2018 AI Global Sourcing Survey

This 2018 edition of the AI Global Sourcing Survey was conducted in December 2017 by AsiaInspection, a leading quality control and compliance provider. It analyzes sourcing, quality and compliance practices among global companies, and identifies trends likely to impact global supply chains in 2018.

The respondent population included over 250 companies from across the globe, ranging from 5 to 5000+ people and working in 7 consumer product segments (Textile, Electronics, Homeware, Toys, Promotional Products, Footwear, and Food).

Executive Summary

- Top sourcing challenges in 2017 and the near future: cost of manufacturing and raw materials comes first, a trend expected to continue into 2018. Politics then are expected to have a more immediate impact than technology: most of the surveyed businesses anticipate to be affected by tariffs, quotas, protectionism and embargos, rather than automation and 3D printing.

- Sourcing geographies: China remains in the lead, being a regular sourcing destination for nearly 88% of respondents, while half of the businesses expect to buy even more from there in 2018. The Toys and E&E sectors favor China particularly strongly, albeit Vietnam has some standing as its competitor in the Footwear industry. Meanwhile, buying patterns in the Food sector were the most varied, with sourcing geographies ranging from Turkey to Latin America, and understandably high importance of home regions.

- Sourcing practices: up to half of respondents prefer to combine direct outsourcing with cooperation through intermediary vendors. The average rate of supplier turnover is around 27%, but the largest companies shop around much more, replacing up to 42% of their suppliers in a typical year.

- Supply chain visibility remains a strong challenge, with an average respondent knowing only around 55% of the suppliers involved in the making of their products. Complete visibility into their supply chain was only achieved by 11% of respondents, while 89% of surveyed businesses have blind spots in their supply chains.

- Ethical compliance: two-thirds of respondents are optimistic about the progress of supplier compliance and most expect it to be even less of a concern in 2018. However, the survey data has revealed obvious gaps in auditing practices: 19% of respondents have no clear policy on the frequency of supplier audits, and 18.5% rely on their in-house audit protocol as their sole compliance framework.

- Product quality, safety, and regulatory compliance: 70% of companies estimated that their product quality has improved in 2017, but only 54% would say the same about their product's safety and regulatory compliance. Nevertheless, in the coming year businesses expect to worry more about managing product quality than they did in 2017, while regulatory compliance is expected to be less of a challenge.

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1. Sourcing Geographies

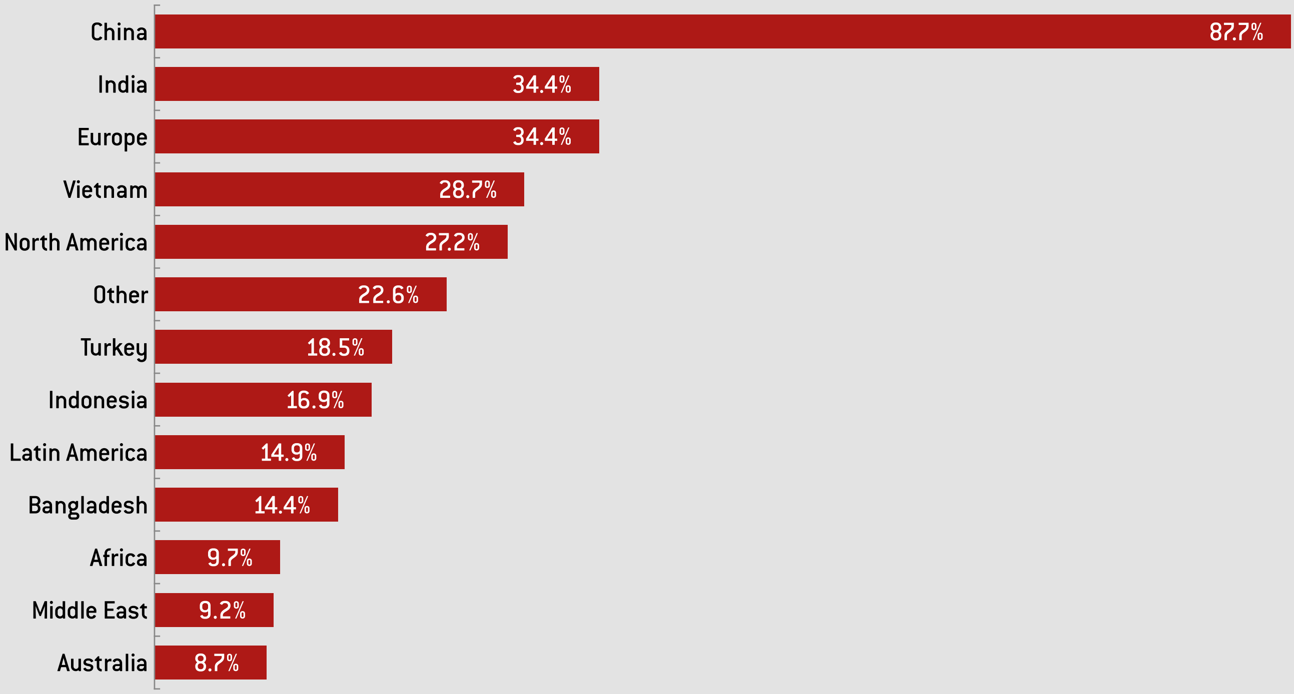
1.1. Sourcing destinations by prevalence

When asked to provide a full list of their manufacturing regions, **China was the top choice among the respondents, with nearly 88% including it in their sourcing geography**. Following it, after a long gap, were India, Europe, Vietnam, and North America.

"Other" popular geographies included (in descending order of prevalence): Taiwan, South Korea, Pakistan, Cambodia, Malaysia, Japan, Sri Lanka, and the United States.

"In which of the following countries and regions does your company source and manufacture products?"

Fig. 1. Popular sourcing geographies
Totals in excess of 100% due to multiple responses.



1.2. Top sourcing destinations by industry

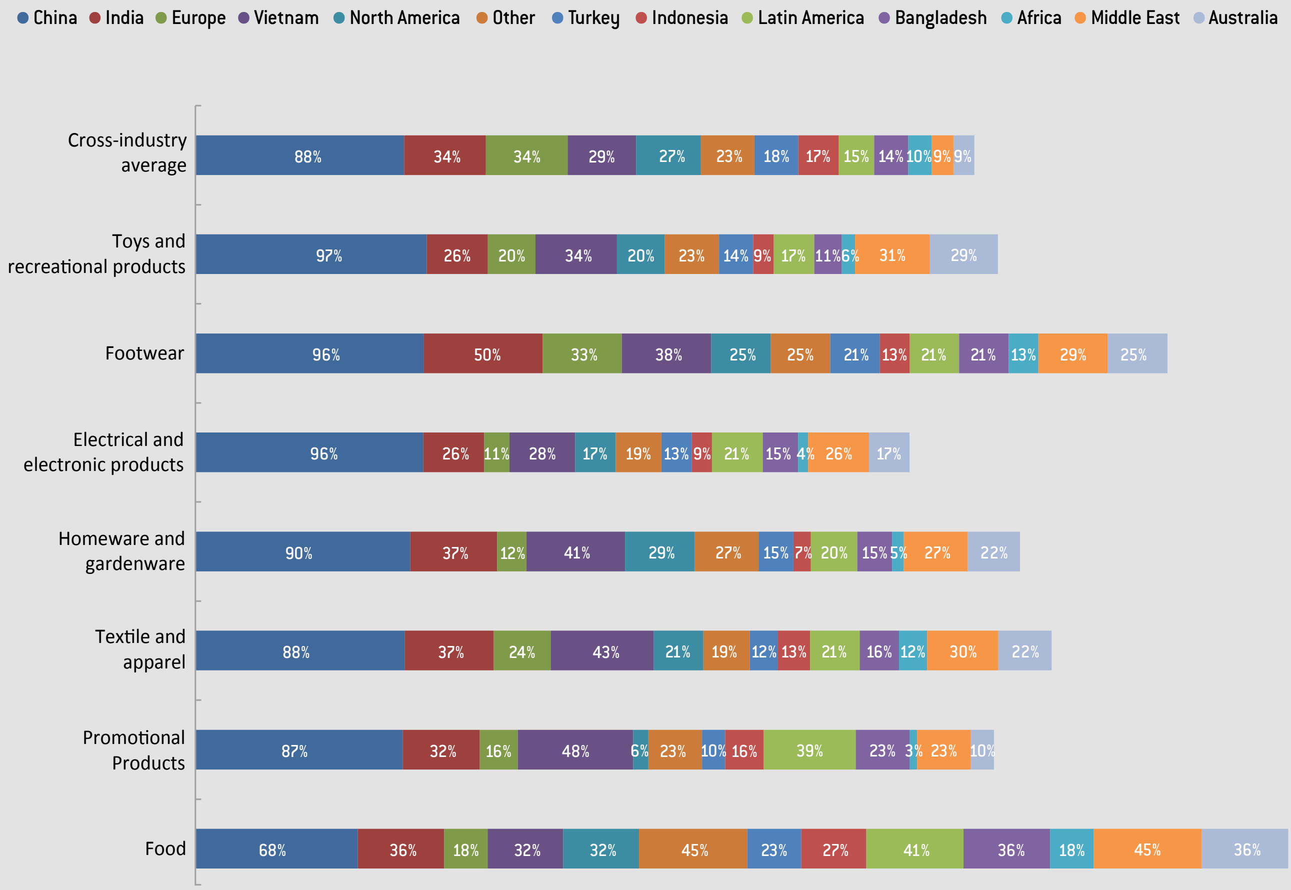
Fig. 2 below compares the sourcing geographies indicated by different industries against the cross-industry average prevalence of these geographies (see the following page).

Notable data points:

- Compared to other industries, **China is strongly favored by the Toys and E&E sectors**.
- **Vietnam is a notable competitor for China in Footwear**, chosen by 50% respondents, the single most popular choice of any industry outside of China.
- Outside of China, **India and Bangladesh are increasingly given preference for Textile sourcing**, being lower-cost destinations.
- India is also a popular sourcing destinations for the Homeware and Promotional products sector.
- **The Food industry has the most varied sourcing patterns**, which is understandable considering such factors as the need for different sourcing regions, and proximity to consumer markets.

"In which of the following countries and regions does your company source and manufacture products?"

Fig. 2. Popular sourcing geographies by industry



1.3. Sourcing destinations by volume

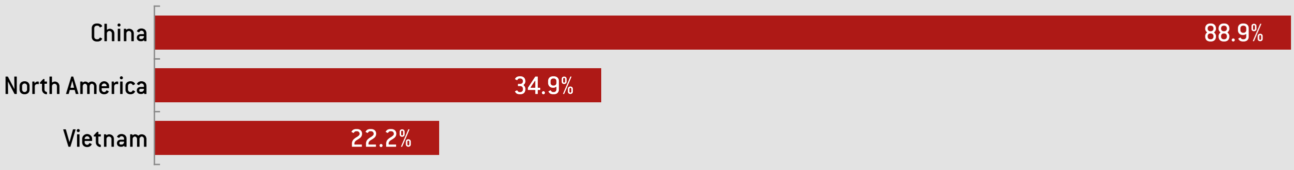
In an assessment of sourcing regions **by volume, China was ranked first by 63% respondents**, and was in the top 3 sourcing regions for 80%.

Respondents from North America and Europe both ranked China and Vietnam among their top 3 sourcing regions, in addition to their respective home region. Interestingly, for European respondents, India tied with Vietnam among the top 3.

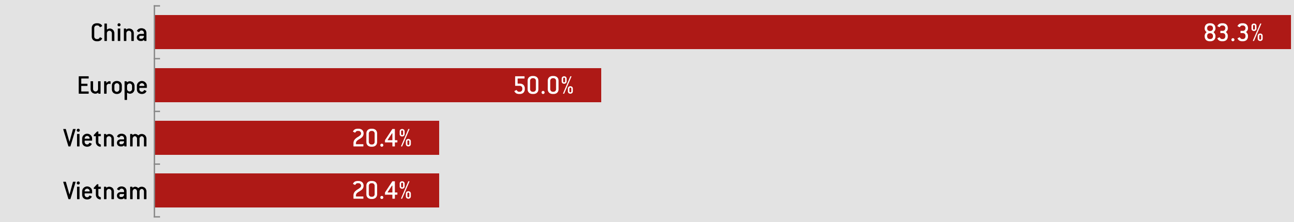
"Please rank your sourcing countries and regions by volume for your company (from largest to smallest)"

Fig. 3. Top 3 sourcing destinations for North American and European respondents

Regions ranked as top 3 sourcing destinations by respondents based in North America



Regions ranked as top 3 sourcing destinations by respondents based in Europe



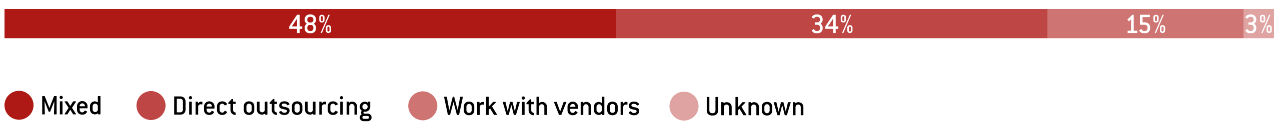
2. Supply chain practices

2.1. Outsourcing models

A "mixed" outsourcing model, which combines direct outsourcing and working with intermediary vendors who manage the factories, **was popular with up to half of all respondents.** Approximately one-third of respondents said they outsource production directly to factories and manufacturers, while 15% work with manufacturers and vendors who manage the factories.

"What best describes your company's outsourced manufacturing model?"

Fig. 4. Overall popularity of different outsourcing models

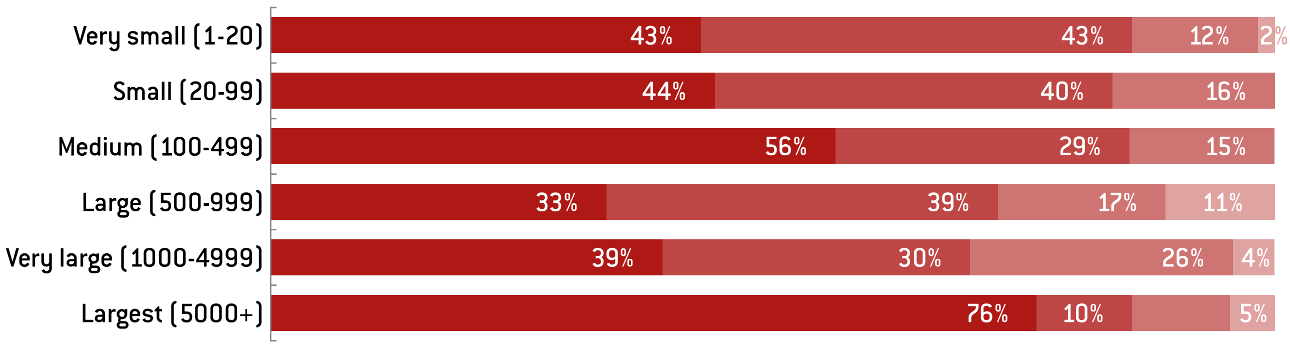


2.1.1. Outsourcing models and company size

A look at the relationship between company size and its preferred outsourcing model shows that shows that **small companies (under 100 employees) are much more likely to work with manufacturers directly**, while larger businesses prefer a mixed outsourcing model. Meanwhile, **the largest companies (5000+ headcount) rarely rely on direct sourcing, showing an overwhelming preference for mixed outsourcing models.**

"What best describes your company's outsourced manufacturing model?"

Fig. 5. Company size vs. choice of outsourcing model

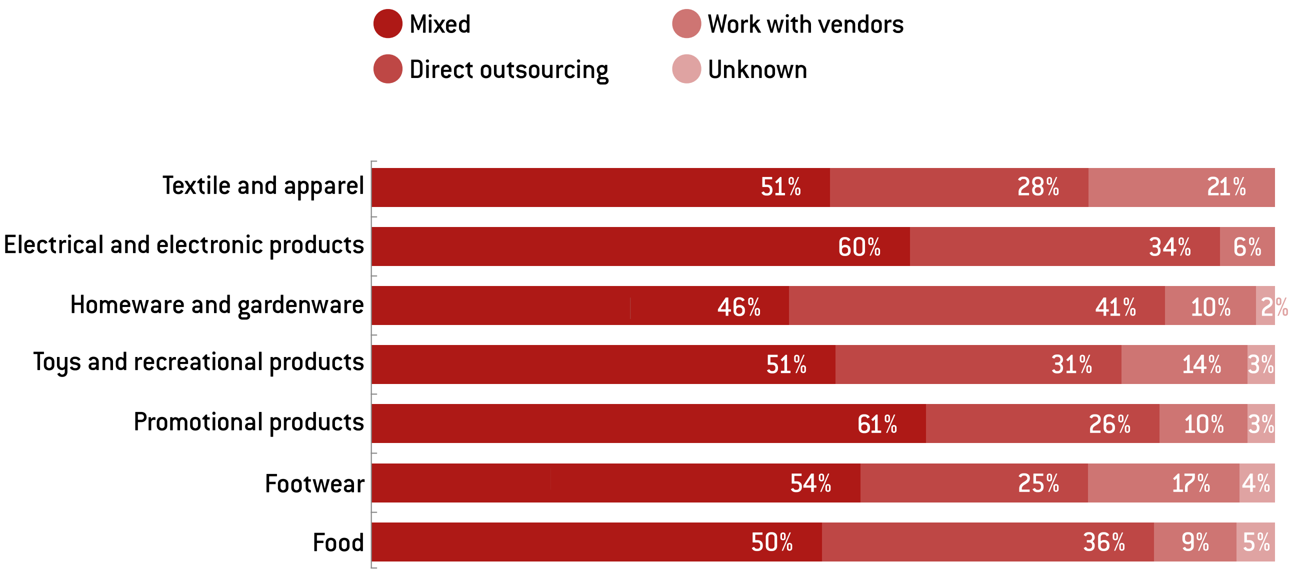


2.1.2. Outsourcing model preferences by industry

While a mixed outsourcing model remains the most popular choice, a look at the different industries shows that **businesses in the Food, Homeware, and E&E sectors are more likely to source directly**. Meanwhile, **Footwear and Textile companies are more likely to work through vendors** – a possible reflection of the industries' shorter product life cycles and their readiness to quickly switch suppliers to optimize costs. This is consistent with the high supplier portfolio renewal rates among Textile and Footwear businesses (see section 2.2.1 for more details).

"What best describes your company's outsourced manufacturing model?"

Fig. 6. Outsourcing model preferences by industry



2.2. Supplier management and supply chain visibility

2.2.1. Supplier portfolio renewal rate

Globally, respondents renew approximately 27% of their supplier portfolio in a typical year, while 9% renew more than 70% every year. Meanwhile, almost 10% work with the same suppliers over multiple years.

The largest companies have the highest average portfolio renewal rate at 42% - an indication that they are more likely to shop around for the best suppliers for continuous optimization and break off relationships with low performers (fig. 7).

By industry, **companies in the Toys segment have the highest portfolio renewal rate**, suggesting that these businesses are demanding in their choice of suppliers that fit their requirements. Meanwhile, companies in the **Promotional products industry, with the second-highest renewal rate**, are likely to be frequently on the lookout for the best terms (fig. 8)

"How much of your company's factory portfolio is new every year?"

Fig. 7. Company size vs. average supplier portfolio renewal rate

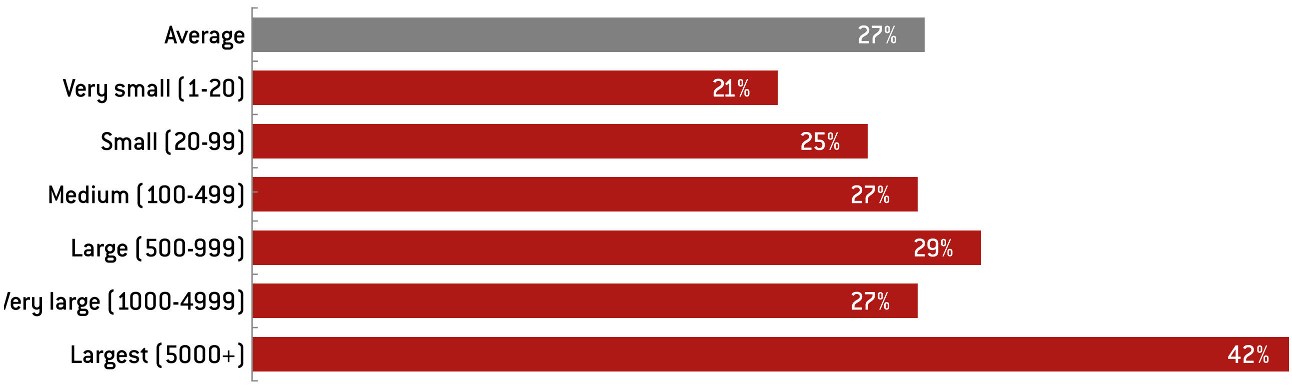
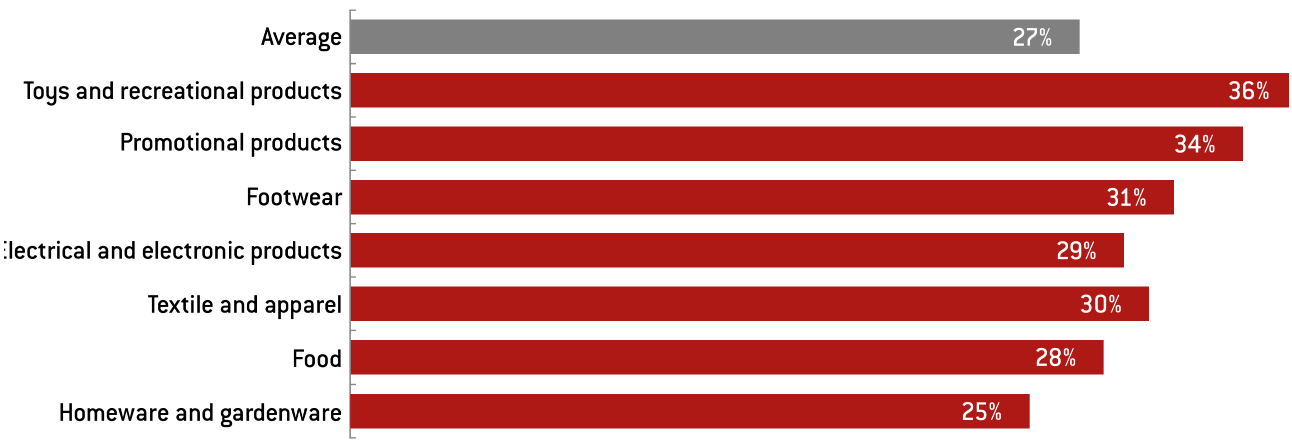


Fig. 8. Industry sector vs. average supplier portfolio renewal rate



2.2.2. Supply chain visibility

Survey data indicates that **supply chain visibility remains a strong challenge for most companies**. On average, the surveyed businesses know only around 55% of suppliers involved in the making of their products.

Only 11% of respondents said they have full supply chain visibility, meaning that as many as 89% of respondents have blind spots in their supply chains. The degree of these blind spots is quite high: **only one-third of respondents know more than 75% of their suppliers**.

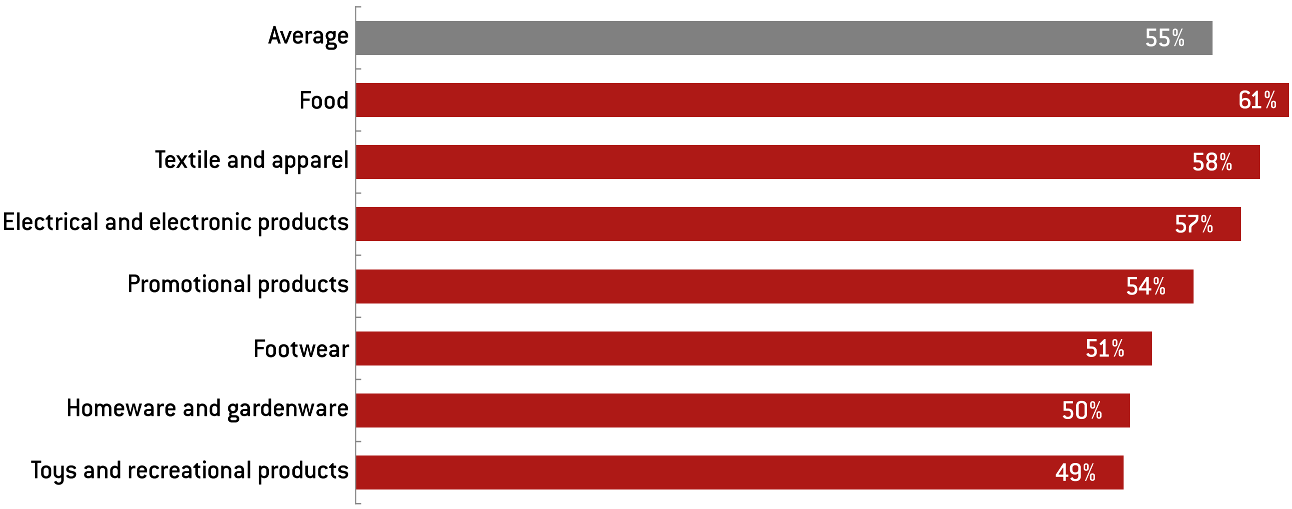
Company size appears to have some impact on supply chain visibility, most notably with the **smallest companies being dramatically below average**.

From the industry perspective, visibility levels in the Toys and Homeware segments were notably low, while **businesses in the Food segment had the highest supply chain visibility** on average, a likely reflection of the increasing concerns about food traceability.

"Supply chain visibility: can you estimate what percentage of the suppliers involved in making your products you actually know? (e.g. processing factories, raw material mills, spare parts vendors, farms, etc.)"

Fig. 9. Supply chain visibility (% of suppliers known) – segmented by company size

Fig. 10. Supply chain visibility by industry (% of suppliers known)



3. Quality Control and Compliance

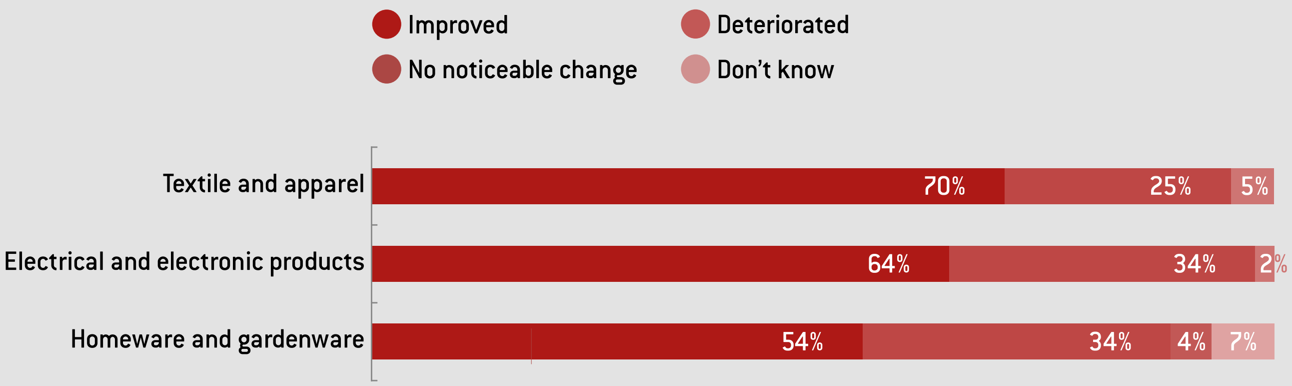
3.1. Overall trends and impact

The respondents were asked about three quality control and compliance services – Product Inspections, Factory Audits, and Lab Testing, as well their supply chain impact in 2017.

Overall, **70% of respondents indicated that product quality has improved, 64% estimated improvements in factory and supplier compliance, and 54% said that the regulatory compliance and safety of their products has improved** over the past year.

"Globally, over the past 12 months, have you observed any changes to product quality / supplier compliance / safety and compliance of your products?"

Fig. 11. Perceived changes in product quality, factory compliance, and product compliance (12 months of 2017)



3.2. Impact by industry

3.2.1. Product quality trends by industry

Among the companies who have ordered product inspections in the past 12 months, **70% noted that product quality has improved** during the respective period, **almost a quarter noticed no change, while 5.4% stated that product quality has deteriorated.**

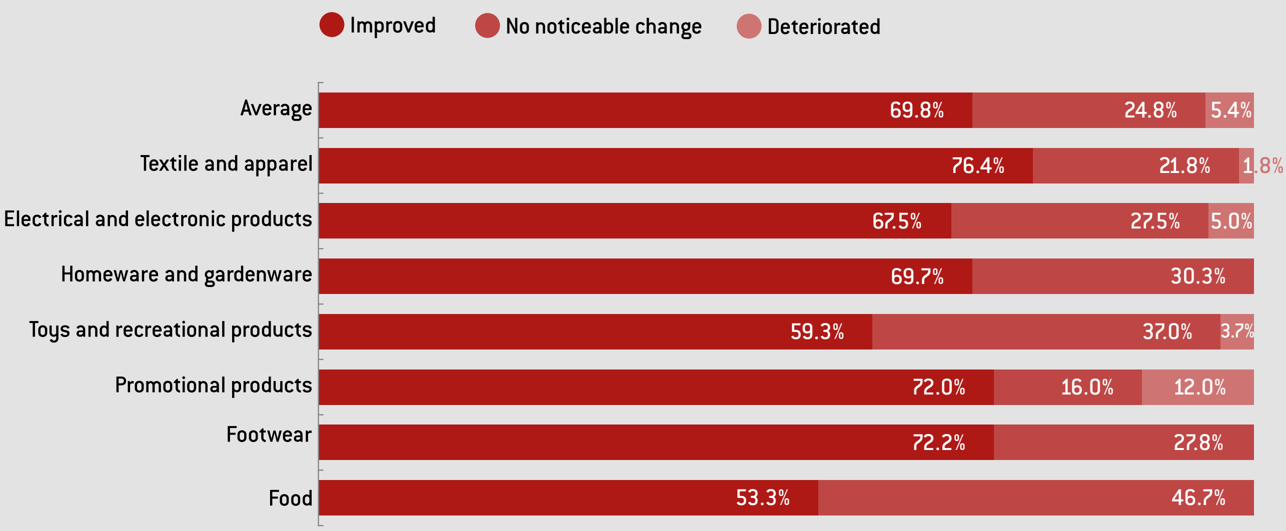
Businesses in the **Textile and Footwear sectors reported higher rates of improvement** in product quality, while **the Toys and Food sectors improved the least.**

Additionally, **some deterioration in product quality was reported by companies in the Promotional products** industry.

It is important to note that the overall perceived product quality trends could have been impacted by the respondents' choice of key performance indicators (KPI). One of the indicators, used by almost 20% of respondents, is the rate of in-store returns, which offers a delayed perspective on product quality (see section 3.3.1 for more details).

"Globally, how has the quality of your products changed over the past 12 months?"

Fig. 12. Perceived product quality trends by industry (12 months of 2017)



3.2.2. Supplier compliance trends by industry

64% of the companies who have ordered supplier audits in the past 12 months **noted that supplier compliance has improved** during the respective period, **34% noticed no change, and 2% stated that supplier compliance has deteriorated**.

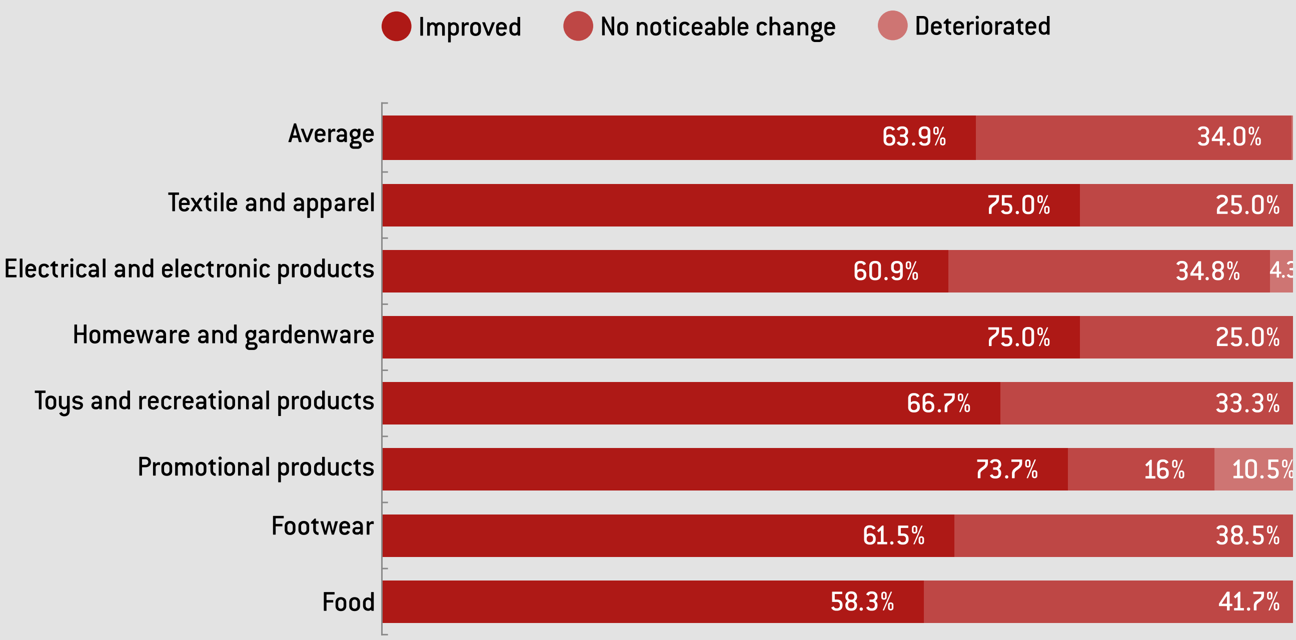
Perceived supplier compliance improved by more than the cross-industry average in **Textile and apparel, Homeware, and Toys**, while the Food sector displayed the slowest rate of improvement.

Supplier performance varied in the Promotional products sector, where three quarters of businesses reported improved supplier compliance, but a notable 10.5% indicated that supplier compliance has deteriorated.

It is worth noting that procuring up-to-date information on supplier performance is instrumental for accurate perception of their compliance. Considering that there are some issues with the frequency and regularity of supplier audits, which are the most reliable source of real-life compliance data, the perceived supplier compliance trend may not always accurately reflect
reality (see section 3.2.2 for more details).

"Over the past 12 months, have you observed any changes to supplier compliance globally?"

Fig. 13. Perceived supplier compliance trends by industry (12 months of 2017)



3.2.3. Product safety and compliance trends by industry

54% of the respondents who have performed lab tests in the past 12 months **noted that product safety and regulatory compliance has improved** during the respective period, **34% noticed no change, and 4% stated that their products have become less compliant**.

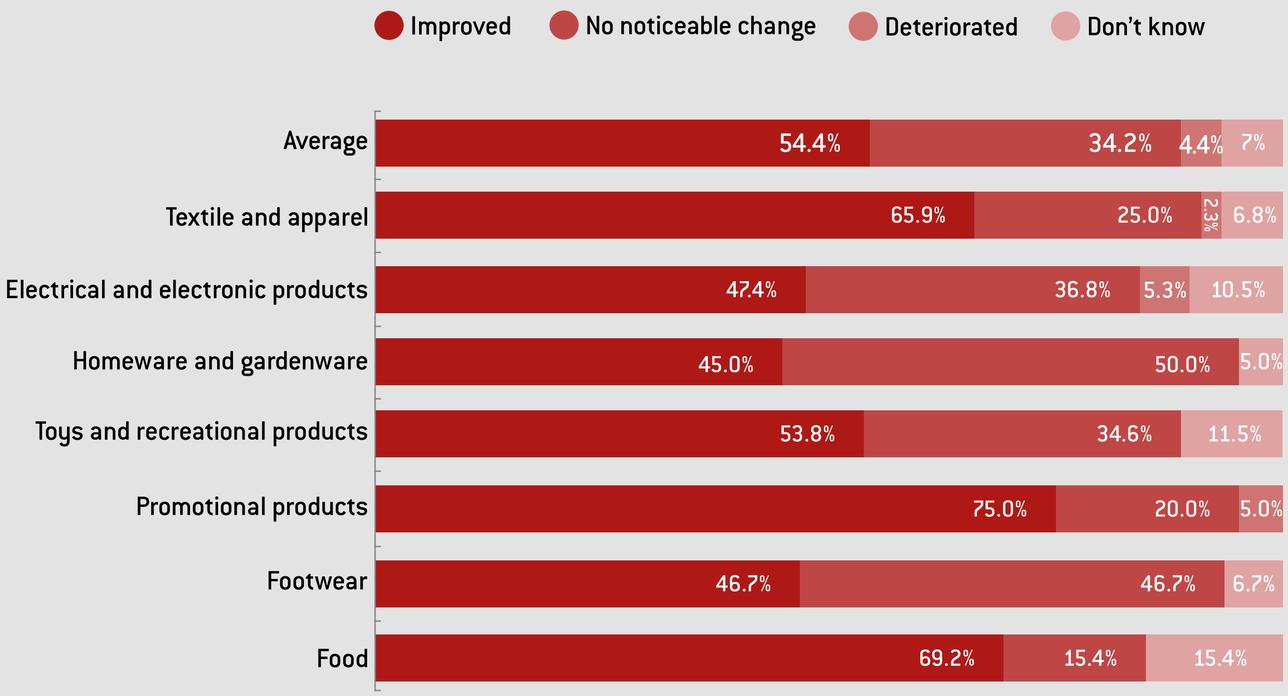
The trend towards **improvement of product compliance was the most pronounced in the Promotional products and Food** industries.

By contrast, the **Footwear, Homeware, and E&E** sections displayed notably **lower product compliance improvement rates**.

Notably, **an average of 7% of respondents could not answer whether their company's products have become more or less compliant** with regulatory requirements during the past year. This figure was even higher in the Food and Toys sectors – a trend of some concern, considering that these industries are regulated more strictly than others.

"Over the past 12 months, have you noticed any changes to the safety and compliance of your products?"

Fig. 14. Perceived product safety trends by industry (12 months of 2017)



3.3. Tools and methodologies

3.3.1. Production inspections

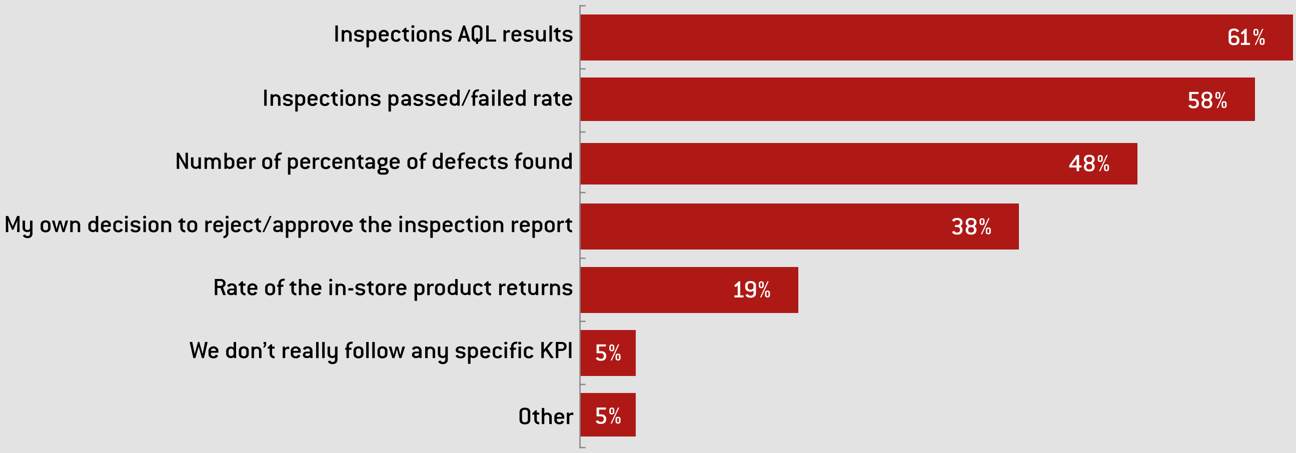
Product inspection KPIs

Around 95% of respondents indicated they use specific KPIs (Key Performance Indicators) to measure product quality and supplier performance.

Among the most frequently used KPIs were **AQL results** and **Pass/Fail rates**. Over one-third of respondents also rely on personal judgment when approving or rejecting inspection results. Notably, **almost 20% of respondents use the rate of in-store product returns among their product quality indicators**, despite the fact that this KPI offers quality data with considerable delay compared to others. For the majority, however, this KPI is used with conjunction with other, more time-relevant indicators.

"What are the main data points/KPIs (if any) your company uses to measure your product quality and supplier performance when it comes to product inspections?"

Fig. 15. KPIs used to measure product quality and supplier performance



Financial responsibility

Around half of respondents said that paying for inspections is the buyer's responsibility.

Only 11% of respondents said the manufacturer pays for the inspection, while a third use a mixed-model, whereby some inspections (e.g. re-inspections following a first failed inspection) are to be paid by the supplier. 8% indicated "Other" (which included respondents with their own QC capabilities).

"Who pays for the product inspections?"

Fig. 16. Financial responsibility for product inspections.

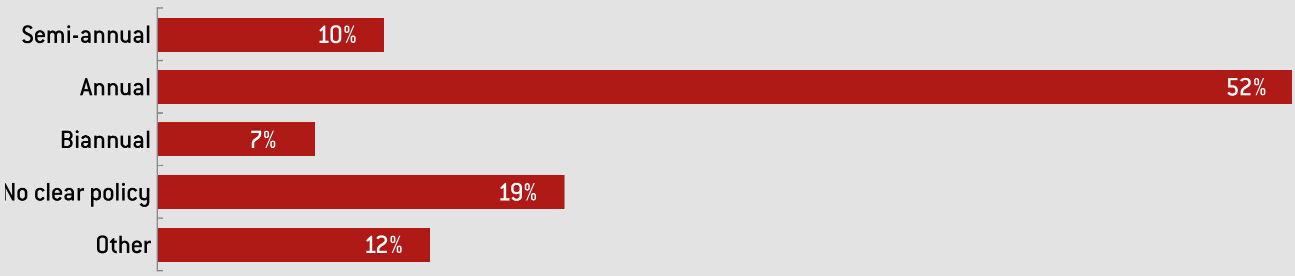
3.3.2. Supplier audits

Auditing cycle and frequency

The most used model (reported by 51% of respondents) is to conduct supplier audits once per year. 10% conduct audits on a semi-annual basis, and as much as 19% have no clear policy as to audit frequency. For some respondents, audit frequency varies depending on supplier, product, overall country risk, and previous results. Others indicated they only conduct an audit when adding a new supplier to their portfolio.

"What is your typical audit cycle?"

Fig. 17. Supplier audit frequency



Supplier audit KPIs

97% of respondents indicated they use specific KPIs to track supplier compliance.

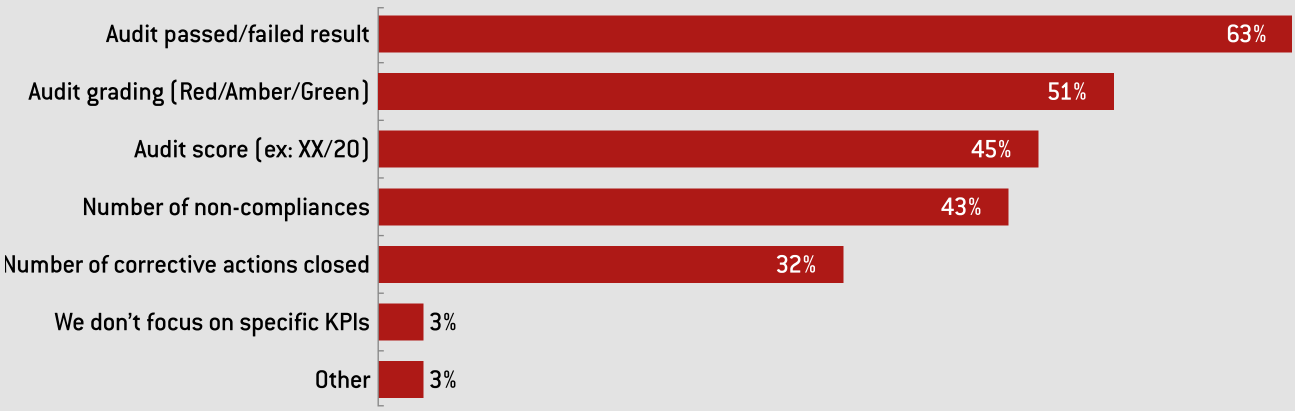
Notably, all of the respondents who indicated they don't focus on specific KPIs also had no clear auditing cycle, evidencing that not 100% of all actors of the supply chain are yet fully educated and clear on the right supplier compliance programs for their needs.

The most frequently used KPI was the **Audit Pass/Fail rate**. Slightly more respondents prefer Audit Grades (Red/Amber/Green) over Audit Scores (xx/20).

Some also indicated that they use a custom score card, or focus specifically on Health & Safety issues.

"What are the main data points/KPIs (if any) your company uses to track your suppliers' performance when it comes to audit programs?"

Fig. 18. KPIs used to track supplier compliance.



Auditing frameworks and protocols

58% of respondents use multiple protocols for supplier audits, while 42% use only one.

For those who only use one protocol, the top choices are:

- their in-house protocol – in 44% cases
- ISO protocols – in 22% cases
- Sedex/SMETA – in 15% cases.

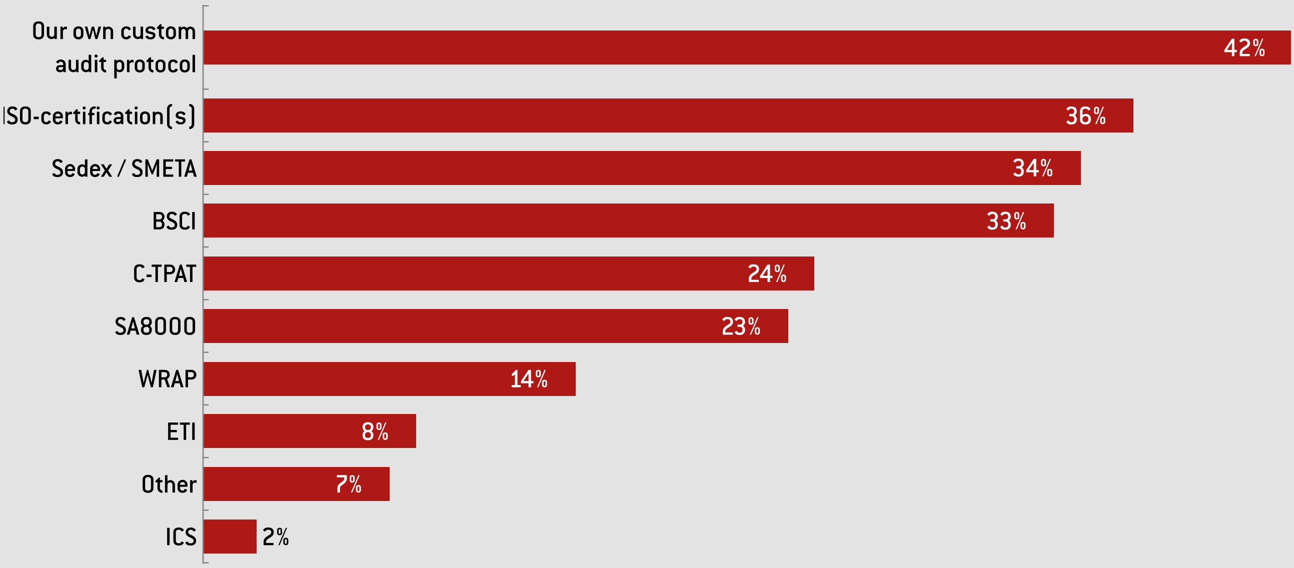
18.5% of respondents use their in-house protocol as the only audit protocol.

For external protocols, the most commonly used were ISO based certifications, Sedex/SMETA, and BSCI. Additionally, almost a quarter of respondents use the C-TPAT audit protocol, but it should be noted that it's only required for imports to the USA.

Among protocols specified under "Other" were: GOTS, OEKO TEX, BRC, ICTI.

"Which of the following frameworks (if any) does your company use to manage supplier compliance?"

Fig. 19. Auditing frameworks and protocols

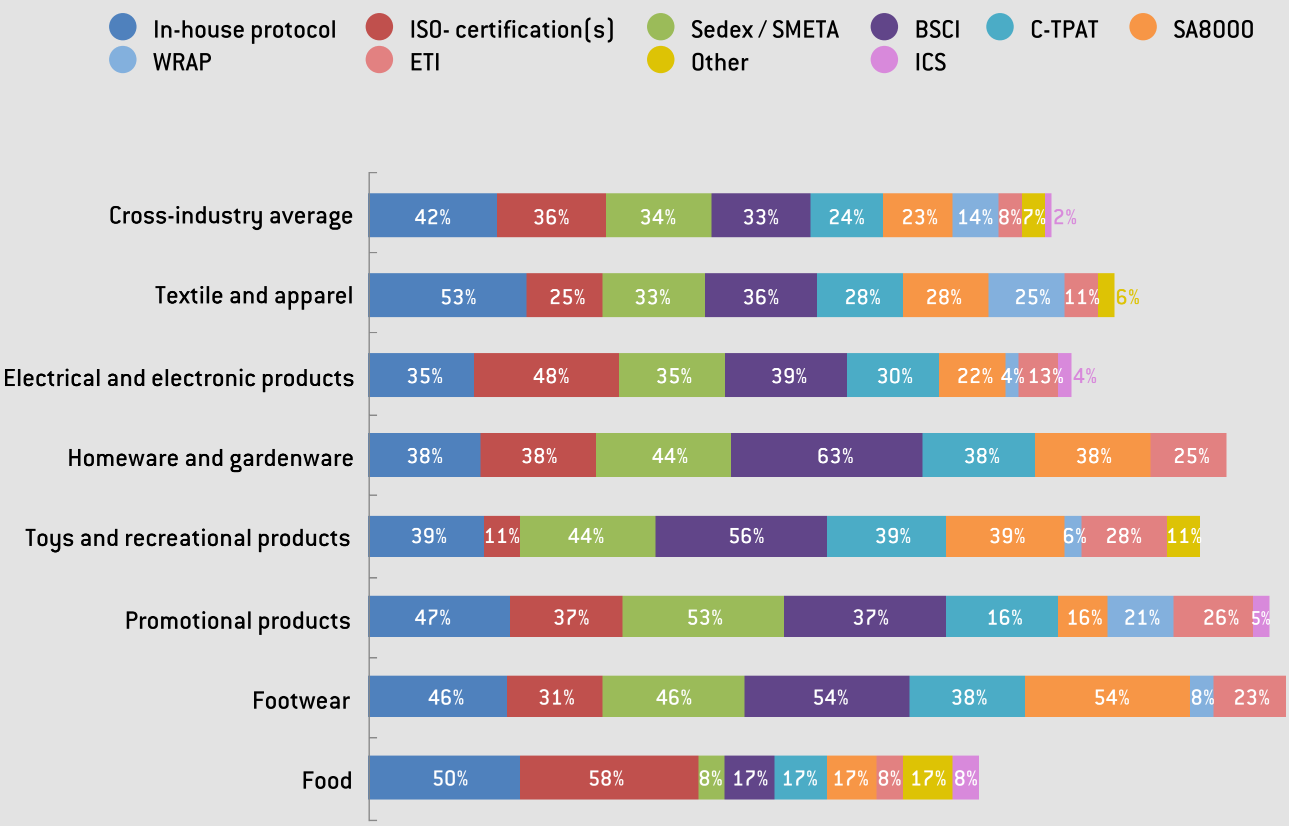


Understandably the choice of auditing protocols and frameworks is highly dependent on the respondent's industry (see fig. 20 for further information).

Notably, the use of **in-house protocols** was particularly high in the **Textile, Promotional products, and Food** segments. The **Food and E&E** industries also gave stronger preference to **ISO protocols** compared to other sectors, while the **Footwear, Homeware and Toy** industries heavily favored the **SA8000** auditing framework.

"Which of the following frameworks (if any) does your company use to manage supplier compliance?"

Fig. 20. Choice of auditing frameworks and protocols by industry



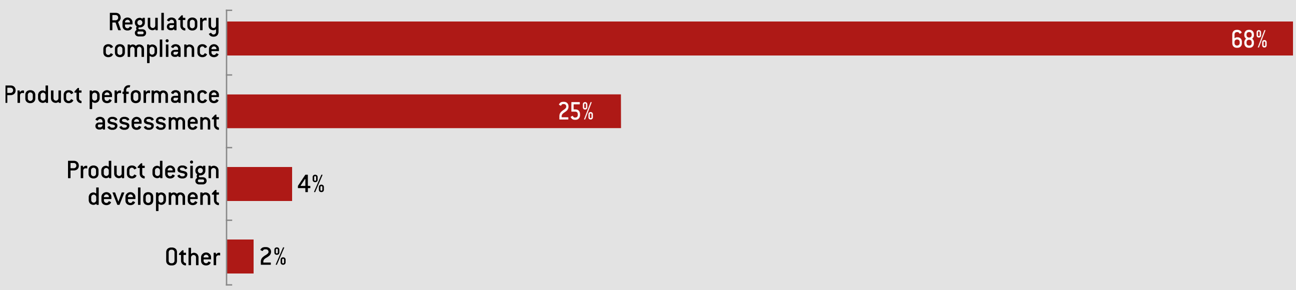
3.3.3. Lab tests

Primary purpose of testing

The primary purpose of the majority of lab tests conducted was to achieve regulatory compliance (68%), while a quarter primarily aimed to assess product performance. Only 4% of respondents use lab tests with the primary purpose of product design.

"What is the main purpose of your company's testing program?"

Fig. 21. Primary purpose of lab testing programs

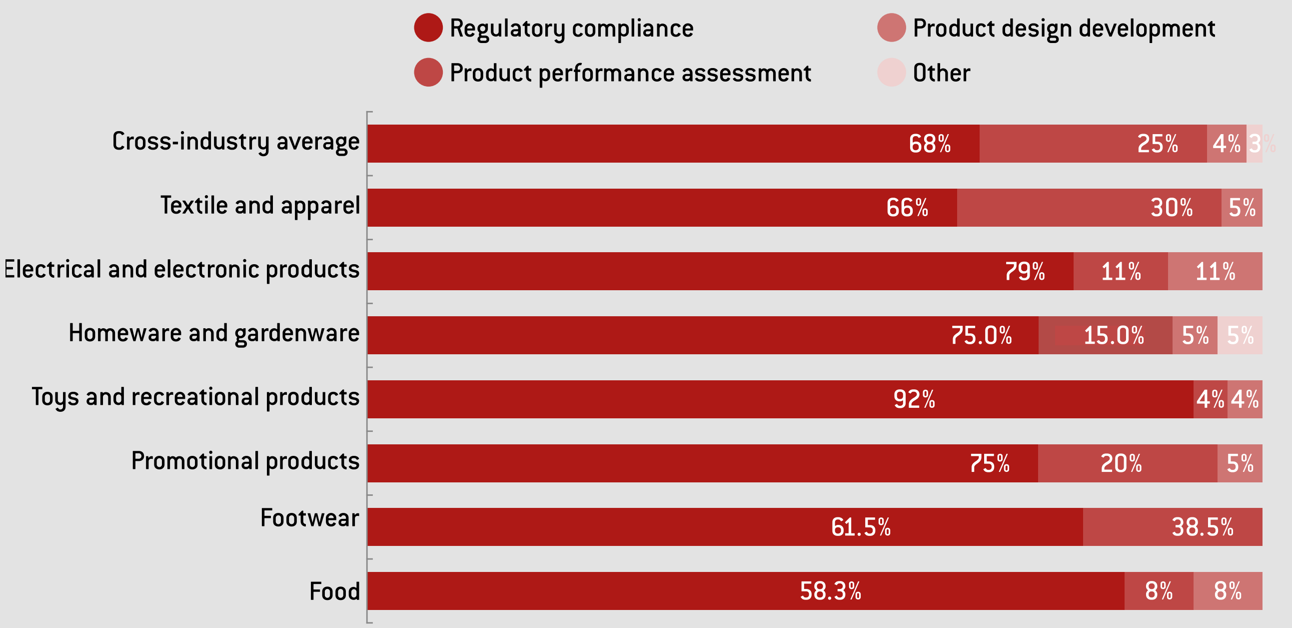


While the lab testing programs maintained by the respondents serve multiple purposes, the choice of primary purpose of testing varies by segment.

The Toys and Food industries have the highest percentage of tests done with the primary purpose of compliance, which is consistent with the sensitive products and strict regulations in these industries. On the other hand, the E&E sector has the highest percentage of lab testing done with the primary purpose of design development.

"What is the main purpose of your company's testing program?"

Fig. 22. Primary testing purposes by industry



Testing cycle

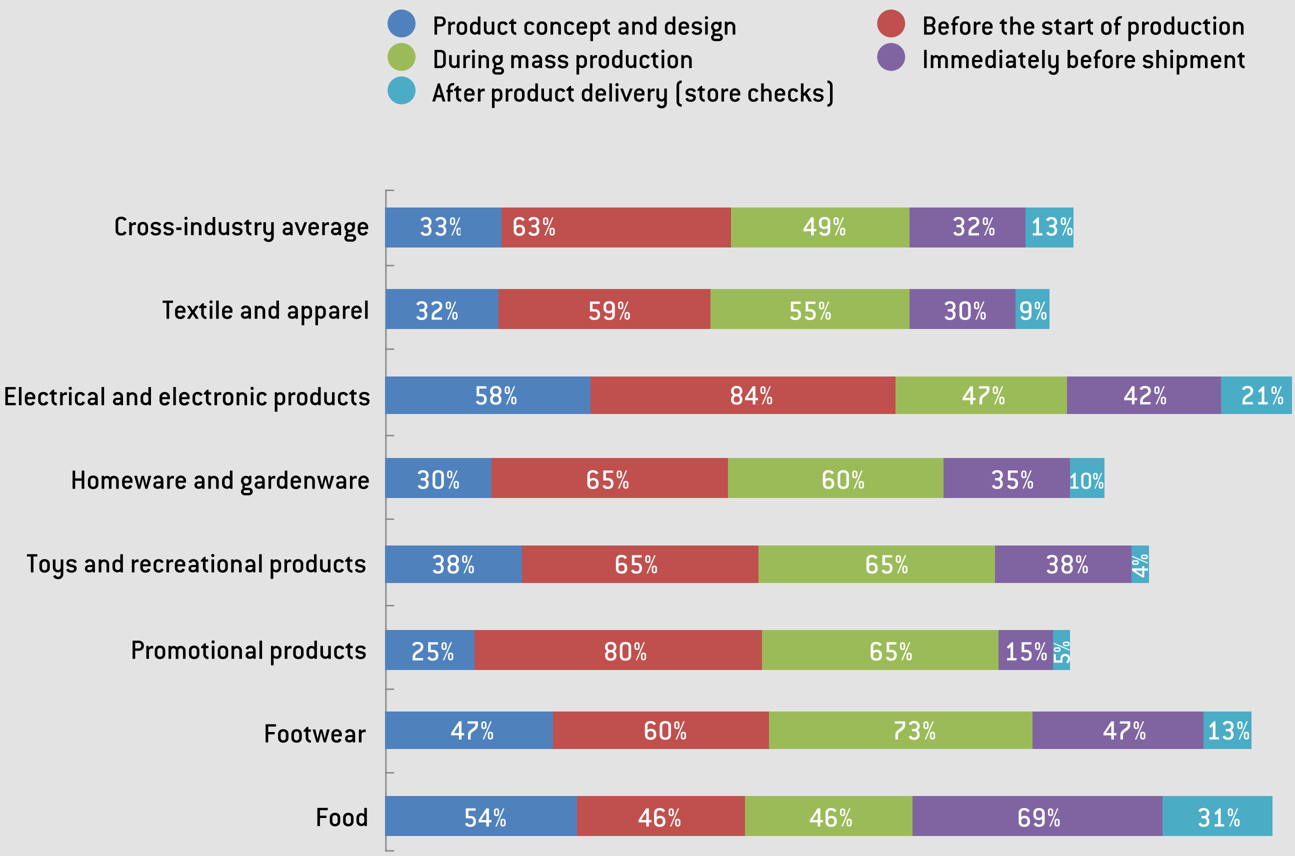
Products are most commonly tested before the start of production and during mass production (as indicated by 63% and 49% of respondents).

An average of 33% of respondents test their products at the concept and design stage, but this percentage is notably higher for the E&E industry, which also **has the overall highest percentage of testing before any production starts** (combined design and pre-production stages). This is characteristic for a field where assessment during design is an important element of ensuring proper functioning and consumer safety.

For the **Food** industry, more tests are done immediately before shipment than at any other stage, and the **percentage of tests conducted as part of store checks** are higher than in any other industry.

"At what phase of the product life cycle does your company typically conduct product testing? (Please select all that apply)"

Fig. 23. Product testing cycle by industry



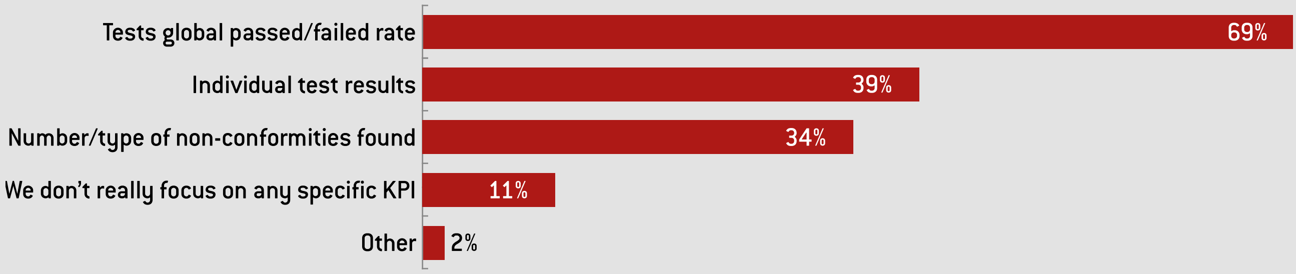
Product testing KPIs

89% of survey participants indicated they use specific KPIs to measure product testing performance, which indicates that **11% of respondents do not specifically track product performance against testing results**, which may indicate a use of testing solely as a “must do” against regulations.

Global Pass/Fail rate was by far the most commonly used KPI.

“Which specific data points/KPIs (if any) is your company using to measure your product testing performance?”

Fig. 24. KPIs used to measure testing performance



4. Sourcing Challenges, Expectations, and Prospects

4.1.1. Evolution of sourcing geographies in 2018

Looking ahead at the sourcing from their current top geographies in 2018 (outside of home regions), **49% respondents said they expect their sourcing volumes from China to increase**. For businesses in the Homeware segment, this figure is 58%.

An average of 43% of respondents expect an increase in their sourcing from India, especially in Footwear segment, where 50% expect to buy more from this region.

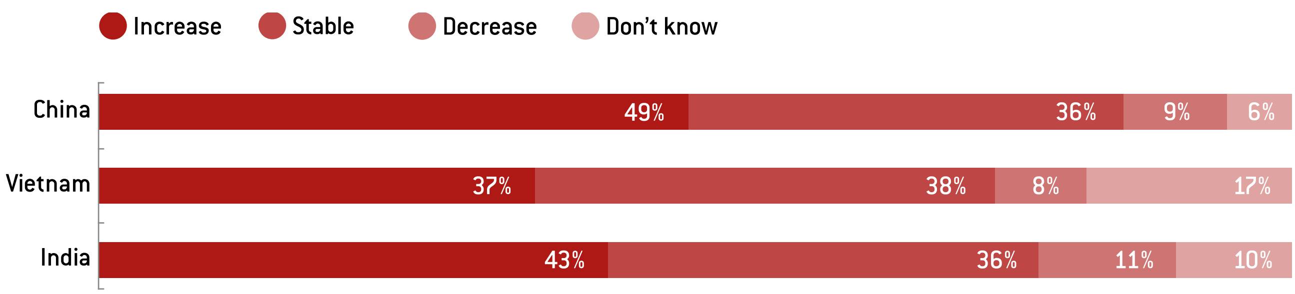
Higher sourcing volumes from Vietnam are expected by 36.5% of respondents, including 56.5% of companies in the Textile segment, 62.5% in Toys, and 73% in Footwear.

All these trends indicate that companies are increasingly diversifying their sourcing portfolios, while those in particularly cost-sensitive industries are also shifting towards lower-cost destinations.

More information on the evolution top of sourcing geographies by industry can be found in fig. 26, which showcases each of the seven industries in detail.

"For each of your sourcing countries and regions, are you anticipating your volumes to increase or decrease in 2018?"

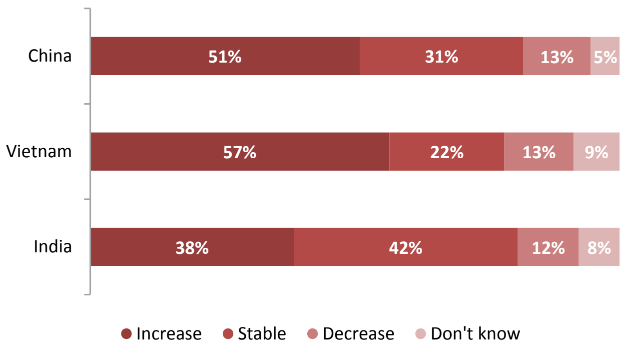
Fig. 25. Sourcing expectations in 2018, by region



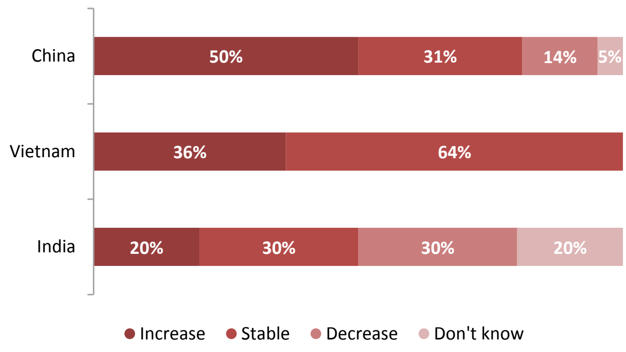
"For each of your sourcing countries and regions, are you anticipating your volumes to increase or decrease in 2018?"

Fig. 26. Expected evolution of sourcing geographies by industry

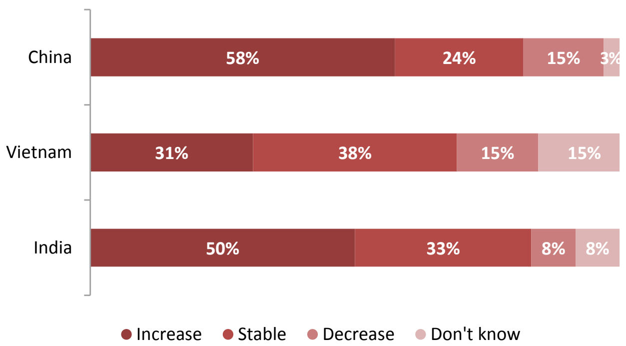
Textile and apparel



E&E



Homeware and gardenware



Toys and recreational products

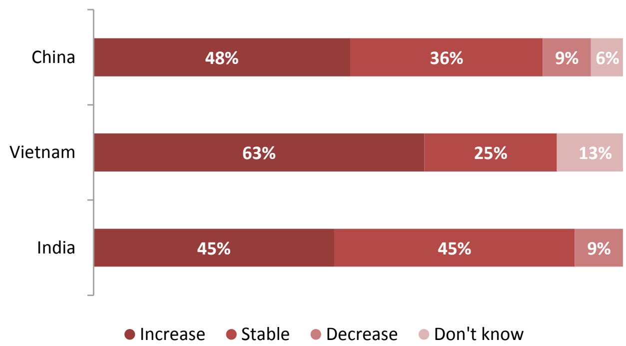
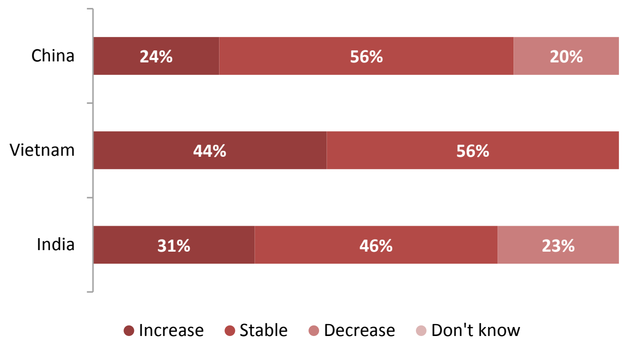
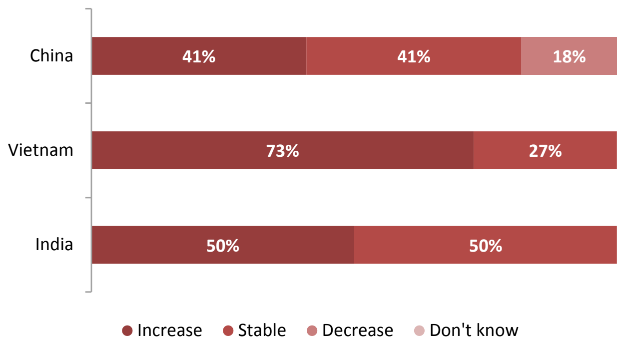


Fig. 26. Expected evolution of sourcing geographies by industry (contd.)

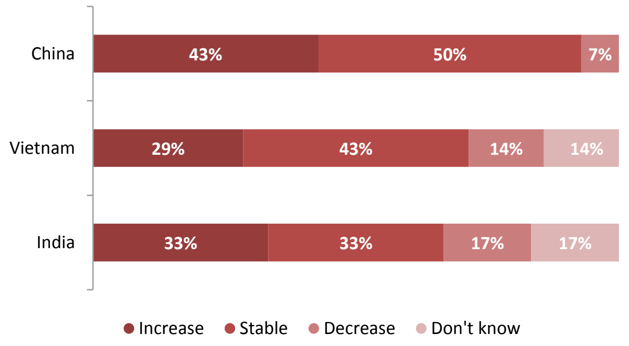
Promotional products



Footwear



Food



4.2. Top sourcing challenges: 2017 vs. 2018

Looking back on their sourcing challenges of 2017, respondents named their top 3 as: 1) cost of manufacturing and raw materials; 2) maintaining / improving product quality, and 3) finding the right supplier capabilities.

Compared to other industries, the **Promotional products sector appears to be slightly less affected by the challenge of production costs**, likely due to the flexibility that comes with their rapidly changing product assortment.

For the Food industry, product quality has been a notable challenge, echoing the recent string of food quality issues worldwide.

While **ethical compliance of suppliers** was further down the list of challenges, the industry most concerned with it was Toys, with 26% of companies listing ethical compliance among their top 3 sourcing challenges of 2017.

Assessing their supply chain expectations for the coming year, r**espondents kept the cost of manufacturing at the top of their 2018 sourcing challenges. Managing product quality** is viewed as the second biggest challenge, and its **importance is expected to increase**.

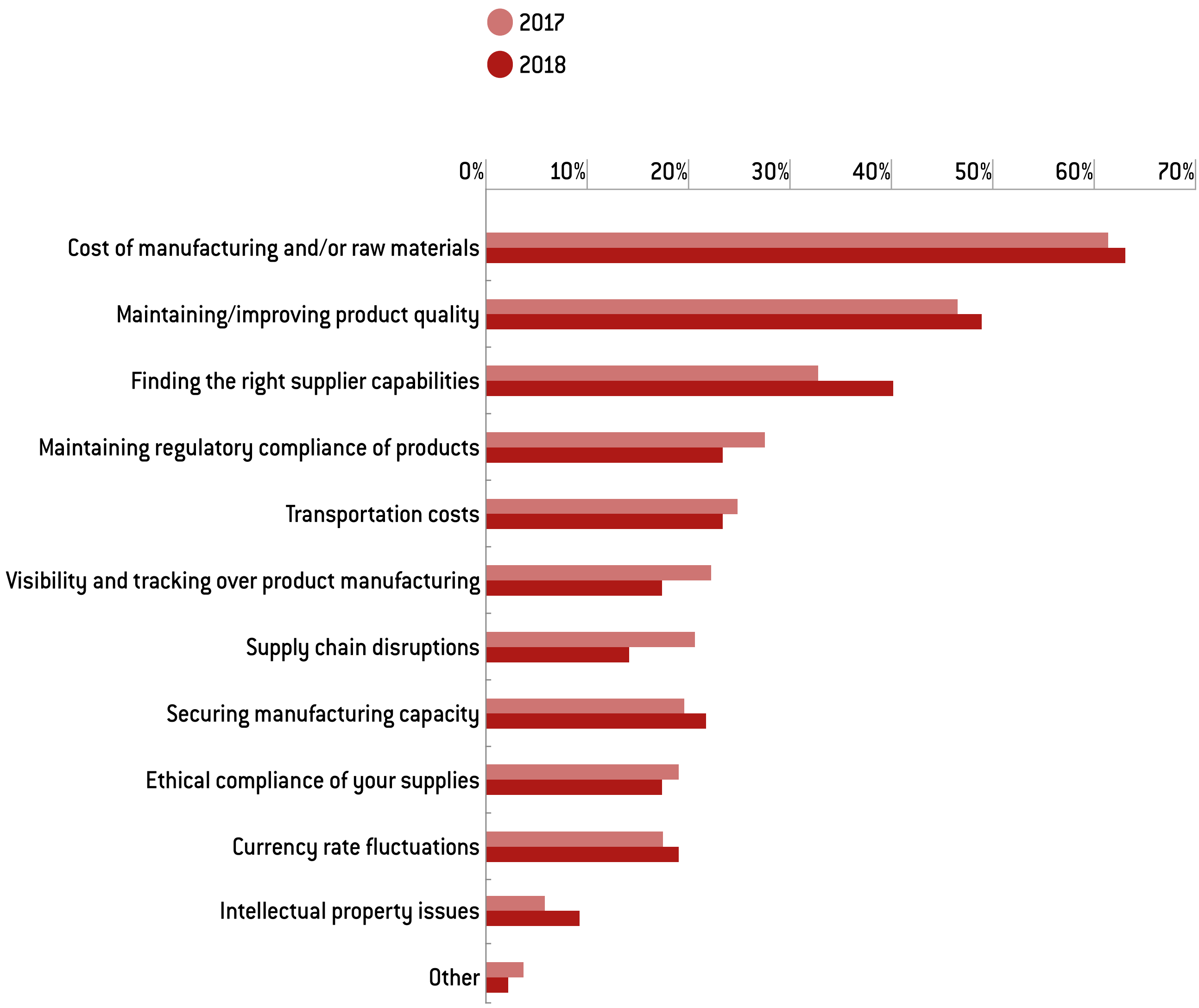
Among **the challenges that respondents expected to affect them in 2018 more than in 2017** are: finding the right **supplier capabilities** (know-how, technology), and, to a lesser extent, the required **manufacturing capacity**. More companies are expected to be affected by currency rate fluctuations and intellectual property issues.

On the other hand, **respondents expect to worry less about supply chain disruptions, regulatory compliance, and ethical compliance of suppliers** in 2018 compared to 2017.

Notably, **visibility and traceability are also expected to be less of a concern**, indicating that respondents expect to have better supply chain visibility in 2018. Respondents also named the ongoing **environmental crackdown in China** among the important challenges of 2018.

"Looking back at 2017 / at the next 12 months, please indicate your company's TOP 3 existing / anticipated sourcing challenges"

Fig. 27. Top 3 supply chain challenges: 2017 vs. 2018



4.3. Top sourcing challenges: 2017 vs. 2018

When asked to estimate the potential impact of today's major trade and manufacturing trends on the near future of their sourcing, **between 76% and 81% of respondents noted that they expect to be affected by such macro factors as tariffs, quotas, protectionism and embargos over the next 2-3 years**. This sentiment is particularly strong in the Footwear industry, where over 90% of companies expect global politics to affect their supply chains.

More than half of surveyed businesses expect their sourcing to be affected by automation and big data. The **Food** industry's opinion in this respect is even stronger, with **45% of Food businesses almost certain that big data will affect their sourcing in the next few years**.

By contrast, **3D printing was low on the list of influential trends**, with less than half of respondents anticipating it to impact their business in any way, indicating that while 3D printing is becoming an increasingly prominent challenge for the technical industries, it will still be some time before it reaches businesses in the FMCG and related sectors.

For more details on the expected impact on macro trends on specific industries, please see fig. 29.

"Do you expect the following trade and manufacturing trends to affect your sourcing over the next 2-3 years?"

Fig. 28. Expected impact of macro trends on sourcing

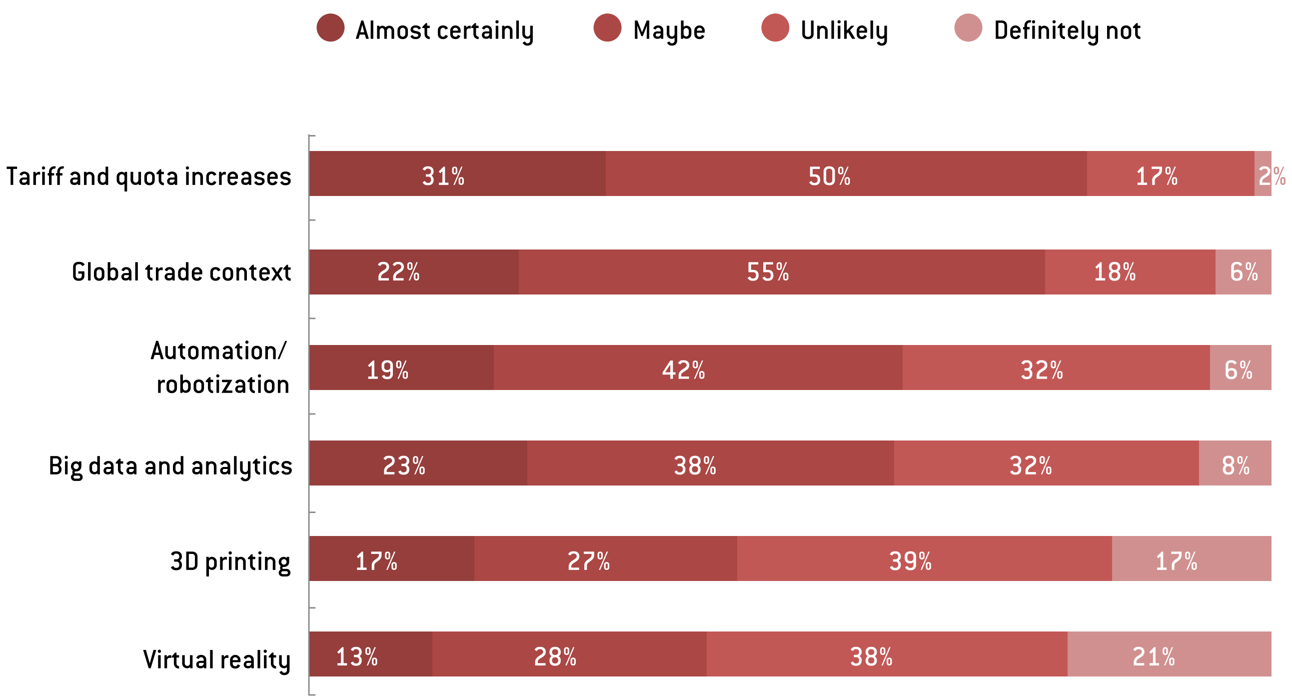
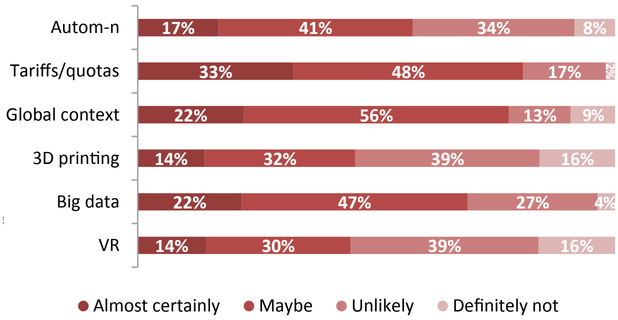
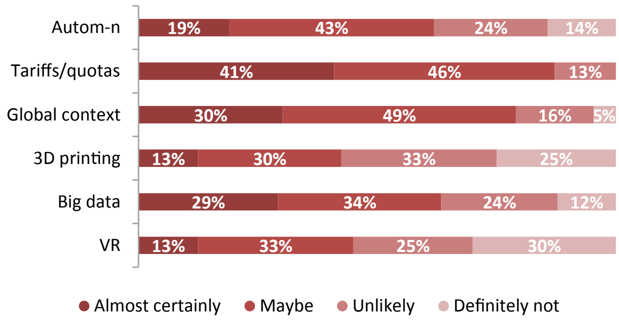


Fig. 29. Expected impact of macro trends by industry

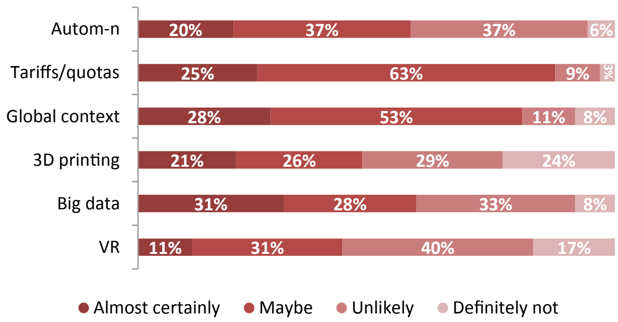
Textile and apparel



E&E



Homeware and gardenware



Toys and recreational products

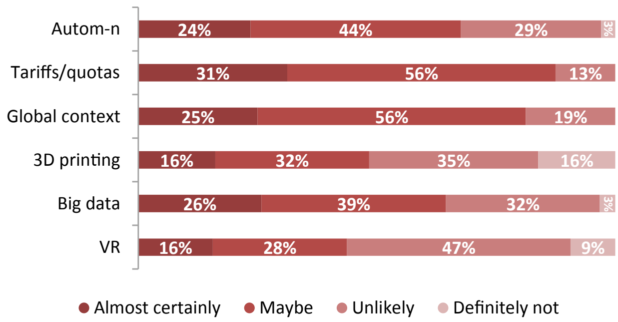
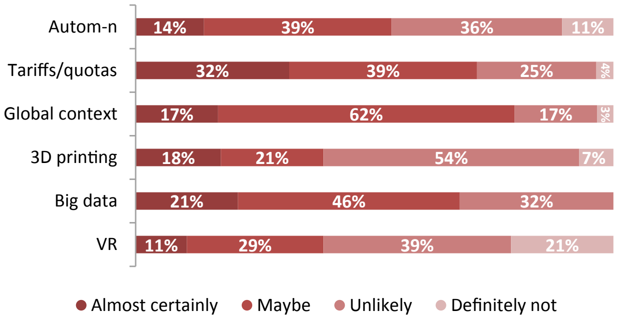
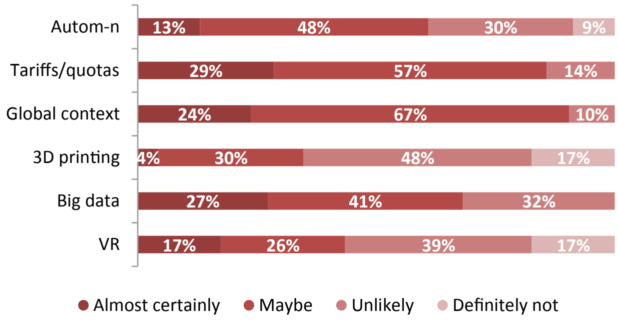


Fig.29. Expected impact of macro trends by industry (contd)

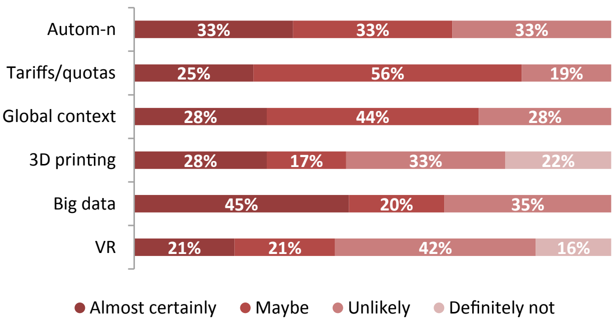
Promotional products



Footwear



Food



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