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Executive Summary

In 2015, BSI noted a number of transnational issues that threatened supply chain resiliency across the world, including an influx of migrants in Europe that disrupted cargo movement across the continent, economic downturns in Argentina, Brazil and China, and issues of political transparency that drove social unrest in Africa and Central America. Extreme weather events, including many attributed to the El Nino phenomenon, caused supply chain disruptions and threatened business continuity in multiple regions. Several industries were plagued by poor enforcement of labor regulations, allowing for significant rates of child or forced labor in Argentina and India, among other nations. Corruption played a central role in or was a driving factor for a number of incidents in 2015, including social unrest in Africa and Central America, cargo theft in India, and the introduction of illegal drugs into cargo in Peru.

In the Asia-Pacific region, BSI recorded a number of new trends affecting cargo theft. Notably, thieves in China increased their reliance on the ‘moving-truck’ technique, whereby thieves targeted in-transit shipments of goods. Cargo thieves in India relied more on corrupt supply chain employees in 2015, and used increasingly sophisticated techniques to target shipments intended for export from the nation. The risk of child labor in India also increased in 2015, driven in part by the adoption of new legislation that provides human traffickers with legal loopholes. A similar trend of legislative shortfalls in China led to a major explosion in Tianjin, which highlighted poor governmental enforcement in the chemical industry.

Political instability in Africa and the Middle East triggered an influx of migrants searching for refuge in Europe, where supply chains were disrupted by social unrest, the threat of stowaway introduction, and the imposition of new security measures in the Schengen Zone. Amidst the movement of refugees, the Islamic State in Iraq and Syria (ISIS) terrorist group demonstrated an increased capacity for international operations after claiming credit for a series of attacks in Paris. ISIS operations threatened supply chains across Africa and the Middle East in 2015, and the potential for an attack directly targeting the regional supply chain remains high.

2015 also saw a number of major corruption scandals emerge in the Americas, with the problem most significantly impacting supply chains in Brazil, Peru, and Guatemala. Economic downturns in Argentina and Brazil and an electoral upset in Venezuela fueled social unrest that interrupted supply chain operations in the region. Cargo thieves in Argentina, Chile, and Colombia shifted tactics last year. Child and forced labor remained a key concern for the Americas region in 2015, as the death of two child laborers in Argentina’s textile industry highlighted the need for supply chain transparency laws like those now under consideration in the United States and the United Kingdom.

In 2016, BSI expects continued disruptions to global trade as a result of the El Nino event, a push for supply chain monitoring and reporting to eliminate the use of child and forced labor, and continued social unrest in Africa, Latin America, and Europe. The following report addresses the high-level challenges that each region faced in 2015, and provides a forward look at anticipated risks in 2016. A more detailed look into supply chain risks can be found in the BSI SCREEN tool, which includes risk ratings and analysis for 204 countries.
2015 SCREEN Global Intelligence
Supply Chain Threats, Risks, and Trends

Major 2015 BSI Threat Rating Trends

Increased Severity
Decreased Severity

Two bills introduced in 2015 would require companies to audit their supply chains for child and forced labor.

The rise in methamphetamine and heroin trafficking could decrease the risk of illegal drug introduction into cargo leaving Mexico.

Cargo theft in Colombia continued to decrease in 2015.

Supply chain operations were exposed to extortion or frequent attack by ISIS in the past year.

French government agency estimates Europe's economy would lose $110 billion if border controls are reestablished in the Schengen Area.

Expansion at the Port of Tianjin estimated to cause $3.3 billion in damages.

An estimated 85 percent of provinces are expected to see drought conditions by April 2016.

Supply chain operations were exposed to extortion or frequent attack by ISIS in the past year.

The Modern Slavery Act became law in March 2015.

Attempts to manipulate elections in Burundi, Guinea, and Congo DRC triggered significant levels of social unrest in 2015.

Factory strikes in China increased 58.3 percent in 2015.

Increase in violence and targeting of low-value loads during hijackings in South Africa.

An estimated 85 percent of provinces are expected to see drought conditions by April 2016.

Increased severity of Factory strikes in China.

2015 Strikes in China by Industry

Heavy manufacturing (steel, machinery, etc.) - 25.8%
Electronics - 17.5%
Garment and textiles - 16.9%
Consumer Goods and Retail - 11.1%
Food - 7.1%
Footwear - 6.2%
Automotive - 5.1%
Pharmaceutical - 2.5%
Other - 10.1%

Natural Disasters
Five Costliest Natural Disasters - 2015

Forest Fires in Indonesia $16 Billion
Floods in the United States $4-$5 Billion
Earthquake in Nepal $4-$5 Billion
Typhoon in China and the Philippines $4 Billion
Floods in India $1.3-$3 Billion

Potential Costs to Top Six European Economies if Schengen Area Border Controls are Reestablished

Germany $10-$15 Billion
Italy $8-$10 Billion
Spain $4-$5 Billion
France $3-$4 Billion
United Kingdom $2-$3 Billion
Netherlands $1-$2 Billion

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Several key supply chain threats intensified in Asia in 2015, including in China and India, the region’s two largest supplier countries. BSI recorded emerging cargo theft trends in both countries in 2015, highlighting cargo criminals’ persistent efforts to develop new tactics to circumvent security countermeasures. BSI analysis suggests that key gaps in recently introduced labor reforms in India will allow serious risks of child labor use to persist. Concerns over human rights issues also continued to affect the supply chain in China, with worker unrest over pay contributing to a record number of labor strikes at factories in China. The significant financial costs of supply chain risk in China were highlighted significantly in the explosion of a chemicals warehouse in the port city of Tianjin, which was estimated to be one of the most expensive industrial disasters of all time.

Emerging Cargo Theft Techniques in China

BSI typically sees relatively unsophisticated thefts in China, though the risk of theft from moving trucks spread to a number of the country’s provinces in 2015. These thefts were most prominent in the southern province of Guangdong, though BSI also recorded moving truck thefts in Henan, Hubei, Jiangsu, Liaoning, and Shandong provinces. Known locally as “open sunroof thefts,” thieves in these incidents drive cars behind cargo trucks, jump on to the moving vehicles, cut a hole in the top of the soft-sided trailer, and toss cargo back to the car trailing behind. BSI recorded the theft of $55,000 of pharmaceuticals and $40,000 of leather goods, among other cargoes, stolen in these types of incidents in 2015.

Within Guangdong, the G4 highway between Huadu and Shaoguan was a particularly high-risk area for these types of thefts, as was the G45 highway north of Guangzhou. Chinese police have had some success capturing gangs carrying out moving truck thefts, but jurisdictional issues have continued to plague all types of cargo theft investigations in the country. Since these thefts occur while goods are en route, it is often not clear which local police office should investigate the incident. Additionally, a number of public security agencies have overlapping jurisdiction for criminal cases involving cargo theft, often resulting in confusion for companies seeking to report crimes. This confusion may discourage truck drivers from filing reports and allow cargo theft gangs to operate for longer periods of time before their capture.
Increased Sophistication of Cargo Theft Gangs in India

BSI noted a rise in sophisticated cargo theft techniques in India in 2015. Most notably, in the early part of the year, criminal groups perpetrated several thefts targeting export cargo shipments after customs seals were placed on containers, but prior to the shipments reaching ports. BSI recorded 14 incidents targeting export shipments that were believed to be perpetrated by just three different theft groups. After being stolen, the shipments were diverted to group-controlled warehouses, where container panels were cut and the goods removed from the consignment.

Customs seals were often left intact, however, delaying discovery of the thefts until after the shipments reached their customers. The thefts occurred in geographically dispersed areas of the country and often involved the participation of supply chain employees, underscoring the importance of thorough vetting of all workers with access to goods consignments in India. In addition to concerns over losses due to theft, criminals’ ability to break into shipments without damaging customs seals also threatens the overall integrity of consignments by creating opportunities for introductions of unmanifested cargo that are less likely to be detected, creating a major risk for companies participating in supply chain security programs like the Customs-Trade Partnership Against Terrorism (C-TPAT).

Increased Child Labor Risk in India

BSI has noted a sustained increase in the risk of child labor use in India. In May 2015, the Indian cabinet approved a set of labor reforms designed to remove red tape, although loopholes in the reforms are likely to raise child labor risk for certain industries. The reforms approved last summer followed 2014 reforms that dampened the effectiveness of Indian labor inspectors, continuing a trend of persistent labor enforcement shortfalls in the country.

Key export industries may be among those impacted by the potential increased risk of child labor in India. Proposed reforms could spark the proliferation of subcontractors structured as ‘family enterprises’, possibly allowing children to manufacture goods like apparel or sporting goods depending
on the law’s interpretation. Furthermore, areas that have significant existing child labor risk, such as Punjab, Uttar Pradesh, Maharashtra, and Tamil Nadu, could witness heightened use of child labor in exempted industries under the new reforms, possibly affecting some of the most economically-productive states in the country.

Increasing Labor Unrest in China

China saw a record number of strikes at factory and manufacturing sites this year, causing disruptions for a number of industries. Factory strikes increased 58.3 percent in 2015, as factory owners struggled to pay workers due to a slumping economy, leading to protests and walk-offs. Withholding of wages was cited as a grievance in 75 percent of strikes in 2015, compared to only 41 percent in 2014.

Guangdong Province, the manufacturing powerhouse in China’s south, accounted for 30 percent of strikes in 2015, more than any other province. Jiangsu, the province with the second-most strikes, accounted for only 9.7 percent in 2015, more than any other province. Jiangsu, the province with the second-most strikes, accounted for only 9.7 percent in 2015, more than any other province.

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**LABOR UNREST IN CHINA IN 2016** Labor unrest is likely to continue in China in 2016, regardless of whether the economy improves. A return to faster growth in the Chinese economy would continue to drive wage increases, emboldening workers to ask for further wage hikes and making them less willing to accept unfair withholdings of benefits. Compounding these problems, the rate at which migrant workers are moving to China’s coastal manufacturing provinces is beginning to slow, creating spot labor shortages in some places and further driving up wages.

Increasing wages in China’s major manufacturing areas in the coastal provinces have also driven companies to relocate to nearby countries that have lower wages, serving as another driver of strikes in China. Vietnam and Cambodia, for example, have monthly wages of $146 and $140, respectively, compared to minimum wages that top out at $325 for Guangdong Province. The garment industry has been most active in relocating to Southeast Asia, followed by electronics. Chinese manufacturers often relocate to these countries quickly and without paying required compensation to workers in China, leading to strikes. Relocation-related strikes increased from 12 in the second quarter of 2015 compared to 32 in the fourth quarter of 2015, a trend that is likely to continue into 2016.

A continued slowdown in the Chinese economy seems more likely in 2016, however, further increasing the likelihood of wage withholdings and accompanying strikes. Estimates from the International Monetary Fund project GDP growth of below 6.5 percent in 2016, lower than the 6.9 percent recorded in 2015. Though the Chinese government has pledged to crack down on employers who withhold wages, it may be difficult to enforce new directives aimed at preventing wage arrears. In many cases, local authorities tasked with preventing this issue have sided with employers, fearful of driving out business. Though judicial rulings against employers for wage arrears have increased, workers’ advocates have indicated that in some cases the rulings are not enforced.
percent of labor actions. The greatest number of strikes in 2015 occurred in the heavy manufacturing sector, such as steel and machinery, accounting for just over a quarter of all strikes. Electronics factories accounted for 17.5 percent of strikes, garment and textiles accounted for 16.9 percent of strikes, and consumer goods and retail manufacture accounted for 11.1 percent of strikes.

The seasonality of strikes in China has also become more pronounced as their total numbers have increased, with the greatest numbers of strikes occurring in the three months at the end of the year. Conversely, very few strikes occur in the first two months of the year, as this is a low season for orders and workers are returning home for the long Chinese New Year holiday. Strikes tend to increase somewhat, but hold relatively steady, during the summer months when factories are flush with orders and typically experiencing fewer problems paying workers.

The Tianjin Disaster and the Risk of Industrial Accidents in China

The explosion of a warehouse storing chemicals in the port city of Tianjin, China in August 2015 killed 173 people in the port area, led to sustained delays to the movement of cargo, and exposed poor oversight and corruption in the regulation of China's chemical industry. The explosion caused serious delays at the port of Tianjin for around a week following the incident, forcing many ships to re-route to ports in Dalian and Qingdao. Authorities restricted or outright banned the handling of hazardous materials at a number of ports in the country. Estimates from insurance companies place the total cost of the disaster as high as $3.3 billion, making it one of the most expensive industrial disasters of all time.

Blast-affected areas of the port, such as Beijing and Dongjiang, continued to experience delays for several months after the explosion. The destruction of the primary building where port-related paperwork is processed added to delays. The Chinese government also announced a series of safety checks for enterprises in Tianjin, slowing operations for businesses that handle both hazardous and non-hazardous materials. Similar checks occurred in other Chinese provinces following the Tianjin disaster, leading to the closure of chemical plants or storage areas in Sichuan, Gansu, and Beijing provinces, among others.

Even as the effects of the Tianjin explosion subside, the threats posed by poor oversight, disregard for zoning rules, and corruption in building permitting processes continue to pose risks to worker safety and business continuity throughout China. According to China Labour Bulletin statistics, 67 industrial explosions occurred in China in 2015. In many of these cases, safety regulations were not followed, the buildings had not been inspected by relevant authorities, or too many dangerous chemicals were stored too close to residential areas. Natural disasters in the country can also reveal safety issues, as tornadoes throughout southern China in early October showed that many factories had no evacuation plans and had been poorly constructed, leading to the collapse of buildings. The death of at least 69 people in a landslide caused by an overfilled waste dump in Shenzhen in December 2015 further underscored the risk of industrial accidents in China.
The influx of massive numbers of migrants affected countries throughout Europe for most of 2015, contributing to economically costly impacts to the regional supply chain, an issue that did not receive primary attention in much of the media coverage of the crisis. Terrorists linked to the Islamic State of Iraq and Syria terrorist group were highly active throughout the Europe and Middle East region last year, often creating significant direct and indirect disruptions to the supply chain. The threat of cargo theft in a major regional logistics hub, the Netherlands, fortunately declined in 2015, while cargo theft operations in South Africa displayed concerning levels of violence, highlighting the importance of discerning nuances in individual countries’ cargo disruption trends across geographic regions.

Europe’s Migrant Crisis and Interruption to Cargo Transportation

The massive influx of refugees fleeing Iraq, Syria, and other conflict zones made headlines throughout 2015, as European governments struggled to cope with large numbers of asylum-seekers entering their borders. Less remarked upon, however, was how the flows of people into the continent interacted with and sometimes hampered the normal flow of cargo in Europe. By the start of 2016, the migrant crisis had led to the re-imposition of checks at eight different previously open borders, cost the economy of the United Kingdom alone at least $1 billion, and seriously threatened the free movement of cargo and people across European borders.

The most dramatic example was found at the French port of Calais, a key transit point for cargo traveling to and from the United Kingdom and the European continent. Beginning in early June, the large numbers of migrants camped near the port combined with a series of strikes by ferry workers to seriously disrupt cargo transportation through the facility. Blockades constructed by striking ferry workers forced cargo trucks to stop on roads leading to the port, making them much more vulnerable to the introduction of stowaways.

Though the ferry strikes subsided by July 2015, migrants camped near the port of Calais continued to enter cargo transportation bound for the United Kingdom, often creating their own disruptions. Migrant attempts to board cargo trucks en masse or storm the nearby Channel Tunnel, along with clashes with police, caused major disruptions to cargo transportation on at least eight separate occasions between August and December 2015. In the most serious incident, migrants engaged in a fourteen-hour running skirmish with police while refugees attempted to storm the Channel Tunnel and cargo trucks near the port alike in December 2015. The major disruptions occurred alongside shorter delays nearly every week in the second half of 2015, and near-constant attempts by migrants to enter cargo trucks as stowaways near the port.

Delays at the port of Calais cost the United Kingdom at least $1 billion in 2015, with daily costs of $1.2 million to UK shipping companies and $545,000 for Dutch shippers, who are also very active at the port. A Dutch shipping group estimated a total cost to their members was $164 million in 2015. The disruptions also resulted in the loss of very high-valued loads, as BSI recorded cases in which pharmaceutical companies destroyed shipments worth...
$3.9 million and $279,000 following their contamination by stowaways. Similar incidents greatly increased the cost of shipping for food companies as well, for similar reasons.

The flow of refugees into Europe disrupted cargo transportation beyond France, as European countries re-imposed border checks where they had previously allowed the free movement of goods and people. In order to cope with the massive influx of people into the continent, estimated at over one million people, eleven different European countries either closed their borders for a period of time or began checking passengers and freight passing through their borders. This led to significant wait times and increased cost for cargo transportation.

Germany was the first European Union country to re-impose border controls, with the state of Bavaria reinstituting checks in June 2015. Germany re-imposed checks along other parts of its border in September, followed by Hungary, the Netherlands, Slovakia, and Austria. Hungary and Croatia outright closed their borders for a short period of time in September as refugees surged across the border. Denmark, Norway, Finland, and Sweden followed in the months afterwards, re-imposing checks along some or all of their borders. The imposition of checks along France’s border following the November terrorist attacks in Paris added to the existing disruption across the continent.
Controls at Europe’s previously open borders have caused delays ranging from between 15-30 minutes to as much as several hours in some cases. On average, these delays cost shippers $59 per hour, per truck. Belgian shippers estimated that checks at the French border alone cost them $200,000 per day and as much as $3.48 million in November and December. Some countries, including Austria, France, and Germany, have announced that they will extend border checks well into 2016, adding to costs. If the controls along the Austria-Germany border alone were extended until mid-2016, they would cost businesses at least $109 million. Border checks tend to have a cascading impact as well, as checks at the German border prevent cargo from Italy, a major trade partner, from quickly moving through Austria.

**ISIS: Supply Chain Threats and 2015 Activities**

Islamic State in Iraq and Syria (ISIS) activities in 2015 served as a clear reminder of the nexus between terrorism and the supply chain. Supply chain operations in areas where ISIS has significant ground forces, such as Iraq, Syria, and Libya, were exposed to extortion or frequent attack in the past year. Additionally, French authorities’ tightening of the country’s borders following the ISIS attacks in Paris in November underscored how terrorism can often have an indirect – yet economically significant – impact on the international supply chain.

More broadly, 2015 saw ISIS place significantly more emphasis on external operations than in the previous year, as part of a multi-pronged strategy that involved including both coordinating and inspiring attacks. ISIS operatives likely played a major role in numerous attacks outside of the group’s main bases of operation last year, including in France, Turkey, Tunisia, and throughout the Arabian Peninsula. Dozens of deadly attacks (and many additional plots) by individuals believed to be “inspired” by jihadist groups but not actually directly commanded by them underscored that the threat posed by ISIS to Western interests was heightened in 2015.

ISIS is likely to remain a significant threat in 2016 as it continues to pursue its goal of establishing
radical Islamic-based rule across the greater Middle East. The group will likely continue focusing on controlling territory in Iraq and Syria – the group’s resilience in these areas highlights that it will remain a serious threat until ground forces can drive it from occupied lands. Also, ISIS’s significant inroads in places like Libya and Egypt give it notable rear bases should its headquarters in Syria fall in the near term. ISIS affiliate organizations exercise control over a stretch of Libya’s Mediterranean coast centered on the city of Sirte, while the local affiliate in Egypt’s Sinai Peninsula remains free to operate throughout much of the region. ISIS will likely continue seeking to expand its activities in places further abroad, as it attempts to attract adherents to its radical ideology. Nations in northern Africa, the Afghanistan-Pakistan region, Southeast Asia, and some Western countries, especially in Western Europe, are most likely to see ISIS recruitment activities or attempted attacks in the year ahead.

<table>
<thead>
<tr>
<th>Inspired Jihadist Threat Rating</th>
<th># Foreign Fighters in Iraq/Syria by Origin</th>
<th>Fighters/Capita (per million people)</th>
<th>Attacks or Plots since May 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>SEVERE</td>
<td>1,200</td>
<td>19</td>
</tr>
<tr>
<td>Belgium</td>
<td>HIGH</td>
<td>440</td>
<td>39</td>
</tr>
<tr>
<td>Germany</td>
<td>HIGH</td>
<td>550</td>
<td>7</td>
</tr>
<tr>
<td>Denmark</td>
<td>ELEVATED</td>
<td>100</td>
<td>18</td>
</tr>
<tr>
<td>Australia</td>
<td>ELEVATED</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Canada</td>
<td>ELEVATED</td>
<td>130</td>
<td>4</td>
</tr>
<tr>
<td>U.S.</td>
<td>ELEVATED</td>
<td>250</td>
<td>1</td>
</tr>
</tbody>
</table>
Declining Rates of Cargo Theft in Netherlands

The Netherlands, an important logistics hub for Europe, saw a decrease in the risk of cargo theft in 2015. The number of cargo thefts in the country declined 20 percent in 2015, according to official statistics, capping three straight years of decreases in the number of thefts.

Targeted, risk-led police operations at rest areas, combined with better surveillance and increased levels of public-private cooperation, have all helped drive down cargo theft in the Netherlands. Additionally, cargo thieves may have shifted to targeting cargo tractors without trailers to sell in East European “chop shops,” as theft of trailer-less trucks increased 50 percent in the third quarter.

Despite the decline in overall cargo theft risk, cargo theft continues to be concentrated in several areas in the Netherlands. The towns of Breda, Hazeldonk, Echt, and Tilburg continue to see pilferage thefts at rest areas, while Rotterdam remains a hotspot for full-truck theft. Clothing and electronics are the most commonly targeted commodities in thefts in the Netherlands.
Heightened Violence in South Africa Cargo Theft Operations

During 2015, BSI noted an increase in violence and targeting of lower-value loads during hijackings in South Africa. While hijackers have used violence against security officers in the past, a string of attacks against security escorts in the first six months of the year represented an unusually high concentration of such violent incidents over a short time period. Most of the incidents were believed to be perpetrated by current or former police or security officers, often involving highly sophisticated tactics to carry out very high-value thefts.

Additionally, BSI has recently observed a trend of increased hijackings of even smaller-valued truck shipments. These types of incidents are noteworthy because they involve criminals using relatively sophisticated hijacking tactics, which in South Africa often include the use of violence, to steal lesser-valued shipments. 2015 saw the highest number of hijackings of loads totaling less than $20,000 of any year since 2012. While the increase in these types of incidents may be due in part to overall increases in theft activity, BSI recorded a small but noticeable relative increase in targeting of smaller valued shipments: loads valued at less than $20,000 accounted for 17 percent of all hijackings last year, compared to only 12 percent in 2014.

While it is too soon to say definitively, the string of attacks on escorts and use of hijacking tactics to perpetrate low-value thefts in 2015 could be indicative of an increase in the willingness of thieves in South Africa to use violence during the course of cargo thefts. Such a trend would be especially concerning if the overall number of thefts in the country continues to climb at recently-seen rates – the overall total number of hijackings in South Africa, a good measure of total theft activity in the country, has increased every year since 2011, rising 29 percent alone in the government’s 2014 fiscal year, the most recent period for which statistics are available.
Political Unrest and Business Continuity Threats in Africa

Protests in multiple Sub-Saharan African countries caused serious interruptions to trade, as protestors took to the streets to demonstrate against attempts to manipulate elections. Demonstrations are likely to occur again in the near future as several other countries in the region approach elections in the next two years, posing significant threats to business continuity over both the short- and long-terms.

Attempts to manipulate elections in Burundi, Guinea, and Congo DRC triggered significant levels of social unrest in 2015. Unrest frequently interrupted the ground and occasionally air transport modalities, highlighting the short-term impacts on the supply chain in these nations. Several countries with similar political situations, such as Uganda, Algeria, and Rwanda, approach elections in the next two years, and there is a strong chance of similar levels of unrest and interruptions as these polls approach.

<table>
<thead>
<tr>
<th>Election-Related Unrest in 2015</th>
<th>Next Election</th>
<th>Years President in Power</th>
<th>Social Unrest Threat</th>
<th>Operations Interrupted of Threatened</th>
<th>Major Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burundi</td>
<td>July 2015</td>
<td>9</td>
<td>HIGH</td>
<td>Air, Ground Transport</td>
<td>coffee, cotton, hides, sugar, tea</td>
</tr>
<tr>
<td>Guinea</td>
<td>October 2015</td>
<td>4</td>
<td>SEVERE</td>
<td>Truck</td>
<td>alumina, bauxite, coffee, diamonds, gold</td>
</tr>
<tr>
<td>DR Congo</td>
<td>2016</td>
<td>14</td>
<td>SEVERE</td>
<td>Truck</td>
<td>cobalt, coffee, copper, oil, diamonds, gold</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>October 2015</td>
<td>5</td>
<td>HIGH</td>
<td>Truck</td>
<td>cocoa, coffee, gold, tea, fish</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk of Future Unrest</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>2016</td>
<td>29</td>
<td>HIGH</td>
<td>Truck, Air, Rail</td>
<td>coffee, cotton, gold, tea, fish</td>
</tr>
<tr>
<td>Algeria</td>
<td>2017</td>
<td>16</td>
<td>HIGH</td>
<td>Truck, Sea, Rail</td>
<td>natural gas, petroleum products</td>
</tr>
<tr>
<td>Rwanda</td>
<td>2017</td>
<td>15</td>
<td>GUARDED</td>
<td>Truck, Air, Rail</td>
<td>coffee, hides, tea, tin, ore</td>
</tr>
</tbody>
</table>

Long-Term Impacts of Political Volatility

GDP Growth Rate (Line color denotes Political Stability threat rating)
Looking further ahead, BSI analysis of multiple countries in Sub-Saharan Africa suggests that sustained political volatility threatens long-term prospects for overall economic growth, as well as the development of trade and logistics capabilities in the region. Frequent regime changes have deterred foreign investment that often drives such development. The significant risk of protests over elections-related issues in the near term highlights that instability will likely continue to pose a threat to overall economic improvements in the Africa region into at least the coming years.

**Corporate Social Responsibility Regulations in Europe**

Countries in Europe moved to pass laws mandating reporting on corporate social responsibility issues in corporate supply chains in 2015. The most significant of these laws, the Modern Slavery Act, became law in the United Kingdom in March 2015. The law requires UK companies with a turnover greater than £36 million ($56 million), a relatively low threshold, to report on due diligence efforts to combat slavery and human trafficking in their supply chains. The passage of the act has been coupled with a push to prosecute human trafficking in the country itself, with the first conviction of a factory owner for such a violation coming in January 2016.

Two initiatives in France in 2015 mirrored the UK’s move towards more mandatory reporting of corporate social responsibility initiatives. The first, still under review by the country’s Senate, would require companies to publish “Vigilance Plans” covering human rights, environmental, health, and safety, and corruption risks throughout their supply chains. As currently structured, the law would require reporting by French companies with more than 5,000 French employees and companies with more than 10,000 employees globally. The second law, proposed in June 2015, requires companies to disclose information about their carbon footprint. These laws, combined with a May 2015 EU Parliament proposal to make conflict minerals reporting mandatory, suggest that companies doing business in Europe will increasingly be faced with mandatory reporting requirements for corporate social responsibility issues.

**U.S. Labor Bills Call For Mandatory Reporting on Child Labor, Human Trafficking**

Two bills introduced to the U.S. Congress in 2015, the Stop Blood Tomatoes Act of 2015 and the Business Supply Chain Transparency on Trafficking and Slavery Act, seek to implement new laws requiring companies that meet specific receipt or revenue standards to report all measures taken to prevent child labor, forced labor, and human trafficking in their supply chains. The bills are both loosely based on the 2010 California Transparency in Supply Chains Act and call for similar actions, but they vary slightly in their scope and implementation. The ultimate goal of both bills is to bring public pressure to bear against any companies that inadequately enforce supply chain guidelines and benefit from child or forced labor.

The key difference separating the two bills is the threshold of revenue that dictates which companies will be impacted by the regulations. Both bills require verification of actions to eliminate the use of child and forced labor, and will necessitate audits of each company’s supply chain. The audits will have to verify that the proper policies are followed at every point of the supply chain. Should either bill pass, companies will face an added cost of paying for audits, likely required on an annual or bi-annual basis, in order to maintain their compliance with the laws.
The threat of cargo theft and illegal drug introductions into cargo remained serious concerns in the Americas in 2015. BSI recorded notable shifts in theft and smuggling trends in many individual countries in the region, however, including in Mexico, Colombia, Chile, and Brazil. Corruption served as a major risk factor threatening supply chains in the Americas last year. The problem was a driver for Brazil, Guatemala, and Honduras, and police in Peru also cracked down on an illegal drug trafficking ring that was supported by corrupt customs officers and workers. Finally, the significant risk of human rights violations in the Americas was highlighted in notable ways in 2015, such as the deaths of two children working in unregulated textile factories in Argentina, which drew attention to the use of child laborers in the country. Some steps were taken to more adequately address such threats last year, with legislators in the United States most notably considering two bills that would require reporting on efforts to eliminate child and forced labor from global corporate supply chains.

Shifting Cargo Theft Trends in South America

Cargo theft occurs more frequently in South America than in any other region in the world, and while the rate of theft in the region has remained consistent for the last several years, the tactics and trends in individual countries have tended to vary over time. In 2015, this shift in national cargo theft trends was most pronounced in Colombia, Chile, and Argentina.

Cargo theft in Colombia continued to decrease in 2015. According to government and trucking association statistics, there was a 26.4 percent decrease in the number of cargo theft incidents between January and September 2015 and the same period of time in 2014. 2015 marked the second year in a row in which cargo theft incidents have decreased in Colombia, and the annual total represented a 15-year low. While the number of cargo theft incidents has continued to fall, hijackings as a percent of all thefts increased from 76 percent in January-September 2014 to 81 percent in 2015. Cargo theft continues to occur most frequently in rural areas of the country. Among urban areas, the cities of Medellin, Bogota, and Popayan see the highest rates of theft.

Argentina generally experienced a shift in cargo theft tactics rather than a fluctuation in overall incident numbers in 2015. BSI noted a shift last year from targeting full-size cargo trucks to smaller cargo vehicles such as vans. Only 20 percent of recorded thefts in Argentina involved full-size trucks, highlighting the extent to which this shift impacted cargo transportation modalities. The slumping Argentine economy, which has resulted in lower demand for goods, and cargo truck restrictions have increased the use of cargo vans, providing thieves with more opportunities to steal the smaller cargo vehicles. In addition, cargo vans are inherently more appealing targets because they can be stolen faster, with fewer thieves, and in confined spaces within cities. Other
notable shifts in cargo theft trends in Argentina include the increased use of heavy weaponry – including automatic assault rifles – selective targeting of vehicles transporting cargo worth more than 125,000 pesos ($9,251) of cargo, and hijackings of GPS-tracked cargo trucks before they leave facilities to make it appear the truck never left.

In contrast, cargo theft rates have been steadily increasing in Chile, with businesses and cargo transportation companies and organizations warning of the rise in theft. An estimated three cargo trucks are stolen in the country every day, forcing companies to adopt costly security measures including communication systems inside their vehicles, panic buttons, kill switches, surveillance cameras inside and outside of trucks, and security escorts. Most cargo theft in Chile continues to occur in what is colloquially known as the “Bermuda Triangle,” or the roads linking Santiago to Valparaiso (Route 68) and San Antonio (Route 78). An estimated 50 percent of all cargo theft incidents in Chile take place on these roads. Thieves in Chile are also demonstrating increased sophistication, using guns, GPS-jamming devices, and, in at least one incident, bullet proof vests.

Potential Decline in Illegal Drug Introduction Risk in Mexico

The introduction of illegal drugs into cargo shipments travelling from Mexico to the United States is the leading cause of decertification from the U.S. Customs and Border Protection’s Customs-Trade Partnership Against Terrorism (C-TPAT) program. Data from both BSI and the U.S. Customs and Border Protection (CBP) agency suggest that cocaine and marijuana trafficking from Mexico to the United States is falling due to lower demand. Marijuana growers in Mexico report that they have been forced to grow higher-quality product or switch to poppies, due to falling demand for Mexican marijuana. Consumers in the United States claim that domestically grown marijuana is of a higher quality than Mexican varieties, and typically available at a cheaper price.
While data suggest that the trafficking of cocaine and marijuana from Mexico to the United States is falling, significantly increased seizures of heroin and methamphetamine likely suggest that the trafficking of these drugs is rising. These drugs are not routinely introduced into cargo shipments, however, as they are typically smuggled in smaller quantities that can be transported via human ‘mules’, parcel shipments, or private vehicles at much cheaper costs, limiting the tampering risks for imported freight. If these trends continue into 2016, the overall risk of illegal drug introduction into cargo leaving Mexico for the United States could potentially fall. However, it is too soon to say for certain whether these trends will continue, as various other factors in Mexico and the United States could have adverse effects on the overall risk of contraband introduction.

Corruption, Cocaine, and the Port of Callao, Peru

The Port of Callao, the major seaport in Peru, played an increasingly important role in the smuggling of cocaine via introduction into legitimate shipments of cargo exported from the country in 2015. Investigative reports have revealed that corrupt dockworkers, crane operators, customs officers, security officers, police, and truck drivers all conspire to traffic cocaine from the port via sea containers. Corrupt port security chiefs can charge about $20,000 to allow the safe passage of cargo trucks carrying cocaine into the docks, while stevedores could earn about $10 per kilogram of cocaine loaded into sea containers.

Traffickers in Peru tend to introduce cocaine into sea containers stored in warehouses along Néstor Gambetta Avenue (Route 100). Traffickers receive tips from corrupt officials and wait to introduce cocaine into sea containers until after customs officers conduct inspections. Smugglers then wait until the cover of night before entering the facility with the help of corrupt port officials and introduce cocaine into containers, removing and replacing legitimate seals with fakes.

There was strong evidence pointing to corrupt officials at the Port of Callao also aiding in the theft of a cargo container from the facility in 2015, further highlighting the impact of corruption on supply chains in the country. Thieves stole a container loaded with $250,000 of electronics after reportedly using a falsified copy of a supposedly unforgeable electronic document that allowed them to pick up the container from the port. The driver and truck that picked up the container full of electronics were also in the facility’s database, another indication that the thieves likely had insider assistance.
In order to combat drug trafficking and a spike in violence in Callao and nearby Lima, President Ollanta Humala imposed a 45-day state of emergency, deploying an additional 2,000 police officers, legally restricting the freedom of movement, and enabling officers to carry out searches and arrests without a warrant. The near-term effects of the state of emergency will likely include the dismantling of criminal groups dedicated to transporting cocaine from production regions to Callao for export. This would likely result in the short-term reduction in illegal drug smuggling and violence. Arrests and seizures of weapons will likely stem the violence attributed to the gang war being fought over the Callao smuggling route.

In the long-term, however, drug smuggling activity will likely return to the port of Callao, as the state of emergency alone will do little to root out the corrupt network of port employees who aid the cocaine smuggling network in the city and port. In addition, cocaine production levels need to be dramatically reduced throughout Peru, otherwise there will continue to be significant incentives for criminal organizations to export the illegal drug.

**Social Movements Against Corruption and Impunity in Central America**

Corruption and impunity in Central America have serious implications for regional supply chains. Often, illegal drug traffickers in the region pay bribes to prosecutors, judges, and other governmental staff in order to avoid prison time when caught. This allows for continued introductions of illegal drugs, and threatens the integrity of cargo shipments exported from Central American nations. Corrupt police officers throughout the region have been indicted for taking part in cargo theft operations or facilitating illegal drug smuggling. Corruption and impunity are so thoroughly ingrained in the society of several Central American nations that regulatory bodies typically experience very little success in prosecuting offenders.

In 2015, Guatemala made serious progress toward combatting corruption and impunity, culminating with the arrest and indictment of both the president and vice president for their involvement in a customs kick-back scandal. The ‘la linea’ ring, as the group in the scandal came to be known, involved members of the government accepting bribes in order to reduce import tariffs for several goods. The International Commission Against Impunity in Guatemala (CICIG), an organization backed by the United Nations and created to support anti-corruption investigations in the country, was instrumental in uncovering the scandal.

The success of the CICIG proved to be a catalyst for protesters in Honduras, who demanded a similar organization be installed. The government responded by creating the Mission to Support the Fight Against Corruption and Impunity in Honduras (MACCIH), largely in order to placate protesters and address rampant corruption. In 2016, BSI anticipates that MACCIH will face difficult challenges in its efforts to address corruption in Honduras. The organization will not be given the wide access to government resources, information, or authority that CICIG enjoys in Guatemala. The political elite in Honduras are also believed to be more closely tied to illegal drug traffickers than their Guatemalan counterparts, which may increase pushback against anti-corruption efforts. Additionally, MACCIH has international support from the Organization of American States (OAS), which is generally perceived as less effective at battling corruption, while the CICIG is backed by the United Nations.

The success or failure of MACCIH will almost certainly have a strong impact on Honduras’ political stability. Should MACCIH prove to be effective at supporting anti-corruption investigations and cases in Honduras, it is possible that endemic impunity in the nation may start to erode. However, if MACCIH is not able to show early successes, the population may reject the organization as a ploy to placate protesters and restart demonstrations against the government. Political stability in Honduras, which suffered following a 2009 coup, could be threatened by additional anti-corruption protests in 2016.
Human Rights Issues Plague Argentina’s Textile Sector

The death of two child laborers in a fire at a clandestine textile factory in Argentina in April 2015 underscored the risk of child and forced labor in the country’s unregulated textile factories, some of which may supply to international companies. Forced and child labor in Argentina is often found in informal factories producing textiles and apparel, where employees frequently work in poor conditions. Migrants from nearby counties such as Bolivia, Paraguay, and Peru are most at-risk of being exploited while working illegally in Argentina, where they face wage garnishment and may be prevented from leaving their worksites. It is estimated that there are between 3,000 and 5,000 such clandestine textile factories in Buenos Aires, though the total number of people employed in these facilities is unknown. Employees at clandestine factories often work around 16 hours per day in cramped quarters that can hamper workers’ health. Tuberculosis is also common among forced laborers in Argentina.

Locations of Textile Sweatshops in Buenos Aires

*As identified by local NGO La Alameda
While these issues are certainly a cause for concern, Argentina's textile industry largely produces goods for domestic consumption, and the problems may not impact international supply chains. In at least one case, however, international brands were found to be sourcing from unregulated Argentine textile factories, underscoring the importance of conducting thorough examinations of corporate supply chains, including the tracing of products to the subcontractor level, to help avoid the sourcing of products from factories that employ workers in forced or other abusive conditions.

**South America Political Transitions and Implications for Supply Chains**

Faltering economies in some of South America's major countries, particularly Argentina, Venezuela, and Brazil, contributed to political transitions and unrest in 2015, which will likely continue to have implications for companies doing business in the region in 2016.

In Venezuela, the opposition coalition gained a controlling two-thirds majority in parliament for the first time in 16 years and has pledged a referendum to recall President Maduro in April 2016, launch constitutional reforms, and replace senior judges and other key administrative officials. The coalition's ascent to power comes as Venezuela continues to suffer from severe inflation that has led to a constant flow of goods being smuggled into Colombia, as well as a spike in cargo thefts targeting everyday products like food and beverage items. The country's economic woes, combined with severe shortages of basic goods, have also led to abrupt policy changes, including the seizing of property owned by Western companies, arbitrary arrests of their employees, and the closing of a major industrial complex by the Maduro administration that have had negative impacts on supply chains. BSI has noted three different scenarios that could play out in 2016 from the opposition's rise to power in parliament, which can be found in the accompanying table.

<table>
<thead>
<tr>
<th>Most Likely</th>
<th>Somewhat Likely</th>
<th>Least Likely</th>
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<tbody>
<tr>
<td>Political stalemate ensues after opposition passes some agreed-upon legislation</td>
<td>Opposition uses legislative power to begin revitalizing economy, revoking socialistic economic policies</td>
<td>Maduro uses military to assert complete control and retain power</td>
</tr>
<tr>
<td>Political differences begin to split the now-unified opposition</td>
<td>Constitution rewritten to remove egregious executive powers</td>
<td>High political instability in short-term, lower level of political instability in the long-term</td>
</tr>
<tr>
<td>Political stability remains constant</td>
<td>Political stability increases</td>
<td></td>
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</tbody>
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Economic woes also presaged the transition from left-wing populism to center-right politics in the election of Mauricio Macri as President of Argentina in late 2015, the first swing to the right in twelve years. Macri is now charged with revitalizing a stalled economy characterized by high inflation and overburdened by currency controls and trade restrictions. Macri has already moved to eliminate the country's stringent exchange controls, letting the peso float freely with the hopes of spurring international investment. However, by doing so, imports are now more expensive, likely leading to higher prices and increasing their appeal as targets for theft. Argentina's top five imports include mineral fuels and oils, machinery, vehicles and automotive parts, electronics, and organic chemicals.
Macri has also already taken a decidedly more aggressive approach to organized crime, particularly the illegal drug trade in the country. Under a declared Public Safety Emergency, set to last for one year, Macri will institute a series of initiatives aimed at combatting organized crime. Whether this hardened approach will reduce the risk of illegal drug introduction into cargo in Argentina remains to be seen in 2016, and it does not appear that any additional efforts will be made to reduce the threat of cargo theft. However, Macri’s acknowledgement of the rise in organized crime through the implementation of the Public Safety Emergency can at least be seen as a positive initial step towards addressing this significant issue.

Brazil’s receding economy was an underlying factor driving social unrest in 2015. Combined with a corruption scandal embroiling the administration of President Dilma Roussef, the country’s economic woes have triggered demonstrations that resulted in significant disruptions for businesses in the country. Massive protests held nationwide in March, April, and August of 2015 highlighted the significant threat of social unrest in the country, with cargo truck drivers, customs officers, oil workers, and agricultural inspectors each holding their own strikes to demand wage increases or improvements to working conditions to counter rising inflation. Each of these protests and strikes in 2015 led to delays in cargo transportation ranging from hours to days, highlighting the significant financial costs to supply chains that can result from social unrest. Business continuity impacts will very likely continue in Brazil into 2016 as the government seeks to make spending cuts in hopes of bolstering the weakening economy, a move that will likely serve to increase the number and severity of labor strikes and other forms of social unrest.
Extreme Weather Events Interrupt Business Continuity Worldwide

Extreme weather events, many of which were tied to the El Nino weather phenomenon, caused significant interruptions to business continuity in 2015 and resulted in billions of dollars of financial losses. Many of these disasters occurred in areas that were ill-equipped to quickly respond to and recover from natural disasters. Torrential rains in Chennai, India, for example, resulted in financial losses of between $1.3 and $2.2 billion, and caused disruption to air, rail, sea, and ground transportation modalities in addition to preventing factory production for longer than one week in some cases. In contrast, Storm Desmond in the United Kingdom, which similarly brought heavy rains, cost around $750 million and most disrupted factories were back online within five days.

Extreme weather is likely to continue to have impacts well into 2016. In the Philippines, an estimated 85 percent of provinces are expected to see drought conditions by April 2016, which could impact production at farms and fisheries. Indonesia is likely to experience decreased agricultural yields, as crops were planted late last year due to a lack of rain. As a result, palm oil output, a key input for many food products, is expected to drop at least three percent. This may result in increased costs for food producers, for whom palm oil is a key input.

Different types of extreme weather events can be expected in 2016 if last year’s El Nino is followed by the La Nina weather phenomenon, which has been the case in 40 percent of recorded cases. The Australian Bureau of Meteorology indicates that there is around a 40 percent chance of La Nina weather events occurring by the second quarter of 2016. La Nina years typically experience the opposite effects of El Nino years, which would most likely suggest an increase in cyclone landfall in China, fewer severe storms in the Indian Ocean, wet weather in Southern Africa and accompanying dry weather in East Africa.
BSI Supply Chain Solutions

BSI Supply Chain Solutions is the leading global provider of supply chain intelligence, auditing services, audit compliance and risk management software solutions, and advisory services. Our mission is to help corporations, governments and associations identify, manage and mitigate global supply chain risks and maintain world class governance risk and compliance programs. Our holistic supply chain risk management suite is designed to predict and visualize risk, and develop robust risk mitigation and compliance management programs to protect your supply chain, brand and reputation. Our intelligence-infused supply chain solutions and global network empower our clients to understand global supply chain risk with unequaled precision.

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