

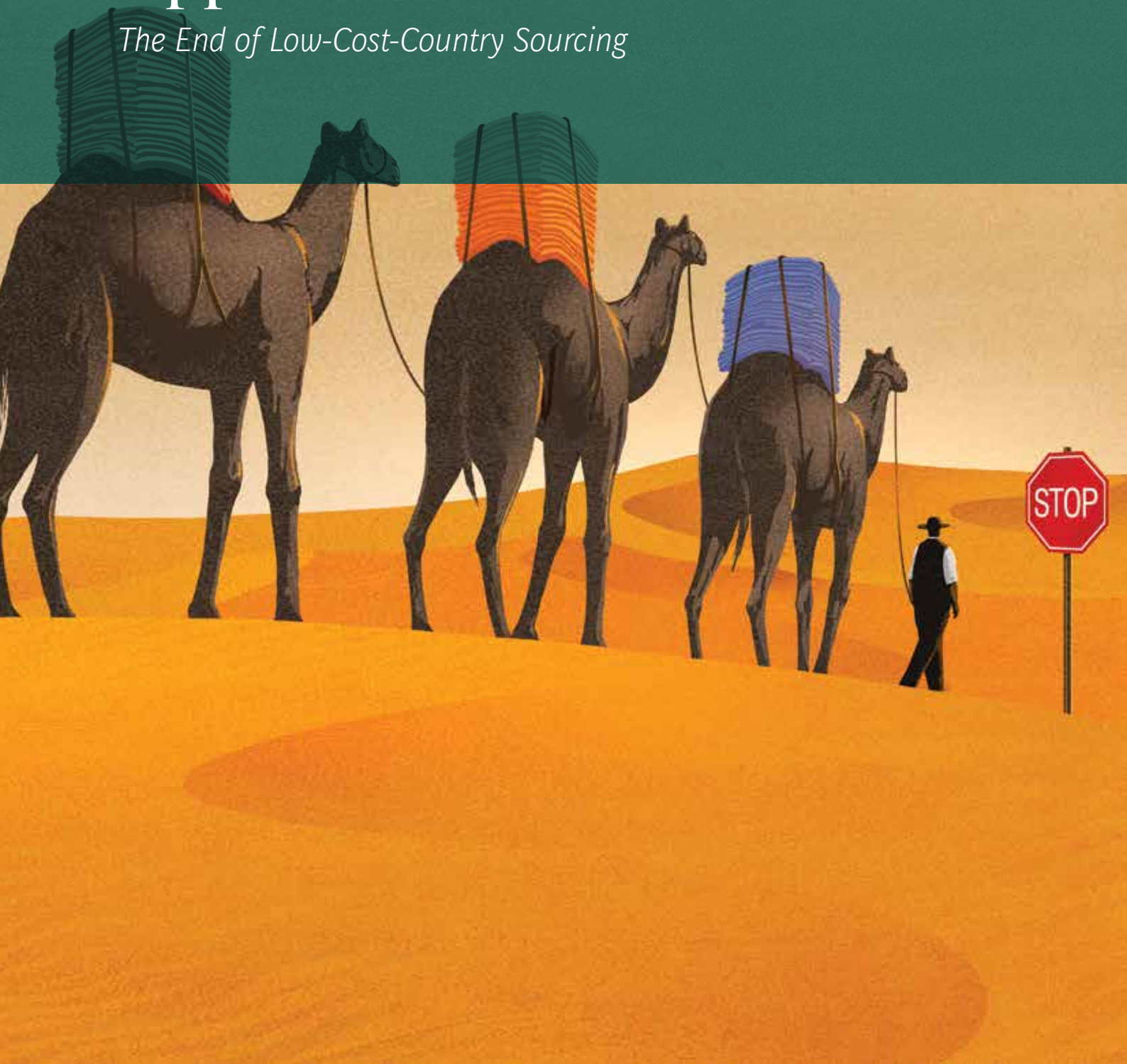
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Apparel at a Crossroads

The End of Low-Cost-Country Sourcing



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Apparel at a Crossroads

The End of Low-Cost-Country Sourcing

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AT A GLANCE

Global apparel makers must halt the migration of production from one low-cost country to another if they are to generate sustainable efficiency gains and improve their speed to market.

ENCOURAGING INNOVATION AT SCALE

Innovations in production are enabling apparel makers to site manufacturing centers closer to their customers and get ahead of collapsing fashion cycles.

BRINGING TRANSPARENCY TO COSTS

Apparel companies need to adopt a new framework for tracking costs to gain control over expenses and provide their principal production partners with incentives to push through productivity improvements.

MANAGING RAW MATERIALS

Through better coordination, tier one, tier two, and tier three suppliers can make lasting efficiency gains by pre-positioning raw materials and adjusting production to reflect seasonal sales.

FOR DECADES, APPAREL MAKERS have worked under the assumption that labor costs must be kept as low as possible in order for garments to be produced at competitive prices. This widely held belief has caused the industry to move from country to country as labor cost increases erode each local market's temporary advantage.

One day, and possibly soon, this journey will come to an end. Cheap labor is becoming a rare commodity, and the number of low-cost countries is dwindling. Apparel makers need to get ahead of this trend by assessing what they can do in their existing facilities to generate sustainable efficiency gains, improve their speed to market, and take the pressure off labor cost management.

The challenge calls for apparel companies to view their production processes and partners through three strategic lenses: innovation, collaboration, and proliferation. By adopting production innovations that improve speed and efficiency, such as new bonding and gluing technologies, they can more readily locate their manufacturing centers closer to customers and increase their responsiveness to fashion cycles. By working together with suppliers to adopt a standard unit of measure, they can help bring cost transparency to the supply chain, providing their production partners with an incentive to improve productivity. And by improving coordination with tier one, tier two, and tier three suppliers, they can more actively manage their raw-material needs.

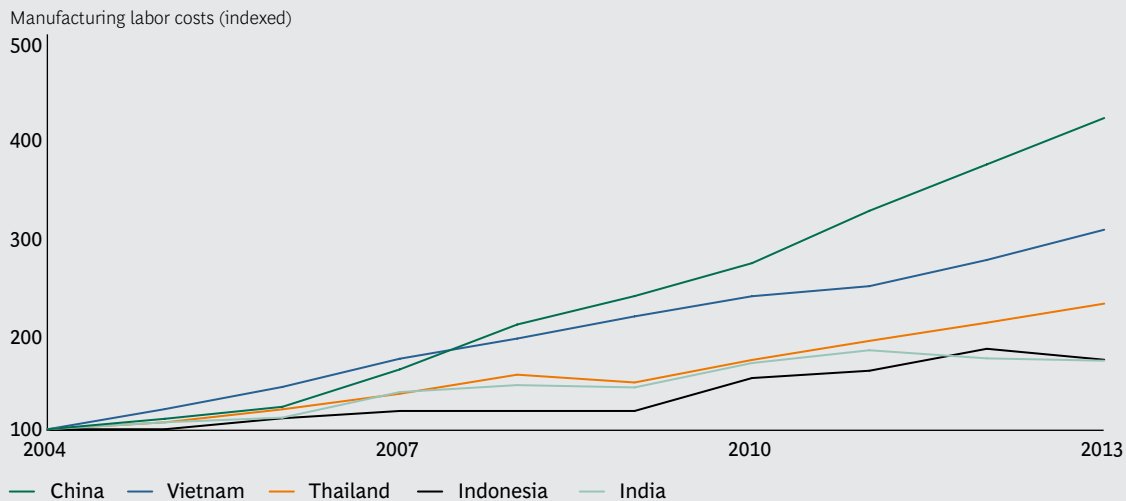
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The End of the Road

Earlier this year, the first major U.S. apparel retailer announced plans to produce clothing at factories in Myanmar, where Western sanctions were lifted two years ago. This was just the latest in a long string of stops for the apparel industry in its migration of production facilities to countries with low labor costs. Rising wages across the Asian supply base have continued to chase these companies from China and Thailand to points South, East, and West, and now Ethiopia and Myanmar are in their sights. (See Exhibit 1.)

The result of this ongoing journey is that cheap labor is becoming increasingly scarce. Even now, some countries in the industry's crosshairs are constrained in their ability to absorb production from elsewhere owing to a limited pool of skilled workers and underdeveloped infrastructure. And suppliers need to import many raw materials because the supply of fabrics, trims, and packaging materials is inadequate.

EXHIBIT 1 | Labor Costs Are Rising Across Asia



Sources: Euromonitor International; Economist Intelligence Unit.
Note: Manufacturing labor costs per hour in dollars indexed to 2004 costs.

Production inefficiencies are another hitch, often offsetting the labor cost advantages that draw apparel makers to new countries in the first place. But this is a problem that many in the industry are not even aware of. Cost comparisons are largely anecdotal because the industry lacks a widely used standard for measuring worker productivity. When workers from one country are less productive than those in another, the differences can go undetected.

Even when cost advantages still exist, infrastructure woes—such as frequent power outages and phone and Internet disruptions—can generate additional costs, if not worse problems. In severe cases, poor production conditions can be fatal, as demonstrated by the Savar building collapse in Bangladesh in 2013. And political instability remains a potent threat in many regions.

These challenges are compounded by an increasingly fickle consumer market. Fashion cycles are collapsing across the industry, making it ever more important to get to market quickly. Consumers are tracking the latest fashions online and buying accordingly, creating a herd mentality that renders clothing items out of fashion after just one season. As a result, the lag time between the emergence of a trend at the designer level and mass dissemination has shrunk from one year to as little as three to five weeks for fast-fashion producers.

A conflict is emerging between these shorter trend cycles and the longer production lead times needed in new low-cost nations. Production centers in countries such as Myanmar and Ethiopia may offer some relief from rising labor costs elsewhere, but their cost advantage is likely to be ephemeral and may already be eroding as nonlabor costs add up. Apparel makers' journey from low-cost country to low-cost country may not have reached its terminus yet, but it will someday soon. That's why industry leaders are weighing the costs and benefits of staying put.

Innovation: Improving Production and Development

Some 350 years have elapsed since English weaver and inventor James Hargreaves brought the world the spinning jenny, a device that dramatically reduced the amount of work needed to produce yarn. Since then, innovation has bestowed on the industry a number of time-saving and cost-efficient breakthroughs, including mechanized textile looms, safety pins, zippers, fabric fasteners, and, of course, the sewing machine.

Today, plenty of opportunities still exist to improve production speed and efficiency, enabling apparel makers to locate manufacturing centers closer to their customers and get ahead of collapsing trend cycles. Used at scale, innovations in production have the potential to reshape the apparel manufacturing landscape.

Bonding and Gluing Technologies. One of the biggest impediments to improving speed to market is the industry's historic use of seams, which require labor-intensive sewing and cutting.

In recent years, bonding and gluing technologies—which use bonded adhesive films and processes such as ultrasonic heating and high-frequency radiation to fuse together layers of fabric—have helped supplant traditional sewing methods in active wear and sportswear. Increasingly, these new seamless technologies are being used in a wider range of yarns, including cotton, wool, and other conventional fibers, as well as high-performance microfibers.

According to industry experts, bonding and gluing technologies can produce an entire small garment in 30 to 40 percent less time than conventional cut-and-sew processes. In addition, bonding and gluing require fewer quality checks, saving time on the back end.

Digital Technologies. Digitally enabled design is another innovation that promises to reduce production costs and enable quick turnaround on customer orders. Sophisticated computer-aided design software is enabling the rapid prototyping of textile designs, in addition to helping apparel makers reduce waste and boost efficiency in pattern making.

Digital printing technologies are helping companies address compressed design cycles by limiting the handling of physical samples and significantly reducing design-to-shelf times. Three-dimensional data from the design and development stages can be redeployed for marketing activities and used as the basis for bidding and production at vendor sites. Finally, design automation is making it easier for producers to communicate with their suppliers during the design process.

One U.S.-based footwear designer demonstrated the impact that 3D printing technologies can have on design and production. The company used high-powered lasers to design a football cleat that minimizes slippage on the playing turf. The technology enabled the company to create, test, and iterate shapes not possible with traditional manufacturing processes. Not only did it allow designers to make updates within hours rather than months, it also helped deliver a product to the marketplace that promises to enhance athletes' performance.

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Waterless Dyeing. Pressure from environmental groups has prompted some apparel makers to reduce the voluminous amounts of water required in traditional textile and garment dyeing by employing waterless dyeing technologies. Some offerings on the market today also enable color pigments to penetrate much more quickly into textile fibers, in some cases cutting dyeing time in half. Such methods promise to expedite turnaround on customer orders.

These technologies could pave the way for apparel makers to produce smaller batches, and possibly even allow for made-to-order production of individually designed and sized garments. This would not only allow companies to match the market's growing need for speed, but also reduce the costs of retail inventory surpluses and associated price reductions.

Collaboration: Devising a Cost Standard

One of the chief reasons that global apparel makers continue to target labor cost reductions is the limited visibility that they have into their other production expenses. Supply contracts are based not on a breakdown of cost components but rather on price negotiations that take their cue from prior-year costs for the same style or from historical market information, such as minimum wages in the supplier's country. In some advanced relationships, compensation is tied to the complexity of the garment, but even here, there are ways to game the system by ensuring that specs are tailored to stay just above or below these thresholds.

This undesirable status quo grants apparel makers little control over costs, robbing them of the ability to exploit potential supplier-improvement initiatives and other savings levers. With few windows onto the various links in the supply chain, predicting future costs and nailing down production times become extremely difficult.

For low-value brands, seeking the lowest bid may of course be an option, since quality, product innovation, and fashion trends are not significant concerns. But makers of high-value brands ignore these factors at their peril. Such companies need a costing framework that enables them to lessen the burden on labor cost management and provide their production partners with incentives to make expense and productivity improvements across their supply chains.

Collaborative Costing. When consumers shop for produce, they can calculate exactly what price they'll have to pay thanks to a standard unit of measure that's been used for centuries: kilograms or pounds. Apparel lacks such a standard measure, so numerous factors affect the cost of a garment, including not just labor but also the materials used, worker productivity, and the energy required to make it. But apparel makers have historically had little insight into these inputs and how much they fluctuate by order and over time.

Leading companies are working with their suppliers to close this gap by identifying and isolating three core cost components: material costs, production time in minutes, and cost per minute. While material costs are fairly easy to determine, production times are more difficult to compare across the industry. One existing standard, general sewing data (GSD), attempts to do this by breaking down work operations

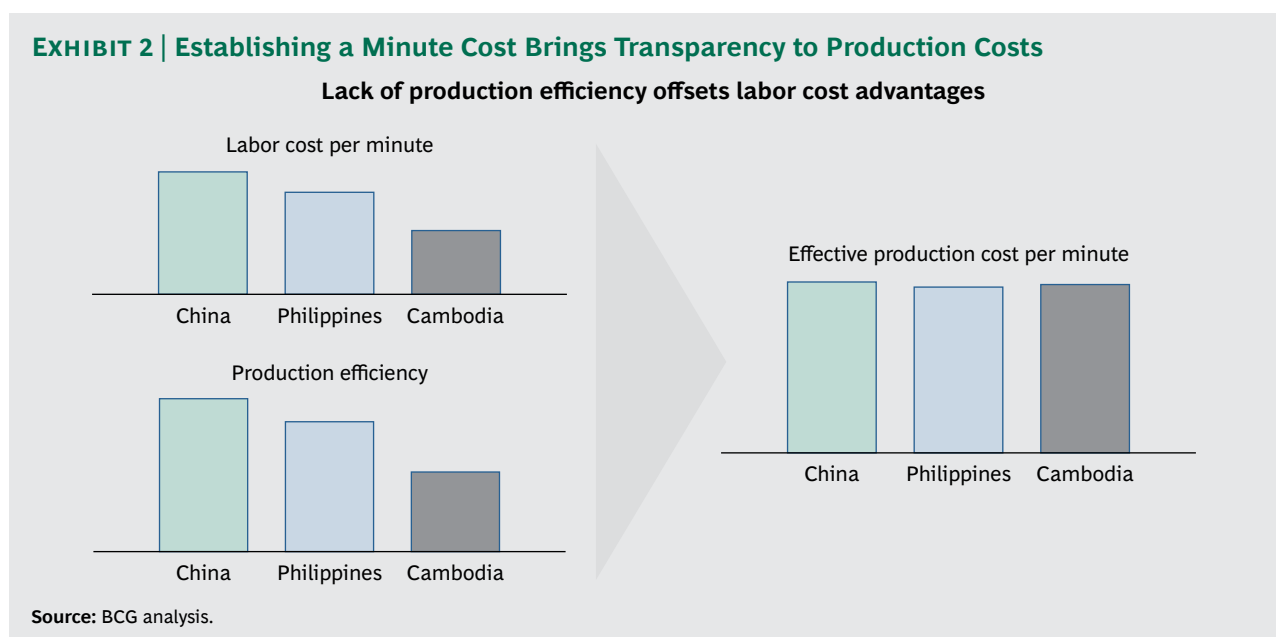
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into human-motion elements, assigning each one a predetermined time for completion depending on the work environment. Apparel companies that have adopted GSD and mechanisms like it are able to measure how much they should be paying based on the minutes required to make a specific garment.

Establishing a per-minute basis for producing garments allows apparel companies to compare suppliers across geographies and determine which are the most efficient. In some cases, production may be so inefficient as to erode the labor cost advantage of the local market. For instance, tier one suppliers in Cambodia enjoy a labor discount relative to their counterparts in the Philippines, but that advantage evaporates because Cambodian workers are less efficient. (See Exhibit 2.) All other things being equal, it makes better business sense to use suppliers in the Philippines.

This type of costing formula facilitates negotiations between apparel companies and suppliers because cost and productivity benchmarks are already in place. To be sure, such costing frameworks are far more likely to work with tier one than with tier two suppliers. Tier two suppliers often don't have as much wiggle room to improve efficiency; their materials are more like commodities, with prices influenced by local competitors and the local market. Tier one partners, in contrast, have a vested interest in reducing the time it takes to produce a single garment, as this frees them up to fulfill more orders and thus earn more business.

Of course, each company's preferred costing approach depends on the complexity of the garments produced and the supply chain involved. (See the sidebar, "Four Sourcing Approaches and Their Strategic Fit.") These sourcing and costing approaches can and should be seen as part of a continuum of increasing collaboration between the producer and its supplier base, ultimately leading to an end product with a cost structure that is easy to understand.



FOUR SOURCING APPROACHES AND THEIR STRATEGIC FIT

Apparel companies tend to use one of four sourcing approaches to establish a cost basis with their suppliers:

- *Tendering.* This involves tendering bids to select a margin-optimized quote. It is applicable in spending categories that are commoditized and in which the supply base is broad. The relationship between the apparel company and its suppliers is ad hoc and transaction based.
- *Direct Buying.* In this scenario, producers engage suppliers in direct price negotiations in the fabrication of simple but differentiated apparel offerings. The supply base is heterogeneous, and the producer-supplier relationship is nonbinding and selective.
- *Cost Management.* This approach is used in complex apparel lines, the producer and its suppliers agreeing to a cost structure and negotiating around it. The supply base is typically consolidated, and the producer-supplier relationship is collaborative and long term.
- *System Costing.* This is the most dynamic sourcing approach, as it establishes cost parameters at the outset and involves a highly consolidated supply base, allowing market forces, rather than traditional tendering practices, to set the cost for each article. Employed in highly complex apparel lines, system costing helps produce advanced cost-structure insights and manufacturing knowledge that suppliers can use to improve their own operations.

Cost Transparency: Clarifying Savings Opportunities. The transparency that comes from collaborative costing helps set the stage for savings opportunities and margin improvement along the value chain, from design to sourcing allocation to the production floor.

With a minute standard, producers can set a margin target and identify the materials and features that will help them design to the resulting cost specifications. They can then optimize designs in collaboration with suppliers to reduce production time. Working together, producers and suppliers are able to identify savings opportunities in materials and engineering without affecting the consumer's perception of value. To take a simple example, if the cost of a garment is too high to hit the margin target, a pocket or collar can be dropped from the design.

Such a process puts apparel companies in a better position to understand how the use of different procedures and workflows to make a garment will affect manufacturing efficiency and price. For instance, they may be able to realize time savings by implementing a different set of hand movements. They will also be better able to assess the merits of introducing innovations—such as the gluing techniques and digital printing technologies identified above—to boost productivity. Finally, the availability of costing information allows companies to assess factory standards at

all their manufacturing sites and determine which plants offer the greatest potential for productivity gains.

Proliferation: Engendering End-to-End Supply Chain Efficiency

The sphere of influence for most apparel companies has historically been limited to finished goods. Most industry players spend the lion's share of their time and energy promoting their brands through marketing and sales. Meanwhile, the actual producers—the tier one, tier two, and tier three suppliers—have enjoyed relative autonomy, with those at the early stages of production being the furthest removed from the apparel maker's strategic reach.

Increasing collaboration with tier one partners is a significant first step in offsetting higher labor costs, but additional opportunities can be created by pushing efficiency and speed improvements through to the other end of the supply chain.

Managing Raw Materials. Traditionally, labor costs have accounted for roughly 30 to 40 percent of a finished garment's total cost, making tier one suppliers an obvious target for efficiency improvements. But the earlier stages of production, when raw materials are purchased and manipulated, are the largest cost drivers, accounting for as much as 70 percent of the total.

Leading companies in the industry are beginning to actively manage their raw materials, typically through one or more of four principal means:

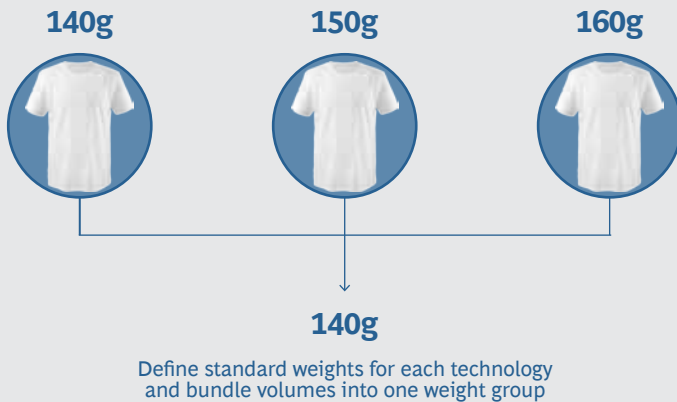
- *Materials-Engineering Excellence.* The cost transparency captured in tier one collaborations is enabling apparel companies to work with their suppliers further down the supply chain to optimize fabric selection. They are gaining a better understanding of how their choice of fabrics and manufacturing techniques affect a garment's total cost, enabling them to make money-saving choices during product development and in the early stages of production. These include the type of yarn chosen, any color effects used in the yarn, and the technology used to manufacture the greige and dye the fabric.
- *Reduced Portfolio Complexity.* Production complexity in the apparel industry is particularly onerous for tier two suppliers, from both a quantity and a timing perspective, and this complexity inflates companies' production costs. Some leading apparel makers are addressing this challenge by consolidating their orders, using fewer yarns and weight classes and reducing the complexity of their overall portfolio. (See Exhibit 3.) In some cases, these measures are allowing them to reduce their fabric count by up to 83 percent. One European retail company achieved fabric count reductions of 20 percent in the spring and summer months and 40 percent in the autumn and winter months by developing standards for fabric use. These included ensuring that each fabric was used in at least 50,000 pieces per season and that standard fabrics accounted for 80 percent of the overall sourcing volume, among other requirements.
- *Value Chain Orchestration.* Similarly, some companies are realizing significant cost reductions by timing orders so as to level the load over the course of the

Leading companies in the industry are beginning to actively manage their raw materials.

EXHIBIT 3 | Fabric Consolidation Reduces Materials Complexity

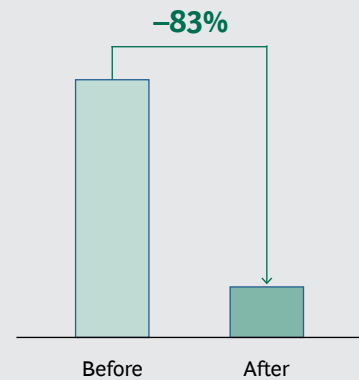
Weight group consolidation

One 100% cotton jersey



Reduced materials complexity

Number of fabrics



Source: BCG analysis.

year. Basing preproduction on forecasts that attempt to get in front of swings in demand has proven to be an unreliable industry practice. Problems with these projections have traditionally contributed to a “bullwhip effect” throughout the supply chain, as larger and larger swings in inventory cascade through tier two and tier three suppliers in response to real changes in consumer demand.

A new tack has some companies turning to proprietary demand data to build statistical models that identify “safe” production quantities. That information is then passed on to tier two suppliers, which use it to even out production. By allowing suppliers to boost production during the traditional off-season and resell capacity once saved for peak months, order timing promotes 24/7 capacity utilization over the course of the year. And there are ancillary benefits. For instance, the use of dye and greige is reduced, leftover rates in greige production fall, and reprocessing costs for flawed dyes decline. More efficient use of factory capacity cuts overtime labor costs, reduces costly machine starts and stops, and limits water and chemical usage. Earlier and bundled yarn purchasing helps reduce overall yarn costs and allows for greater freedom in the timing of purchases.

Integrated Supply Chains. While the steps described above are helping apparel companies address their cost basis, many still have to account for their speed to market, given how quickly fashions go in and out of style. The value they place on timing depends on which of three specialization strategies they have adopted:

- *Value.* Winners succeed by offering trendy clothes at attractive price points, delivering an excellent value proposition.
- *Fast Fashion.* Winners excel by reacting to market trends with short cycle times, empowered by a fast and flexible supply chain.

- *Full Brand Experience.* Winners are experts in creating a full brand experience and loyal customer communities on the strength of their brand execution.

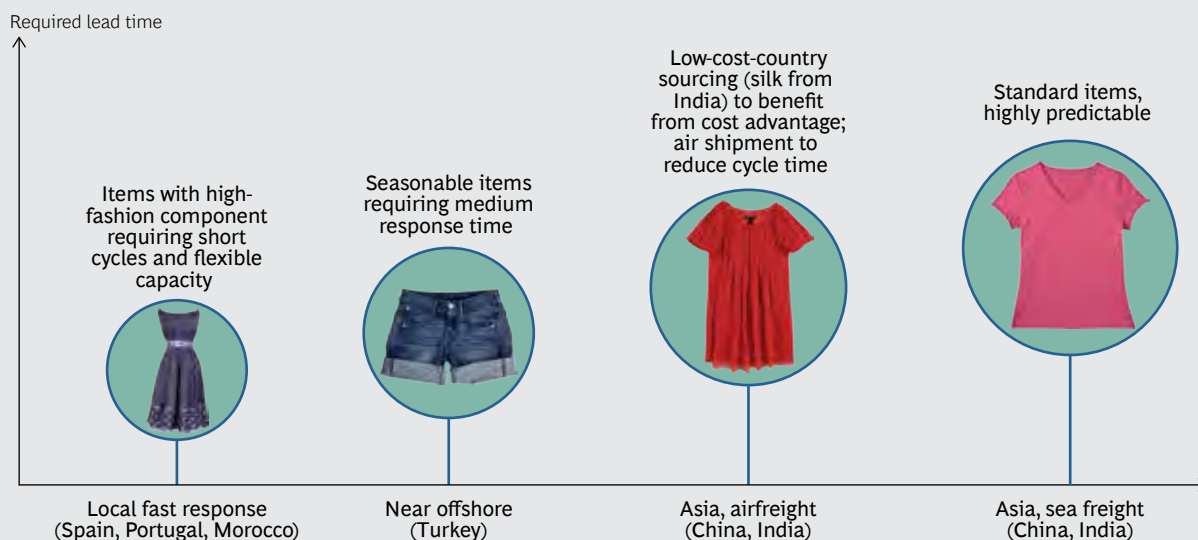
While timing isn't as important to companies focused on value or the full brand experience, fast-fashion adopters succeed or fail on their responsiveness to emerging trends. Their business model forces them to consider new ways of integrating their supply chains so they are ready to ramp up production or transition to new styles as fashions evolve.

One major apparel retailer has achieved consistent revenue growth and set an industry standard for fast fashion by adopting a "pull" model for all of its fashion lines. Each season, it enlists a seven-step process to determine which clothing lines to produce. Before the season has begun, the company defines the themes for the season, including the fabrics and colors to be used. Designers build the initial collection, representing 15 to 20 percent of the season's styles. Next, the company allocates production capacity, staying in-house for time-sensitive items. It then pre-positions about two-thirds of its raw materials in order to be ready to respond quickly to market trends.

During the season, the company analyzes sales, staying in constant communication with its stores and with the design team. It resupplies items that are selling well through accelerated production and delivery, usually within three to four days. Designers then create new styles by adapting the best sellers using the pre-positioned material.

This retailer's fast-fashion approach relies on factories that are vertically integrated and geared for speed. Orders come in on Monday afternoon, ship Friday night, and are available in stores the following Thursday. The retailer chooses production facil-

EXHIBIT 4 | One Company's Supply Chains Are Differentiated by Segment



Sources: Company information; BCG analysis.

ities based on their proximity to the European market, the complexity of the fashion components, and the local availability of raw materials. (See Exhibit 4 on the previous page.) Its production partners are guaranteed orders every month, and they know the minimum and maximum quantities needed at least six months in advance. In return, they hold materials such as dyed or undyed fabrics at no liability to the retailer.

SOONER OR LATER, there will be no low-cost countries left to meet the apparel industry's ever-shifting demands. Already, constraints are starting to surface in the form of unexpected delays, unavailable workers, and undesirable headlines. Today, apparel makers are tallying the costs associated with issues such as production inefficiencies, skilled-labor shortages, and political instability, and they are questioning whether fleeting labor-cost advantages are worth the trouble of relocating.

The industry has other options beyond picking up stakes every few years. Innovation in technologies and development strategies are creating a new source of cost efficiency. Costing collaborations are giving manufacturers fresh insights into costs across the production floor, creating a basis for comparison and production shifts among countries. Finally, industry leaders are reporting early successes in managing and actively influencing their tier two and tier three costs.

Industry participants that seize these opportunities have the potential not only to halt the decades-long migration to low-cost countries, but to effectively head others off at the pass. With speed to market so important these days—and likely to be even more so in the future—the spoils will fall to those that free themselves from the widespread fallacy that labor costs are the industry's only lever left to pull.

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