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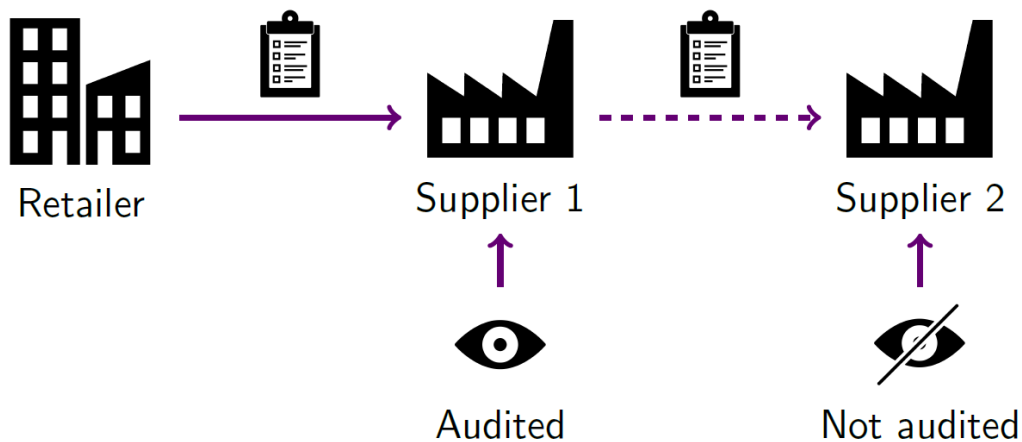
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Four Myths About Unauthorized Subcontracting

Organizations that want to improve supply chains visibility — and reduce diverted orders — must use analytics and think beyond price

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It has never been more important for a brand to know who exactly is making its products.

A case in point: Last summer, a Sunday Times of London investigation revealed that workers making clothes for “ultra-fast” fashion brand Boohoo toiled in cramped conditions during the COVID-19 pandemic, with lax safety measures and for less than minimum wage.¹ Though it claimed that the factory was not a direct supplier, Boohoo lost more than £1.5 billion in market value in the immediate aftermath of the Times report.²

As Boohoo discovered, suppliers can pose serious risks to a company's reputation and finances, and the nature of the modern supply chain — global, complex, and frequently opaque — only increases the dangers. Companies that outsource manufacturing often discover that their suppliers rely in turn on layers of subcontractors, often without the buyer's knowledge or approval. Making matters worse, these unauthorized subcontractors are more likely to operate unsafe workplaces, use unfair labor practices, and violate health and environmental laws.

Unauthorized subcontracting is the bane of businesses that are working to improve visibility into their supply chains. The 2013 collapse of Rana Plaza, an eight-story commercial building in Bangladesh, killed more than a thousand apparel workers and drew worldwide attention to the problem. Workshops in the building made clothing for several prominent brands, including Italian fashion company Benetton and Irish retailer Primark, but many of the companies claimed they weren't aware that their orders had been farmed out to workrooms in the substandard building. These problems aren't limited to Bangladesh and go beyond building compliance: Companies have come under fire for using subcontractors that employed children³ and exploited forced labor^{4,5}.

The pandemic has made supply chain visibility even more urgent, by exposing the terrible working conditions in plants producing essential goods. A notorious example is the meatpacking industry. In Germany, 180 workers at one slaughterhouse tested positive for the coronavirus; a senior union official blamed “a sick system” and a meat industry that has long relied on “dubious subcontractors.”⁶

In response to the workplace problems in their supply chains, companies have adopted codes of conduct, regular audits, and requirements that plants adhere to international health and safety rules. However, if they want to demonstrate their commitment to the well-being of the people who make their products and communities in which they live, they'll need to get a grip on the problem of unauthorized subcontracting.

One major challenge is that data on unauthorized subcontracting is hard to come by. We collaborated with a large supply-chain intermediary that in the aftermath of the Rana Plaza disaster kept records of orders that went to subcontractors not on buyers' authorized lists. In our analysis, more than a third of the 32,000 orders — placed by 30 brands with 226 apparel factories — involved an unauthorized supplier.⁷

Our research findings allow us to debunk four common misunderstandings or myths about the practice of unauthorized subcontracting — and point to specific guidance for companies seeking to gain greater visibility into these most opaque links in their supply chains.

Myth 1: All factories (in developing countries) are doing it.

Because the problem is so widespread and the practice has been going on for so long, it's easy to imagine that *all* factories in developing countries have dealings with unauthorized and substandard workshops. But the data suggest that impression is incorrect.

In fact, we found that manufacturers vary widely in their use of unauthorized factories. Only a small fraction, 11%, *always* send their orders to a non-compliant subcontractor, while a majority (57%) never engage in the practice. The rest farm out orders occasionally, depending on the circumstances. (See Myth #2.)

What's even more revealing, the factories that are prone to use unauthorized subcontracting share some common characteristics. For one thing, they tend to be less specialized and make a greater number of different product categories—pants, sweaters, and overcoats, for example (see Figure 1).

This suggests that when factories commit to deliver products but lack the specialized know-how for making them, they are more likely to turn to unauthorized subcontractors to fill those orders.

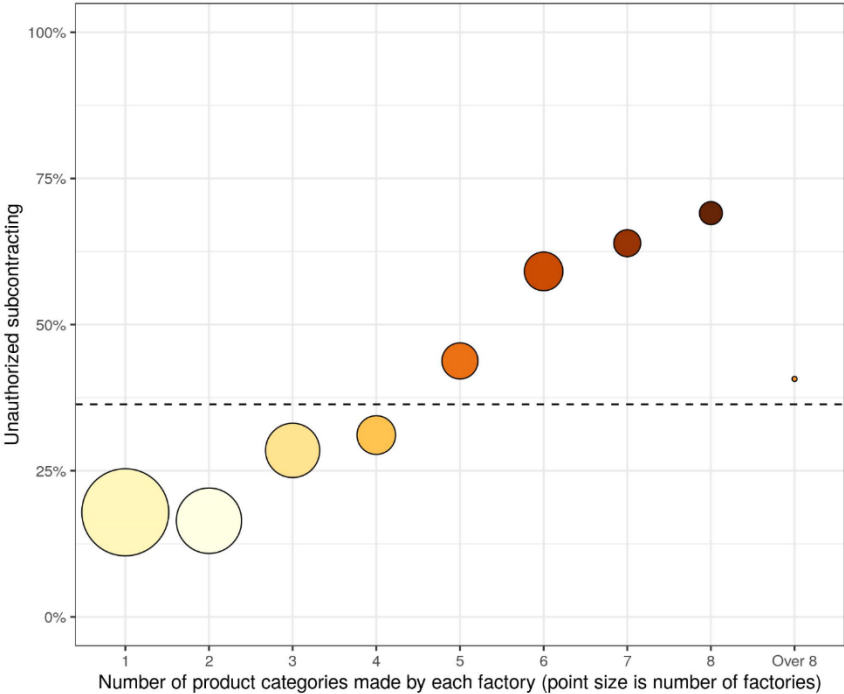


Figure 1: Unauthorized subcontracting is above the average (the dotted line) for factories that produce more than four product categories.

Unauthorized subcontracting also varies by country. On average, Vietnam had the highest level of incidence, closely followed by Cambodia and China. This doesn't necessarily mean that all those subcontractors have substandard operations, however. In fact, many of the unauthorized factories in China meet higher safety standards than the average workshop in Bangladesh. But paradoxically these plants are not on the authorized list as they lack the resources to go through all the paperwork and approvals needed, even though they can meet all the requirements to do so.

Myth 2: Unauthorized subcontracting is mostly driven by price.

Not surprisingly, price pressure — when a buyer offers a price lower than that paid for a similar order in the past — can make it more likely the supplier will turn to an unauthorized subcontractor. For instance, prices that were 25% lower increased the chance of unauthorized subcontracting by 9%. This fits with the conventional wisdom: Subcontracting is a way for a manufacturer to cut corners and save money. But while price is important, it's not always the main driver.

More important is whether a factory is running close to capacity when a new order comes in. At some point, the factory can't fulfill all its contracts, and farming them out becomes a way to manage the overflow and keep its customers satisfied.

We found that in periods of high factory utilization, unauthorized subcontracting frequently happens in batches. Once the queue of factory orders exceeds the plant's capacity and is sent to a subcontractor, it's likely that the next order will also exceed the threshold and be farmed out as well. In fact, when a plant sends one order to an unapproved subcontractor, the chance it will divert the next order *almost doubles*. Batching had a bigger effect than price or any other driver that we studied.

Factories might have several reasons for running so close to capacity. More orders mean more business and potentially higher earnings, especially if they can subcontract out the work profitably. A supplier might fear, not unreasonably, that rejecting an order will mean the buyer won't return with future purchases. And some plant managers lack advanced planning tools and instead schedule production on an ad hoc basis.

A related misconception is the belief that a supplier is more likely to subcontract out rush orders than those with longer lead times. We found the opposite to be true: while only 24% of rush orders were dispatched to an unapproved contractor, 38% of those with a lead time of more than two months were farmed out.

The reason? Short lead times are more common with orders for fashion items, but it takes more sophisticated operations to make these items — something that is lacking in the informal factories that receive the bulk of the subcontracted orders.

In contrast, basic apparel items, such as plain color pullovers, typically change less often and can be ordered far in advance. They are also easier to make, and can be more easily farmed out to other nearby factories. However, these are often makeshift workshops that may not meet the customer's compliance standards.

Myth 3: Consumer advocacy doesn't work.

Fashion consumers are typically far removed from the working conditions in distant, largely invisible, informal factories. Therefore, it's easy to imagine that pressure from those shoppers, when it can be mustered at all, would be largely ineffective. The reality is that global consumers have more power to effect change than might be assumed.

After the Rana Plaza disaster, widespread consumer protests pushed brands and retailers to compensate victims of the building collapse and to crack down on workplace conditions in their supply chains. In response, retailers and fashion brands adopted the Accord on Fire and Building Safety in Bangladesh and the Alliance for Bangladesh Worker Safety, which required stepped-up factory inspections and worker safety training. The groups provided grants to pay for plant upgrades and set up worker-safety committees and hotlines to receive complaints about violations.

Consumers are increasingly demanding greater transparency in the apparel supply chain through advocacy groups like Fashion Revolution and the Clean Clothes Campaign, and social media movements such as #WhoMadeMyClothes, which aims at making brands accountable for the working conditions at their factories.

It's frequently the largest, best-known brands that are the focus of these campaigns, and they have proved to be the most sensitive to public pressure. H&M, a Swedish fashion retailer, was the largest exporter of clothing from Bangladesh and received the brunt of attention after the Rana Plaza disaster.⁸ It was among the first to sign the Bangladesh Accord.

This is consistent with our study. We found that the chance of unauthorized subcontracting is 22% lower for orders placed by well-known brands. Specialty retailers like H&M are more exposed to any consumer backlash than lesser-known, private-label brands. As a result, they are more likely to exert greater oversight over their suppliers.

Myth 4: Companies can't do much.

The long list of subcontracting horror stories might suggest that there is little companies can do to identify unauthorized suppliers and prevent their abuses. However, based on our research, buyers using analytics and big data can discover with high levels of accuracy when manufacturers are most likely to use subcontractors. They can even predict which orders will probably be farmed out.

Using our analysis of the middleman's orders, we trained a model to do just that. With information already in the hands of an intermediary, the model can predict with more than 82% accuracy when an order will be diverted to a subcontractor. A similar model can identify suppliers that use unapproved factories and those that don't with 75% accuracy.

The model can be plugged into a brand's existing decision-support systems to monitor pending orders, the workload at each supplier's factories, and the average price per category, and then flag those orders most likely to be farmed out. It could even suggest alternative factories. Brands — working with governments and nongovernmental organizations (NGOs) such as the Sustainable Apparel Coalition — could use this information to put pressure on factories with abusive labor policies and substandard living and working conditions.

Ours is a fairly simple model, and its purpose is mainly to show that such forecasting is possible. With more data, advanced machine-learning techniques such as artificial neural networks could deliver even more accurate results.

Lessons for supply chain leaders

Our findings can help businesses increase their visibility into what goes on in their supply chains. There's no silver bullet, but companies can minimize the problem by working with suppliers closely and continuously. We suggest that they take the following actions.

Get rid of the worst actors. The first step is simplest: Simply weed out those factories that constantly use unauthorized subcontractors. The "serial offenders" are only a small fraction of factories according to our findings. Industry insiders we talked to describe these suppliers as "mock factories"—plants that have passed buyers' audits but don't actually produce anything. Instead, they simply transfer their orders to factories that haven't been approved by the buyer.

One warning sign is if the supplier claims "they can produce anything." Our evidence indicates that factories that produce many different categories of goods are more likely to rely on unauthorized suppliers. Sometimes a brand's demand for variety requires more versatile suppliers, but then the brand at least needs to have a solid understanding of the supplier's actual skills.

New Balance has on occasion taken this step. Reporting on its 2017 audit of 96% of its first-tier suppliers, the company says that it terminated relationships with three suppliers, two of them for reasons to do with sourcing.⁹ Gap Inc. explicitly addresses unauthorized subcontracting on its corporate website and warns that the practice is grounds for terminating the supplier relationship.¹⁰

Help suppliers manage workloads. "Unauthorized subcontracting happens at factories in moments of duress, so you must know your factories' capacity," a former Nike executive advises. The footwear maker holds regular supplier conferences just for that purpose. Other brands could follow suit.

Nike also gains insight on suppliers' perspectives via the Better Buying Institute¹¹, which provides a tool for suppliers to anonymously rank companies' purchasing practices. It focuses on seven areas where buyers can help — or hurt — a supplier's ability to meet contractual obligations profitably while providing a safe work environment.

By working jointly with supply chain partners from the beginning of the design process, a business will be able to anticipate demand and plan factory capacity in advance, leading to a sustainable supply chain without resorting to subcontracting. Moreover, data-based models can be used to improve production schedules and reduce costly and time-wasting changes to orders.

Be willing to pay. While low prices aren't the main reason suppliers divert orders, it is a factor; the Ethical Trading Initiative¹² lists aggressive price negotiation among poor purchasing practices that put pressure on supplier capacity, working hours, and labor costs. A brand can reduce unauthorized subcontracting by guaranteeing that their payments are in line with what they've paid in the past. Indeed, companies that value transparency and compliance might be willing to pay a slight premium to ensure they know where their goods are made. This is especially true for the large specialty brands that can be easy targets for consumer and labor advocates.

Be more diligent. Too often brands focus only on their first-tier suppliers, but greater attention to those in the second-tier can pay big dividends. That should include visits to facilities that aren't on their lists of approved suppliers. They should also work toward bringing more of those subcontractors into the authorized fold. We heard of one informal factory in China that was quite advanced but that wasn't on the compliant list because the process of becoming certified was too burdensome. Streamlining the certification process can help expand the base of approved suppliers. NGOs, can also help nudge buyers and suppliers in the right direction by gathering information and exposing problems.

Patagonia is among those companies going beyond the first tier: It has extended its monitoring to tier 2 of its supply chain, specifically looking at the largest suppliers of raw materials. It employs an audit and remediation process similar to what it uses for tier 1 factories.¹³ HP engages its tier 1 suppliers in outreach to the next tier: It trains the first rank directly on its code of conduct and then involves them in jointly training the second tier.¹⁴

Buyers that prefer having an arm's-length relationship with their suppliers can at least collect data and use predictive analytics to flag which suppliers or orders are risky. One source of tools and services to help with this is Elevate, which provides analytics on unauthorized subcontracting.

CRITICS OF corporate social responsibility (CSR) say that it's just another buzzword used to adorn annual reports. However, in the case of unauthorized subcontracting, firms have the means for their CSR efforts to have a real impact. The time is right: the disruption caused by the coronavirus and the resulting economic shutdowns has accelerated already-trending changes, such as shifts to online shopping and remote work. The same should happen with tackling unauthorized subcontracting to increase supply chain visibility.

¹ C. Wheeler, A. Bassegy and V. Matety, Boohoo: fashion giant faces 'slavery' investigation, *The Sunday Times*, July 5, 2020.

² E. Paton, Why You Should Care That Boohoo Is Making Headlines This Week, *The New York Times*, July 8, 2020.

³ Child refugees in Turkey making clothes for UK shops, *BBC News*, October 24, 2016.

⁴ N. McKenzie and R. Baker, Surf clothing label Rip Curl using 'slave labour' to manufacture clothes in North Korea, *Sydney Morning Herald*, February 21, 2016.

⁵ Vietnam: Torture, Forced Labor in Drug Detention, *Human Rights Watch*, September 7, 2011.

⁶ Coronavirus flare-ups in Germany, South Korea show the risks in easing restrictions, *Los Angeles Times*, May, 9, 2020.

⁷ Further description of the data and a thorough empirical analysis is available in Caro, F., L. Lane, A. Sáez De Tejada Cuenca. 2021. "Can Brands Claim Ignorance? Unauthorized Subcontracting in Apparel Supply Chains", forthcoming in *Management Science*.

⁸ M. Kerppola, R. Moody, L. Zheng, A. Liu. "H&M's global supply chain management sustainability: Factories and fast fashion," technical report, William Davidson Institute at the University of Michigan, Ann Arbor, 2014.

⁹ <https://www.newbalance.com/responsible-leadership/who-we-are.html>

¹⁰ <https://www.gapinc.com/en-us/values/sustainability/people/supply-chain-working-conditions/policies-and-approaches-for-human-rights/unauthorized-subcontracting>

¹¹ <https://betterbuying.org/>

¹² <https://www.ethicaltrade.org/resources/guide-to-buying-responsibly>

¹³ <https://www.patagonia.com/our-footprint/working-with-factories.html>

¹⁴ https://www.hp.com/us-en/pdf/hp_fy11_gcr_supply_chain_responsibility_tcm_245_1357693.pdf