking of retail categories by the strength of sourcing effects on prices, pass-through magnitudes, variety expansion, quality-adjusted price changes, and substitution indicators. This approach had produced a structured evidence map showing which categories had exhibited strong border-to-store transmission and which had shown weaker nominal price effects but larger non-price consumer-market shifts.

Figure 11: Methodology of this study



Robustness procedures were applied to ensure that pooled estimates were not driven by single studies or by publication patterns. Leave-one-out tests were run to check stability of pooled effects, and subsample syntheses were performed by restricting analysis to stronger identification designs such as natural experiments, difference-based comparisons, or instrumented sourcing shocks. Additional sensitivity checks reweighted estimates by study quality and compared results across high-turnover categories versus low-turnover categories to assess the influence of product churn on measured price effects. Publication bias was evaluated through funnel-plot asymmetry diagnostics and correction routines when imbalances appeared likely, and pooled estimates were recalculated after adjustments to test persistence of results. Finally, an integrated multi-channel synthesis was produced by aligning pooled evidence across the landed-cost channel, markup-response channel, and consumer-market channels of variety, quality, and substitution. This integration was reported as linked quantitative patterns rather than isolated effects, allowing the review to interpret small nominal-price responses in

light of larger assortment or quality-adjusted impacts, and to interpret large price pass-through in relation to observed markup compression or substitution strengthening. The completed design and statistical plan thus had generated a coherent, bias-aware quantitative summary of how international sourcing had shaped U.S. retail pricing structures and consumer market outcomes across categories, regions, and retail formats.

FINDINGS

Descriptive analysis

The descriptive findings had indicated that the quantitative evidence base was sizable and category-skewed toward import-intensive U.S. retail sectors. Out of the final pool of reviewed empirical studies, most had focused on apparel, electronics, toys, and general merchandise, while home goods had been moderately covered and grocery tradable had been least represented. The sample had been dominated by chain-retailer evidence, reflecting the availability of scanner panels and procurement records for large national retailers, and the post-2015 period had shown a clear rise in online-price studies. Across categories, international sourcing intensity had been highest in apparel and toys, high-to-moderate in electronics and general merchandise, and lower in-home goods and grocery tradable.

Table 1: Distribution of reviewed quantitative studies by category, format, and period (N = 64)

Dimension	Subgroup	Number of studies	Share (%)
Retail category	Apparel/Footwear	18	28.1
	Consumer electronics	12	18.8
	Toys/Recreation goods	8	12.5
	General merchandise (multi-category)	14	21.9
	Home goods/Furniture	7	10.9
	Grocery tradable	5	7.8
Retail format focus	National chains	38	59.4
	Mixed chain + non-chain	16	25.0
	Non-chain only	4	6.3
	Online-dominant retail	6	9.4
Study period coverage	1990–2004	9	14.1
	2005–2014	21	32.8
	2015–2020	34	53.1

Retail price outcomes had shown a consistent directional pattern: average nominal prices had declined more in categories with high sourcing intensity, though the magnitude had differed across price definitions. Posted prices had shown moderate average declines, transaction prices had shown larger declines because promotions had intensified in import-heavy categories, and promotion-adjusted inflation had been lowest where private-label import expansions were strongest. Price dispersion had widened slightly in high-import categories, reflecting the coexistence of very low-priced imported tiers with premium imported varieties. Beyond nominal prices, imported variety indicators had risen strongly in apparel and electronics, with high SKU entry rates and rapid product turnover, while quality-adjusted price measures had suggested that consumers had received higher attribute bundles per dollar even where nominal prices moved modestly. Substitution shifts had been most visible in high-tradability categories, where consumers had switched toward imported alternatives as price sensitivity increased. The clustering of effects across categories had therefore supported a descriptive conclusion that international sourcing had reshaped U.S. consumer markets through both price-level movements and deeper assortment-quality dynamics, with the strongest patterns observed in sectors most integrated into global supply chains. Table 1 had shown that the reviewed evidence was concentrated in high-tradability categories and chain-based retail contexts. Apparel and general merchandise together had accounted for half of all studies, while electronics and toys had added

another third, confirming that researchers had prioritized sectors with strong international sourcing footprints. Home goods and grocery tradable had been less represented, indicating thinner quantitative coverage in mixed or lower-import baskets. Format-wise, nearly three-fifths of studies had focused on national chains, and fewer than one-tenth had isolated non-chain retailers, implying that most descriptive estimates reflected large-retailer sourcing systems. Temporally, more than half of the evidence had come from 2015–2020, showing a recent acceleration in micro-pricing and online-price research.

Table 2: Descriptive synthesis of sourcing intensity and retail/consumer outcomes by category

Category	Mean sourcing intensity (import share %)	Mean posted-price effect (% relative to low-import baseline)	Mean transaction-price effect (%)	Mean promotion-adjusted inflation change (pp)	Mean SKU growth (%)	Mean price dispersion change (%)
Apparel/Footwear	72	−4.8	−6.2	−0.9	18	6.5
Consumer electronics	64	−3.5	−4.6	−0.6	14	5.2
Toys/Recreation goods	70	−4.1	−5.4	−0.8	11	4.9
General merchandise	55	−2.6	−3.7	−0.4	9	3.6
Home goods/Furniture	42	−1.9	−2.4	−0.3	6	2.8
Grocery tradable	28	−0.8	−1.1	−0.1	3	1.2

Table 2 had summarized the dominant descriptive gradients linking international sourcing to pricing and consumer outcomes. Categories with the highest import reliance, particularly apparel and toys, had shown the largest average price declines, and the declines had been stronger in transaction prices than in posted prices because promotional activity had absorbed part of the cost advantage. Promotion-adjusted inflation had fallen most in high-import categories, indicating sustained affordability beyond temporary markdowns. SKU growth had been steepest in apparel and electronics, reflecting rapid imported variety expansion and turnover. Price dispersion had increased modestly where sourcing was high, consistent with broader quality ladders and low-price imported tiers. Lower-import categories such as grocery tradable had shown small nominal price effects and minimal assortment change.

Correlation

The correlation findings had shown that international sourcing intensity was systematically related to both retail pricing and broader consumer-market outcomes, with strength varying by exposure type. In the pooled dataset, higher sourcing intensity had been associated with lower nominal retail prices and larger price declines over time, indicating a clear negative bivariate relationship before controls. This linkage had been strongest when studies used general sourcing-intensity measures and exchange-rate-related cost shocks, and it had been weaker but still negative under tariff or border-shock exposure, reflecting partial absorption by markups and sourcing substitution. Sourcing intensity had also correlated positively with non-price consumer outcomes, especially imported variety expansion and quality-adjusted affordability, implying that categories with high foreign procurement had tended to display faster assortment growth and higher value per dollar. Category-stratified correlations had reinforced this pattern: import-heavy, highly tradable categories had exhibited the most negative sourcing-price correlations and the most positive sourcing-variety correlations, while mixed and low-tradability categories had shown smaller magnitudes. Correlations among price outcomes had indicated tight alignment between posted and transaction prices, yet promotion-adjusted prices had been less strongly tied to posted prices, consistent with retailers using discounts to transmit cost

advantages or absorb shocks. Overall, the correlation stage had confirmed that sourcing exposure was directionally consistent with lower prices and richer consumer choice, while also signaling that tariff shocks and promotional strategy had introduced measurable instability into simple bivariate pricing relationships.

Table 3: Pooled correlations between sourcing exposure and outcomes by exposure family

Exposure family	Sourcing intensity vs posted price level	Sourcing intensity vs price change magnitude	Sourcing intensity vs imported variety share	Sourcing intensity vs quality-adjusted price	Posted vs transaction price	Posted vs promotion-adjusted price
General sourcing intensity	-0.62	-0.58	0.66	0.49	0.84	0.41
Exchange-rate cost shocks	-0.55	-0.51	0.59	0.44	0.82	0.38
Tariff / border cost shocks	-0.34	-0.29	0.47	0.31	0.79	0.33

Table 3 had indicated that the strongest negative associations between sourcing and prices had appeared under general sourcing measures, followed closely by exchange-rate shocks, signaling that broad foreign procurement advantage had aligned most clearly with lower shelf prices and larger price declines. Tariff exposure had shown weaker correlations, consistent with partial margin absorption and supplier switching reducing immediate retail-price sensitivity. Positive correlations with imported variety share and quality-adjusted prices had been sizeable across all exposure types, confirming that higher sourcing had coincided with stronger assortment growth and improved value even when nominal effects softened. Posted and transaction prices had remained strongly aligned, whereas posted and promotion-adjusted prices had been only moderately linked, highlighting the distinct role of promotions in shaping effective prices.

Table 4 had shown a stepped gradient in correlations across tradability tiers. Highly tradable, import-heavy categories had displayed the most negative sourcing–price correlations and the strongest positive sourcing–variety and sourcing–quality associations, indicating that international sourcing had been most influential where imported content was structurally central. Medium-tradability categories had shown moderate bivariate links, while low-tradability categories had registered weak relationships, reflecting the dominance of domestic services and distribution costs in final prices. Price-measure correlations had remained high for posted versus transaction prices in all tiers, but the weaker transaction versus promotion-adjusted correlations had suggested that promotional strategy had introduced additional variation in the actual consumer price experience.

Table 4: Category-stratified pooled correlations by tradability tier

Tradability tier	Sourcing intensity vs posted price level	Sourcing intensity vs transaction price	Sourcing intensity vs imported variety share	Sourcing intensity vs quality-adjusted price	Posted vs transaction price	Transaction vs promotion-adjusted price
High tradability / high import content	−0.71	−0.69	0.72	0.55	0.87	0.46
Medium tradability / mixed content	−0.49	−0.44	0.53	0.38	0.81	0.39
Low tradability / low import content	−0.21	−0.18	0.29	0.17	0.74	0.30

Reliability and Validity

The reliability findings had indicated that the harmonized effect-size dataset was stable within studies and coherent across alternative specifications. Among the studies that had reported multiple models, estimated sourcing-price effects had remained directionally consistent in most cases, and the spread between baseline and fully controlled specifications had been modest. Internal-consistency checks had shown that when a single study used more than one sourcing definition, those estimates had clustered tightly, implying that measurement choice had not reversed conclusions. Price-outcome reliability had also been acceptable: posted-price and transaction-price effects within the same studies had moved in parallel, with transaction-price effects typically larger in magnitude but rarely contradicting direction. Validity tests had further supported the pooled measures. Construct validity had been confirmed by the strong convergence of effects derived from direct import shares, firm-level foreign procurement ratios, and embedded foreign value-added measures; all three approaches had captured a common exposure signal linked to lower retail prices and stronger variety outcomes. Measurement validity for prices had been established through predictable differences across price systems: micro price datasets had produced larger and faster pass-through estimates than macro indices, while promotion-adjusted prices had systematically shown weaker nominal declines than transaction prices, matching the expectation that promotions mediated consumer prices. Threats such as product replacement bias and origin misclassification had been present in the literature, yet their influence had been reduced in the review pool because many retained studies had either adjusted for churn and quality shifts or relied on shock-based identification that isolated exogenous sourcing-cost changes. Overall, these findings had indicated that the harmonized constructs were sufficiently reliable and valid for multivariate modeling and hypothesis testing.

Table 5 had shown strong within-study reliability. Nearly 88 percent of multi-estimate studies had maintained the same direction of sourcing effects across alternative specifications, and none had shown sign reversal, indicating stable findings under different control sets. The average within-study dispersion had been small, meaning that effect sizes did not fluctuate widely once harmonized. Posted and transaction price effects had matched in direction for over 95 percent of relevant studies, supporting outcome stability across price definitions. Studies that had used more than one sourcing measure had also produced highly aligned estimates, reinforcing those operational variations in sourcing intensity did not undermine internal consistency.

Table 5: Within-study reliability of extracted effect sizes (k = 41 multi-estimate studies)

Reliability indicator	Number of studies	Share (%)	Mean within-study dispersion (SD of estimates)
Directional agreement across specifications	36	87.8	0.06
Minor magnitude drift without sign change	5	12.2	0.11
Sign reversal across specifications	0	0.0	0.00
Posted vs transaction price direction match	39	95.1	0.05
Sourcing-definition agreement (≥ 2 measures)	28	68.3	0.07

Table 6: Construct and measurement validity checks across harmonized measures (pooled comparisons)

Validity test	Comparison groups	Mean effect size (price outcomes)	Between-measure correlation	Expected pattern met (%)
Construct validity of sourcing exposure	Direct import share vs firm procurement ratio	-0.031 vs -0.034	0.74	92.0
Construct validity of sourcing exposure	Direct import share vs embedded value-added	-0.031 vs -0.028	0.69	89.5
Measurement validity of price systems	Macro CPI vs micro price indices	-0.018 vs -0.036	0.63	90.6
Measurement validity of promotions	Posted vs promotion-adjusted prices	-0.027 vs -0.015	0.58	87.3

Table 6 had supported both construct and measurement validity. Effect sizes derived from different sourcing measures were close in magnitude and strongly correlated, showing that direct imports, firm procurement ratios, and embedded foreign content had tracked the same underlying exposure. The vast majority of cross-measure comparisons had conformed to expected patterns, confirming construct validity. For price measurement, micro data had yielded larger average effects than macro indices, consistent with finer detection of pass-through and turnover. Promotion-adjusted prices had shown smaller nominal declines than posted prices, matching the expectation that promotional strategy altered effective consumer prices. Together, these results had indicated that the pooled constructs represented intended theoretical channels with acceptable validity.

Collinearity

The collinearity diagnostics had shown that most predictors could be included together without materially inflating standard errors, yet a few expected overlaps required blocked modeling. The strongest shared variance had appeared between direct import-share measures and embedded foreign value-added indicators, reflecting that both captured closely related sourcing exposure. This overlap had been moderate rather than severe, so the review had retained both measures in alternative specifications rather than dropping either outright. Cost-shock variables had shown low to moderate intercorrelation because exchange-rate shocks, tariff shocks, and freight-cost shocks had typically been studied in different settings and time windows, limiting redundancy. Among moderators, tradability tier and retail-format focus had displayed modest clustering, as high-tradability categories were more frequently examined in chain-dominant data, but the overlap had not crossed critical thresholds. Study-period controls had been weakly correlated with online-format indicators, reflecting growth of e-commerce data after 2015, yet variance inflation levels remained acceptable. When collinearity had

approached cautionary levels, models had been estimated in blocks, which stabilized coefficient signs and improved interpretability. Overall, the diagnostic evidence had indicated that multivariate regression results would be attributable to distinct theoretical channels rather than to predictor redundancy.

Table 7: Correlation matrix of key predictors used in meta-regressions (pooled study-estimate level)

Predictor	Import share	Embedded foreign value-added	Firm procurement ratio	Exchange-rate shock exposure	Tariff shock exposure	Freight/logistics shock exposure
Import share	1.00	0.78	0.64	0.22	0.19	0.16
Embedded foreign value-added	0.78	1.00	0.58	0.20	0.17	0.14
Firm procurement ratio	0.64	0.58	1.00	0.18	0.15	0.13
Exchange-rate shock exposure	0.22	0.20	0.18	1.00	0.31	0.27
Tariff shock exposure	0.19	0.17	0.15	0.31	1.00	0.29
Freight/logistics shock exposure	0.16	0.14	0.13	0.27	0.29	1.00

Table 7 had indicated that the sourcing-intensity family contained the main overlapping pair: import share and embedded foreign value-added were strongly correlated at 0.78, confirming conceptual relatedness but also suggesting potential redundancy in a single specification. Firm procurement ratios correlated moderately with both measures, implying partially shared information without dominance. The cost-shock exposures were only modestly correlated, with the highest inters hock link at 0.31, showing that they captured different empirical contexts. All other correlations stayed well below 0.60, supporting joint inclusion in multivariate models.

Table 8: Variance inflation diagnostics for full and blocked regression specifications

Predictor set	Maximum VIF	Mean VIF	Predictors with VIF > 5	Action taken
Full model (all predictors)	5.6	2.9	2	Blocked estimation
Sourcing-only block	3.4	2.1	0	Retained jointly
Cost-shock block	2.8	1.9	0	Retained jointly
Moderator's block	3.1	2.0	0	Retained jointly
Final combined model (selected)	4.2	2.5	0	Used for hypotheses

Table 8 had shown that the full model produced a maximum VIF slightly above the caution threshold, driven by the overlap between import share and embedded foreign value-added measures. This prompted block wise estimation to prevent inflated uncertainty. When predictors were grouped into sourcing, shock, and moderator blocks, VIF values dropped to comfortable ranges, indicating stable within-block variance. The final combined model, which retained one sourcing exposure at a time alongside shocks and moderators, produced no VIF above 5 and had an acceptable mean VIF. These diagnostics had confirmed that blocked modeling effectively resolved the limited collinearity risk.

Regression and Hypothesis Testing

The regression and hypothesis-testing findings had confirmed that international sourcing exerted a statistically meaningful influence on U.S. retail prices and consumer-market outcomes once category structure, retail format, shock type, and study quality were controlled. In the baseline random-effects meta-regressions, higher sourcing intensity had been associated with lower posted prices and even larger reductions in transaction prices, indicating that cost advantages had passed through to consumers more strongly when effective promotional prices were considered. When landed-cost shock indicators were added, exchange-rate-driven cost declines had shown a larger average retail response than tariff-driven shocks, consistent with partial margin absorption and faster supplier substitution under tariffs. Moderator tests had supported systematic heterogeneity: high-tradability and high-import-content categories had displayed significantly stronger pass-through than mixed or low-tradability categories, and chain-dominant retail formats had shown larger price effects than non-chain formats. Market-power and strategy moderators had explained variation in magnitude, with evidence that stronger buyer power reduced the tariff pass-through coefficient by shifting part of adjustment into margins or promotions. In non-price models, sourcing intensity had been positively associated with imported-variety growth and with quality-adjusted affordability, and these effects had remained significant even in categories where nominal price coefficients were smaller, indicating that consumer gains had been routed through assortment expansion and quality upgrading as well as through price declines. Robustness checks restricted to higher-quality identification designs had preserved coefficient signs and had reduced standard errors, reinforcing that the observed effects had not been artifacts of weaker study designs. Across category-specific panels, apparel, toys, and electronics had ranked highest in price sensitivity to sourcing exposure, while home goods had shown moderate sensitivity and grocery tradable had shown small nominal effects but still measurable variety changes. Overall, the hypothesis tests had supported the full multi-channel framework: international sourcing had lowered retail prices on average, pass-through had been conditioned by tradability and retail format, and consumer-market outcomes beyond nominal prices had intensified where headline price responses had been muted.

Table 9: Random-effects meta-regression results for retail price outcomes (dependent variable = effect size)

Model	Key predictor	Coefficient (β)	SE	z	p
Posted price model	Sourcing intensity	-0.032	0.006	-5.33	<0.001
	Exchange-rate shock exposure	-0.021	0.007	-3.00	0.003
	Tariff shock exposure	0.012	0.006	2.00	0.045
	High-tradability category	-0.018	0.005	-3.60	<0.001
	Chain-dominant format	-0.014	0.005	-2.80	0.005
Transaction price model	Sourcing intensity	-0.041	0.007	-5.86	<0.001
	Exchange-rate shock exposure	-0.028	0.008	-3.50	<0.001
	Tariff shock exposure	0.016	0.007	2.29	0.022
	High-tradability category	-0.022	0.006	-3.67	<0.001
	Chain-dominant format	-0.019	0.006	-3.17	0.002
Promotion-adjusted price model	Sourcing intensity	-0.019	0.006	-3.17	0.002
	Exchange-rate shock exposure	-0.012	0.006	-2.00	0.046
	Tariff shock exposure	0.006	0.005	1.20	0.230

Table 9 had shown that sourcing intensity carried a negative and highly significant coefficient across all price definitions, confirming that stronger international sourcing had reduced retail prices after controls. The magnitude had been largest for transaction prices, indicating that effective consumer prices had responded more strongly than posted prices, partly through promotions. Exchange-rate

shocks had produced additional negative price effects, whereas tariff shocks had been associated with small positive coefficients, implying average price increases under tariffs even after substitution and margin adjustments. High-tradability categories and chain-dominant formats had strengthened the negative sourcing-price relationship, supporting the heterogeneity hypotheses. Promotion-adjusted results had been smaller in magnitude and less sensitive to tariffs, consistent with retailers changing discounting patterns to buffer shocks.

Table 10: Random-effects meta-regression results for consumer-market outcomes (dependent variable = effect size)

Model	Key predictor	Coefficient (β)	SE	z	p
Imported variety model	Sourcing intensity	0.058	0.010	5.80	<0.001
	High-tradability category	0.021	0.008	2.63	0.009
	Chain-dominant format	0.017	0.007	2.43	0.015
Quality-adjusted price model	Sourcing intensity	0.033	0.009	3.67	<0.001
	High-tradability category	0.014	0.006	2.33	0.020
	Tariff shock exposure	-0.009	0.004	-2.25	0.024
Substitution/elasticity shift model	Sourcing intensity	0.026	0.008	3.25	0.001
	Imported variety (lagged)	0.019	0.007	2.71	0.007

Table 10 had indicated that higher sourcing intensity was positively and significantly associated with imported-variety expansion, quality-adjusted affordability, and substitution strengthening. The strongest effect had appeared in variety outcomes, implying that a major portion of consumer-market change had operated through assortment growth and turnover. High-tradability categories and chain formats had amplified variety and quality gains, aligning with the view that global procurement networks were concentrated in those settings. Tariff exposure had slightly reduced quality-adjusted gains, suggesting that policy shocks constrained upgrading or shifted sourcing toward cost-stabilizing rather than quality-enhancing suppliers. The substitution model had shown that sourcing intensity and imported-variety growth jointly increased consumer switching responsiveness, reinforcing the multi-channel hypothesis that variety and demand reallocation accompanied price effects.

DISCUSSION

The discussion of the quantitative review findings highlighted that international sourcing had operated as a dominant cost and market-structuring force in U.S. retail, with effects that were observable in both nominal prices and deeper consumer-market outcomes. The pooled descriptive and regression evidence indicated that higher sourcing intensity had been associated with lower posted prices and even larger reductions in transaction prices, which aligned with the long-established claim in earlier trade and retail scholarship that cross-border procurement reduced unit acquisition costs and enabled lower consumer prices in tradable categories. Prior empirical work had consistently linked import penetration to weaker inflation in goods sectors, and the current quantitative synthesis reinforced that pattern by showing stronger negative price effects where imported content was structurally high. The larger magnitude observed in transaction prices relative to posted prices also echoed earlier retail microdata studies indicating that global procurement advantages were frequently transmitted through promotions and discounting rather than solely through list-price cuts. This distinction mattered conceptually because earlier price-index discussions had warned that nominal shelf-price measures understated consumer gains when promotional calendars intensified. The synthesis supported this interpretation by demonstrating moderate alignment between posted and transaction prices but a weaker alignment between posted and promotion-adjusted prices. The behavioral implication was that retailers had used pricing instruments flexibly, passing a meaningful share of procurement savings through to consumers in competitive segments while retaining some savings as margin buffers or as financing for expanded assortments. Earlier industrial-organization examinations of retailer conduct had found similar patterns, noting that cost shocks did not map mechanically into shelf prices because

retail markups and brand positioning mediated pass-through. The present review added a harmonized quantitative scale to that claim, showing that sourcing remained a significant predictor of price outcomes even after strategic moderators were added. The evidence therefore suggested that international sourcing's primary influence on retail pricing had been to shift marginal costs downward and to intensify price competition, while the realized consumer-level effect depended on retailer strategy (Lang & Yang, 2019). This framing was consistent with earlier global value chain arguments that buyer-driven retail systems transmitted offshore cost structures into domestic consumption, yet it also clarified that the transmission had been conditional on market structure and pricing format rather than uniform across all retailers.

A second major point emerging from the discussion concerned the differential impact of exchange-rate-driven cost shocks versus tariff or border-cost shocks. Earlier studies of exchange-rate pass-through into domestic prices had shown partial and heterogeneous transmission, often stronger in categories with high import content and weaker in categories where domestic distribution services dominated final prices (Ricci, 2021). The review's meta-regressions aligned with this evidence by returning stronger negative pricing coefficients under exchange-rate exposure than under tariff exposure. Exchange-rate cost declines had been associated with additional retail price reductions, while tariffs had produced small average price increases and weaker negative associations overall. Prior tariff-episode research had reported that border-cost increases were frequently absorbed through margin compression, supplier renegotiation, or sourcing relocation, leading to incomplete retail pass-through. The current synthesis corroborated that mechanism by showing weaker tariff-price relationships and by documenting the role of substitution moderators in dampening border-to-store translation. The descriptive category patterns also reflected earlier natural-experiment findings that tariff exposure produced uneven price effects across goods, with some items showing increases and others showing stable prices accompanied by reduced discounts. By integrating evidence on promotions, the review helped reconcile why earlier tariff studies sometimes observed muted posted-price changes alongside clear consumer-incidence effects. Tariff shocks in the pooled dataset had corresponded more closely to changes in promotion-adjusted prices and to shifts in product mix than to immediate list-price jumps, indicating a strategic absorption pathway already emphasized in earlier retail economics. The implication for interpreting pass-through magnitudes was that shocks arriving through policy wedges altered retailer behavior in multiple dimensions, including markdown strategies, private-label positioning, and origin switching. Earlier supply-chain scholarship had stressed that tariffs accelerated sourcing diversification and nearshoring within global portfolios; the current review's finding that tariff exposure correlated with lower quality-adjusted gains supported the view that, under policy stress, retailers prioritized cost stabilization over quality upgrading. The contrast between exchange-rate and tariff channels therefore fit well within the existing empirical landscape, while the harmonized evidence clarified their relative strengths and their differential influence on nominal versus effective prices.

The heterogeneity results across tradability tiers and retail formats formed another core element of the discussion, and these findings were strongly compatible with earlier category-based and retailer-based research. Previous studies had repeatedly established that import competition and offshoring effects were largest in highly tradable, manufactured goods where foreign sourcing represented a large share of marginal cost (Millhouse, 2019). The review's category-stratified correlations and regression moderators amplified this claim by showing a stepped gradient: high-tradability categories had exhibited the most negative sourcing-price relationships and the strongest pass-through magnitudes, medium-tradability categories had shown moderate responses, and low-tradability categories had shown weak nominal pricing links. This ordering matched earlier observations that domestic service inputs and local distribution costs dilute the pass-through of foreign cost advantages in less tradable goods. The format-based moderator results were also consistent with the established "chain conduit" argument in retail globalization. Earlier empirical work on large national retailers had found that chains used scale purchasing, direct overseas contracting, and private-label systems more intensively than smaller retailers, allowing them to access deeper procurement savings and to impose stronger competitive discipline on local price structures (Lampropoulos et al., 2020). The present review confirmed this channel quantitatively: chain-dominant formats had shown larger negative sourcing

coefficients than non-chain or mixed formats. Earlier research on buyer power had suggested that large chains could either pass savings through to consumers or retain them as higher margins depending on competitive positioning. The current synthesis supported that two-branch outcome by documenting strong average price declines in chain-heavy categories alongside moderate but persistent price dispersion widening, a pattern consistent with chains offering both very low-cost imported tiers and premium imported varieties. The heterogeneity evidence therefore aligned with earlier work that treated U.S. retail markets as segmented, where globalization's consumer-price footprint was shaped by the intersection of category tradability and the sourcing sophistication of dominant retail formats. By presenting this segmentation in a harmonized quantitative framework, the review helped explain why earlier studies had sometimes produced conflicting national-average estimates (Araújo et al., 2021). Those differences reflected real structural variation rather than methodological noise, and the present evidence treated that variation as a central descriptive feature.

Figure 12: International Sourcing and Retail Outcomes



Consumer-market outcomes beyond nominal prices were another major theme in earlier literature, and the current review's findings strongly reinforced and extended that tradition. Previous welfare and variety-based studies had argued that globalization's consumer benefits were understated if analysis focused only on matched-item nominal prices, because imports increased the set of available varieties and enabled quality improvements at stable price points. The review's positive associations between sourcing intensity and imported-variety growth were consistent with these earlier claims and were especially strong in apparel and electronics, categories previously identified as high-turnover and highly import intensive. The descriptive data showing high SKU growth and elevated product entry and exit rates in these categories replicated the pattern earlier microdata studies had reported: global sourcing accelerated assortment churn and expanded low-price choice sets. Earlier research had also emphasized that quality upgrading could occur simultaneously with stable nominal prices, producing meaningful quality-adjusted affordability gains. The present synthesis supported that idea by finding significant positive sourcing effects on quality-adjusted prices even in categories where nominal price coefficients were smaller. This reinforced the view that retailers used foreign supplier ecosystems not only for cost minimization but also for climbing quality ladders within private labels and imported national-brand alternatives. Earlier substitution and demand studies had predicted that when imported choices proliferated, consumers became more price sensitive and more willing to switch away from domestic incumbents. The current review's positive elasticity-shift findings aligned with this prediction by showing that sourcing intensity and variety growth jointly strengthened substitution

patterns. This relationship helped interpret the observed pass-through gradients: higher substitution elasticity in import-heavy categories increased competitive pressure on retail markups, enabling stronger price transmission over time. Earlier literature had treated variety, quality, and substitution as interlinked channels that magnified consumer welfare gains beyond nominal effects, and the integrated evidence here confirmed that linkage on a pooled basis across categories (Lampropoulos et al., 2020). Thus, the consumer-market discussion converged on the conclusion that international sourcing had reshaped what U.S. consumers purchased, not simply what they paid for unchanged baskets.

The markup and market-power channel provided a behavioral explanation for several observed pricing results, and the discussion positioned these findings as consistent with earlier industrial-organization work on retailer conduct (Araújo et al., 2021). Prior studies had argued that retailers are not passive price transmitters; instead, they decide how procurement savings and shocks are distributed between consumers and margins. The review's pooled results supported this behavioral view by showing incomplete pass-through under tariffs and by documenting stronger nominal price declines in transaction-level measures where promotions are central to marketing strategy. Earlier research on powerful retailers had found that buyer leverage enabled lower factory-gate prices and favorable contractual terms, while the downstream distribution of those savings depended on competition and customer traffic goals. The evidence that chain-dominant formats amplified sourcing-price effects aligned with this mechanism, indicating that stronger buyer power increased the size of the cost advantage available for strategic allocation. Earlier documentation of private-label expansion in globally sourced categories also provided a relevant benchmark, as private labels tend to carry higher margins and allow retailers to manage price-quality ladders more precisely (Zhang & Roe, 2019). The current synthesis's combination of lower average prices with modest dispersion widening fit that earlier logic, suggesting that retailers used global procurement to expand both low-margin traffic drivers and higher-margin differentiated imported lines. Promotion behavior was a key part of this channel, and earlier retail economics had shown that promotions often serve as a flexible adjustment margin for both cost decreases and cost increases. The weaker alignment between posted and promotion-adjusted prices in the pooled evidence was consistent with earlier findings that retailers adjust discount depth and frequency to transmit savings quietly or to absorb shocks while maintaining visible price points. The net result was that the observed price outcomes reflected not just cost reductions at the border but also endogenous markup policy and promotion schedules. This behavioral explanation helped reconcile why tariff shocks had produced smaller nominal pass-through despite clear landed-cost increases observed in earlier border-price datasets (Porter et al., 2019). The discussion therefore treated retailer strategy as essential for interpreting cost-price linkages, reinforcing existing literature while providing harmonized evidence across categories and formats.

Methodological alignment between the review and earlier empirical traditions was also central to the discussion, especially in interpreting the reliability, validity, and collinearity findings. Previous quantitative reviews and meta-analyses had cautioned that inconsistent definition of exposure and outcomes yields artificial divergence in estimated effects (Rolf, 2019). The current synthesis addressed this concern by harmonizing sourcing intensity across direct import shares, firm procurement ratios, and embedded foreign value-added measures, and the construct-validity results showed that these measures converged strongly. That convergence echoed earlier arguments that visible imports and embedded foreign content represent different windows on the same underlying globalization exposure. In price measurement, earlier studies had diverged partly because some relied on macro indices while others used micro price systems that capture promotions and churn. The present measurement-validity findings indicated that micro data yielded larger average effects than macro indices, which was fully consistent with earlier evidence that aggregate CPIs understate pass-through when product turnover is high. The internal reliability of effect sizes within studies further aligned with earlier best-practice assessments, showing stable directional effects across specifications. Collinearity diagnostics found moderate overlap between import share and embedded foreign content, an overlap anticipated in earlier value-chain literature and managed here through blocked modeling. This methodological clarity strengthened confidence in the substantive results and helped explain why earlier single-category studies sometimes produced smaller or even unstable estimates: measurement

limitations and exposure misclassification can attenuate effects without reversing underlying relationships. The discussion therefore interpreted the pooled evidence as both substantively consistent with prior research and methodologically more integrated, emphasizing that credibility depends on matching sourcing measures to price constructs and on accounting for variety, quality, and churn.

The distributional dimension of international sourcing effects, while not framed as a normative implication, was evident in the heterogeneity patterns and aligned with earlier research on uneven globalization exposure across regions and income groups (Coles, 2021). Prior studies had documented that import-intensive price declines are concentrated in goods categories that form larger budget shares for lower-income households, and that chain penetration is higher in many lower-income markets, raising potential exposure to sourcing-driven affordability. The current synthesis's strong category gradients and chain-format amplification were consistent with those earlier distributional observations. Regional variation in import exposure, previously highlighted in studies mapping local retail structures and tradability mixes, was reflected here in the uneven category coverage and in the segmentation of pass-through magnitudes by exposure tier. Earlier literature had also shown that consumer welfare gains from variety expansion are not uniform because access to expanded assortments depends on retail format availability and local competition (Franck, 2020). The evidence that variety effects were strongest in chain-dominant, high-tradability categories fit that earlier narrative. At the same time, the modest widening of price dispersion in high-import categories aligned with established findings that globalization expands both low-cost tiers and premium tiers within the same category, producing richer price ladders rather than simple compression. This distributional discussion remained anchored in reported quantitative patterns, suggesting that international sourcing had produced multiple simultaneous consumer-market shifts: nominal affordability increases, variety-driven choice expansion, and quality-adjusted value gains, each expressed more strongly in markets where imported content and chain sourcing capabilities were highest. In aggregate, the discussion tied together cost, pass-through, strategy, and consumer-market channels as mutually reinforcing components of a coherent empirical story that matched the direction and structure of earlier studies while clarifying variability through harmonized quantitative synthesis.

CONCLUSION

International sourcing had been positioned in the reviewed quantitative evidence as a central organizing force in U.S. retail pricing and consumer-market structure because it connected domestic shelf prices to global production networks, foreign cost conditions, and cross-border policy environments. Across retail categories, international sourcing had operated through a cost pathway in which foreign factory prices, global freight and insurance charges, tariff wedges, and domestic distribution expenses combined to determine retailers' marginal acquisition costs, and these marginal costs then interacted with retailer markups, promotional strategy, and competitive positioning to shape observed prices. The pooled findings had shown that categories with higher foreign procurement intensity – especially highly tradable goods – had displayed more pronounced nominal price declines, with transaction prices falling more than posted prices, indicating that retailers had frequently transmitted sourcing advantages through discounting and promotional depth rather than only through list-price resets. At the same time, pass-through had been incomplete and heterogeneous, confirming that retail prices did not adjust mechanically to border costs; instead, price transmission had depended on import content, category tradability, retail-format dominance, inventory cycles, and the flexibility of sourcing portfolios to substitute across origins when shocks occurred. Exchange-rate-related cost changes had tended to show stronger and more consistent retail-price responses than tariff shocks, while tariff exposure had been associated with weaker nominal pass-through, suggesting that retailers had absorbed part of policy-driven cost increases through margin compression, promotion redesign, and reallocation of sourcing away from exposed origins. Consumer-market outcomes had extended beyond nominal price changes in ways that materially altered household purchasing environments. Higher international sourcing intensity had been linked to greater imported-variety expansion, faster product turnover, and wider assortment ladders within categories, which effectively lowered the cost of achieving preferred consumption bundles even when matched-item nominal indices moved modestly. Quality upgrading had also been evident, as internationally sourced supply ecosystems had enabled retailers to introduce both low-price entry goods and premium feature-rich goods, raising

quality-adjusted value per dollar and reshaping the experience of affordability. These assortment and quality shifts had reinforced substitution effects, increased consumer price sensitivity and intensifying competitive pressure on incumbent domestic and branded goods, thereby strengthening price discipline over time. Heterogeneity across space, income, and retail format had remained a defining empirical feature: chain-dominant markets and high-import regions had shown the strongest sourcing-price linkages and the richest imported assortments, while lower-import baskets and non-chain settings had shown smaller nominal effects yet still registered measurable changes in variety and choice structure. Methodological syntheses had supported these interpretations by demonstrating reliability within studies, convergence across alternative sourcing measures, predictable differences between macro and micro price systems, and manageable collinearity among predictors. Taken together, the quantitative literature had portrayed international sourcing as a multi-channel driver of U.S. retail evolution, lowering marginal costs, influencing strategic markups and promotions, broadening variety and quality frontiers, and producing segmented consumer-market outcomes that varied systematically by category tradability and retail-structure exposure.

RECOMMENDATION

Recommendations derived from the quantitative review should focus on strengthening measurement alignment, improving causal identification, and enhancing category-sensitive interpretation so that evidence on international sourcing and U.S. retail outcomes becomes more comparable, policy-relevant, and consumer-market accurate. First, future empirical work should adopt harmonized sourcing exposure metrics that can be reported alongside each other within the same study, including direct import shares, firm-level foreign procurement ratios, and embedded foreign value-added estimates, because pooled findings indicated that effect magnitudes varied partly due to inconsistent exposure definitions rather than true behavioral differences. Reporting multiple exposure measures in parallel would allow direct cross-validation and reduce measurement-driven disagreement across categories. Second, retail price outcomes should be captured in a multi-layer form that includes posted prices, transaction prices, and promotion-adjusted prices, since the evidence showed that international sourcing advantages often translated into greater discounting and altered promotion intensity rather than uniform list-price movements. Studies relying only on macro price indices or posted prices should therefore be complemented with micro price data or carefully constructed indices that account for promotional calendars, product entry and exit, and item replacement, ensuring that measured price effects reflect real consumer payments. Third, category-level comparisons should be expanded with consistent tradability and import-content tiers so that apparel, electronics, home goods, toys, and grocery tradable can be evaluated on a shared quantitative scale; sparse harmonized comparisons were identified as a key gap, and addressing it would clarify which sectors are most sensitive to global procurement and which operate primarily through non-price channels. Fourth, combined modeling strategies should be prioritized, integrating landed-cost shocks, markup responses, and substitution-variety outcomes within one framework, because the review indicated that isolated pass-through estimates often missed the simultaneous adjustments retailers and consumers made through margin buffering, origin switching, assortment reconfiguration, and quality upgrading. Fifth, identification designs should continue to lean on exogenous foreign cost shocks such as tariffs, exchange-rate shifts, freight disruptions, and foreign supply interruptions, but should also incorporate explicit tests of supplier substitution capacity and inventory lags, since these moderators explained why border shocks produced partial retail pass-through. Sixth, distributional and spatial heterogeneity should be treated as core analytical dimensions rather than robustness add-ons, with studies routinely estimating effects by region, retail format, and household basket composition, because consumer welfare shifts were not uniform nationally and were strongest in high-import, chain-dominant environments. Finally, transparency protocols in quantitative reviews should be strengthened through standardized extraction templates, quality scoring rubrics, and public reporting of effect-size conversions, enabling replication and clearer synthesis across disciplines. Collectively, these recommendations aim to move the evidence base from fragmented, channel-specific results toward integrated, category-aware, and consumer-relevant quantitative conclusions about how international sourcing shapes U.S. retail pricing and market structure.

LIMITATIONS

The limitations of this quantitative review had been shaped by the scope and structure of the underlying evidence base as well as by unavoidable measurement constraints present in international sourcing research. A first limitation had been the uneven distribution of available studies across retail categories and formats, with a heavy concentration in highly tradable, import-intensive sectors such as apparel, toys, electronics, and general merchandise, while grocery tradables and mixed domestic-foreign categories had been less frequently analyzed. This imbalance had constrained the precision of cross-category comparisons and had made pooled estimates more reflective of import-heavy baskets than of the full U.S. consumption landscape. A second limitation had involved heterogeneity in sourcing exposure definitions across studies; even though construct-validity checks had shown convergence among direct import shares, firm procurement ratios, and embedded foreign value-added measures, these indicators had not been reported uniformly, and some studies had relied on only one measure, creating residual incomparability in effect sizing. A third limitation had related to retail price measurement, where macro price indices and micro scanner or online datasets differed in their ability to capture promotions, product turnover, and quality or variety change. Because many tradable categories experienced high item churn and rapid model replacement driven by international sourcing, nominal price series that did not adjust for replacement or attribute upgrading may have understated consumer gains, and not all reviewed studies had applied variety- or quality-sensitive corrections. Fourth, the review had remained dependent on the identification strategies used by original studies, and although many had exploited exchange-rate movements, tariff shocks, or foreign supply disruptions, strategic endogeneity of sourcing choice could not be fully eliminated in all contexts. Retailers had often altered sourcing in response to anticipated demand shifts, competitive repositioning, or product-line strategy, and where exogenous shocks were weaker or absent, estimates may have partially captured strategy-driven effects rather than pure cost-based sourcing impacts. Fifth, origin misclassification had persisted as a background limitation, because final-goods import tags did not always reflect embedded foreign inputs within domestically assembled goods, and some customs linkages could not perfectly match the first importer to the final retailer. Sixth, the capacity to detect distributional heterogeneity had been limited by the reporting practices of primary studies; only a subset had provided region-specific, income-basket-specific, or non-chain-specific estimates, restricting the depth of pooled inference on spatial and socioeconomic segmentation. Finally, publication patterns and data access asymmetries may have affected the available evidence, since large national chains and high-visibility categories were overrepresented in proprietary datasets, while smaller retailers and niche categories were less visible, potentially biasing pooled results toward the behavior of sourcing leaders. These limitations had not overturned the directional consistency of findings, but they had narrowed the interpretive boundary conditions, indicating that estimates should be read as strongest for import-intensive categories and chain-dominant retail environments and more tentative for lower-import sectors and under-studied market segments.

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