RISK BEYOND 2025

ERMA INTERNATIONAL CONFERENCE ON ERM

Risk Odyssey:
Engineering Momentum,
Building a Resillient Risk DNA

The Great Disruption: De-Risking Global Supply Chains

Satpal Singh

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The Global Risk Landscape – Supply Chain disruption up-to USD 1 TR impact

2024	2025
1 Extreme weather conditions	1 Geopolitical Conflict
2 Critical change to Earth systems	2 Extreme Weather Events
3 Biodiversity loss & ecosystem collapse	3 Sanctions / Tariff / Trade War
4 Natural resource shortages	4 Economic Downturn
5 Misinformation & disinformation	5 Misinformation & disinformation
6 Cost of Living	6 Societal Polarization
7 Geopolitical Conflict	7 Changes to Earth System
8 Cyber insecurity	8 Cyber insecurity
9 Trade War	9 Loss of Biodiversity
10 Pollution	10 Natrual resource shortage

Shift in urgency

Rapid escalation of geopolitical conflicts overshadowed long-term environmental concerns

- Between 2024 and 2025, wars and state-based conflicts intensified in (Eastern Europe – Middle East).
- These conflicts create **immediate global disruptions** (energy prices, food supply, trade routes, migration),

Geo-economic fragmentation accelerated

- In 2025, governments increasingly used economic tools—sanctions, export controls, investment screening and trade barriers—as part of geopolitical strategy.
- This shifted global concern toward **trade wars, economic coercion, and decoupling**,

Short-term vs long-term risk perception

- Environmental risks dominate the **long-term** horizon (5–10 years) but there is increasing concerned with **what could break the world in the next 12–24 months**.
- Supply-chain shocks—experts prioritized **urgent, rapidly unfolding risks** over **cumulative, long-horizon risks**

Legend: *Environmental* *Societal* *Technological*

Source: World Economic Forum (WEF) The Global Risk Report 2024

A deep dive into supply chain disruptions

Geopolitical Conflicts

15%
Russia–Ukraine War significantly reduced maritime supply-chain resilience

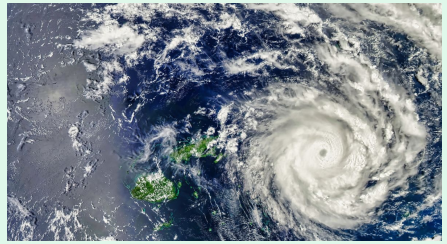
- The World Economic Forum (WEF) **state-based armed conflict** as the most immediate global risk, noting its major threat to **trade routes, resource flows and supply-network stability**.
- Geopolitical conflict has degraded resilience of certain maritime routes/networks, requiring **rerouting, longer distances, and higher transport costs**.

Trade War & Protectionism

82%
Global supply-chain leaders affected by new tariffs

- Tariffs, sanctions, export controls are now structural features of global trade, driving firms to **redesign sourcing models, rebuild inventories**, and **recalibrate supply strategies**.
- In 2024 and 2025, **export controls and licensing requirements** imposed by major suppliers **disrupted supply** of rare-earth metals, magnets and battery-related materials heavily affecting sectors such as semicon, automotive and high-tech manufacturing.

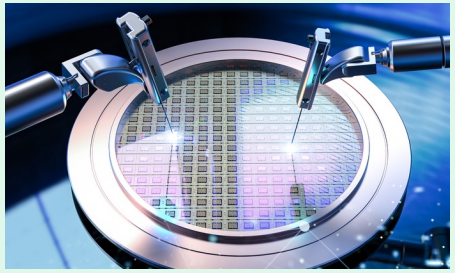
Climate Extremes



30%
Companies experienced climate impact on supply-chain

- Floods, wildfires and extreme weather are repeatedly closing ports and factories and creating localised shocks that ripple through supply networks.
- **Dramatic rise in weather-related disruption alerts in 2024** as flood-related alerts surged by 214% year-on-year; The **growing frequency and severity** means that environmental risk is now core to **resilience planning**.

Dependency Concentration



15%
of global trade in goods (by value) is depending on two or fewer countries

- **Import-concentration is rising globally**, making supply networks more vulnerable to localized shocks (political, environmental, or regulatory) in high-concentration source regions (e.g. China for electronics, Taiwan for chips).

Source: WEF 2025 Global Risk Report, OECD 2025 Supply Chain Resilience Review, WTW 2025 Global Supply Chain Risk Survey, World Bank Global Economic Prospects (June 2025), Resilinc – "Top Disruptions and Most Impacted Industries for 2024", The Edge "Impact of Red Sea crisis on trade and prices limited for now" (Jan 2024)

Resilience Strategies for Supply Chain Stability

Supplier diversification / multi-sourcing

Avoid reliance on a single geography or supplier; spreads risk across regions

- Following supply chain disruptions, Cisco dramatically reduced its reliance on China by diversifying its manufacturing to **India**, **Mexico**, and **Europe**.
- This has lowered risk and lead-time variability in its intelligent supply chain.
- Cisco built a **multi-tier supplier mapping and real-time risk monitoring system**, enabling early detection of disruptions and keeps **product availability stable**

Nearshoring / reshoring

Move production closer to demand markets or home base to reduce transport, geopolitical, and logistic risk

- Intel is investing **USD20 billion** to build two plants in **Arizona**, reducing reliance on overseas production (China, Malaysia & Vietnam).
- In Europe, Intel is further nearshoring by upgrading its **Ireland** facility and potentially a **€30 billion investment in Germany**, positioning production closer to key automotive and industrial markets.

End-to-end transparency & multi-tier supplier mapping

Map out and monitor every tier of the supply chain (not just immediate suppliers) to foresee hidden vulnerabilities

- Only **38%** of firms can identify and map suppliers and cost impacts during disruptions, highlighting the need for full visibility.
- Patagonia shows what good transparency looks like by **mapping up to tier-2 suppliers**, requiring **audit uploads** on a shared platform, maintaining **accreditation** with the Fair Labor Association and Better Work, and **sourcing third-party-certified materials**.

Inventory & flexible supply network

Maintain safety stock or build flexibility (alternative logistics, flexible sourcing) to absorb shocks without halting operations

- Manufacturers increasingly see buffer stock, alternate sourcing, and flexibility as critical, as disruptions occur several times a year.
- Unilever demonstrates flexibility by **leveraging AI for demand forecasting**, **real-time inventory tracking** and maintaining a **diverse supplier base**, reducing reliance solely on inventory buffers.

Source: Kinaxis Inc "International conflicts, high energy costs and raw material shortages are the three biggest risks for supply chains"

Balancing Global Efficiency and Local Resilience?

As supply chains become increasingly optimised and efficient for on-time performance and cost. During a disruption, their sensitivity to small shocks grows. These supply chains then get severely affected creating a ripple and deep impact. **Leading companies now adopt a hybrid supply strategy that protects costs, capacity and capabilities while strengthening resilience.**

Global Efficiency

- Lower cost with in stable conditions
- Quick production and distribution
- Exposes firms to systemic shocks

Local / Regional Sourcing

- Higher unit cost and lower economies of scale
- Capacity constraints & limited supplier capabilities
- Stronger shock absorption and reduces risk

Is there a Hybrid Approach?

A way forward – to keep cost of Local Resilience low while maintaining efficiency

Smart Sourcing Strategy

Selective nearshoring and dual sourcing

- Keep basic, high-volume parts offshore.
- Bring back ONLY the items that need speed, control or are critical.
- Use one global supplier and one regional backup. Map all sub-suppliers (Tier 2/3) so risks are known early.

Build Up Local Suppliers

Share investment and training

- Bigger companies may need to help local suppliers upgrade skills, systems and technology.
- While it might look costly, over time, this reduces cost and improves reliability.

Design & Manufacturing

Modular designs and shared manufacturing

- Make important or custom parts locally and keep standardised parts global to balance cost vs responsiveness.
- Use regional manufacturers instead of BYO factory to save capital but still get the scale.

Improve Productivity through AI

Automate and digitise operations

- Start incorporating AI into the processes
- Digitalise as much as possible
- This together will narrow labour-cost gaps and raise productivity to make local supply bases more competitive.

What This Looks Like in Practice:

ivalua
ALL SPEND, ALL SUPPLIERS, NO COMPROMISES

Released survey showing companies with *fully deployed AI tools* felt were more prepared for geopolitical disruption Specifically, **98%** of mature AI adopters reported they were prepared for global/trade-policy risks.

AI enables better supplier visibility, risk scoring, scenario planning (e.g. tariff changes, supply sourcing), and more agile supplier-selection / procurement decision-making — key when geopolitical uncertainty is constant

Built an **AI-powered supply-chain monitoring and risk-management system**, which gives real-time visibility across its global network of suppliers (incl. sub-tier suppliers), tracks news and flags potential disruptions (natural disasters, supplier-site disruptions, to broader geopolitical or regulatory shifts) before they cascade.

In 2025 alone, GM says its AI tools prevented at least **75 production stoppages** enabling the company to take proactive measures.

Sustainability driven expectations is reshaping Global Supply Chain Strategy

Environmental	Social	Governance
Regulatory pressures: • EU Corporate Sustainability Reporting Directive (CSRD) and EU Deforestation Regulation **Consumer demand:** • 66% of European consumers consider sustainability when making purchases **Investor expectations:** • > USD30 trillion in ESG-focused investments globally	**Labor conditions:** - Living wages, safe working environments, no forced labor **Community impact:** Respecting indigenous rights, community engagement **Diversity and inclusion:** Throughout the supply chain **Human rights due diligence:** - Mandated by laws	**Transparency and traceability:** Full visibility into multi-tier suppliers **Ethical sourcing policies:** Conflict minerals, responsible mining **Anti-corruption measures:** Especially in high-risk regions **Board oversight:** ESG performance tied to executive compensation

Demand for transparency & traceability

Customers, regulators, and investors increasingly **demand visibility** not just on where products are made, but under what conditions (**labour standards, environmental impact, human rights**). That drives firms to map deeper-tier suppliers and audit practices.

Climate resilience & sustainability regulation

Climate-related **supply-chain risks** (extreme weather, resource scarcity, regulatory changes) raise the cost and risk of traditional sourcing thus encouraging firms to **source sustainably**, use **renewable energy**, and **lower carbon footprints** in logistics and production.

Reputational risk & long-term brand value

Supply-chain failures tied to **unethical sourcing** or **environmental damage** can result in severe **brand and financial damage** making ESG compliance a competitive advantage and a risk mitigation necessity.

Investor & stakeholder pressure

Increasingly, **investors and stakeholders** assess companies not just on financials but on **ESG metrics**; supply chain transparency, ethical sourcing, and environmental impact become part of valuation and access to capital

Using Sustainability as a competitive advantage

Key Emerging Risk are Sustainability Risks

- According to the Global Risk Report 2025, the top global risks ranked by severity over the next 10-year period are sustainability-related risks:

1. Geopolitical Conflict
2. Extreme Weather Events
3. Sanctions / Tariff / Trade War
4. Economic Downturn
5. Misinformation & disinformation
6. Societal Polarization
7. Changes to Earth System
8. Cyber insecurity
9. Loss of Biodiversity
10. Natrual resource shortage

Sustainability is Becoming a Must Have for Business

Government

- Allocation of RM2bil for National Energy Transition Facility
- Promote residential solar PV installation under NEM

Investors

- 79% global investors made investment based on the company's performance in managing ESG risks & opportunities.
- Around 50% ASEAN investors prioritise ESG due to pressure from employees and environmental regulation while 40% recognised that employing ESG strategies can improve returns or reduce risk.

Public

- NGOs urging the stop of development projects that harm the environment & communities
- 90% of consumers in Asia Pacific are keen on embracing sustainable lifestyles and making eco-friendly purchases

Financial and Legal Implication of Neglecting Sustainability Risks

- Explosion of Deepwater Horizon causing severe damage to the environment and BP to pay $20.8bn settlement.

- Former workers claimed compensation over poor working and living conditions at their factories.

- Exploiting consumers' interest in sustainable apparel by using misleading marketing claims to 'greenwash' products.

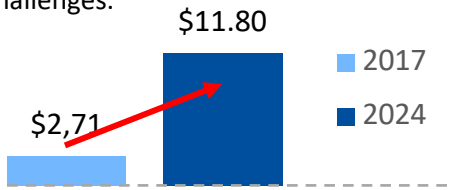
Good Sustainability Practices Correlates to High Performance

- Businesses that are committed to good ESG practices observed increase in annual Earning Per Share (EPS).

Microsoft

1 Microsoft

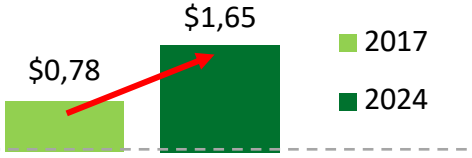
- ✓ One of the largest purchasers of renewable energy.
- ✓ Invested $50 million in AI to accelerate innovation to address sustainability challenges.



Schneider Electric

2 Schneider Electric

- ✓ Named the most sustainable company in the world in 2021
- ✓ Initiated the Energize consortium to strengthen ESG in their supply chain



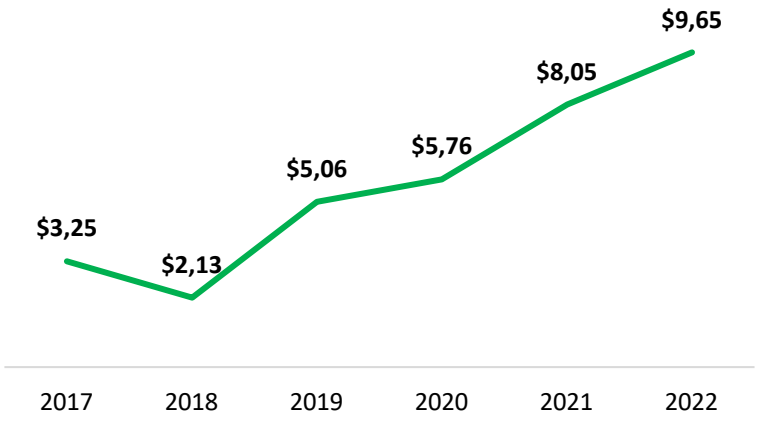
Legend: Environmental Societal Technological

Correlation between good sustainability practices and high performance

Microsoft

- Taking responsibility on land footprint by **committing to permanently protect and restore land** use by 2025
- **Water positive by 2030** - Creating and employing tools to help address the world's water challenges including scarcity, pollution, and ocean health
- **Zero waste by 2030** - Reduce and eliminate waste by reusing materials, source reduction, and recycling and treated with environmentally responsible methods
- One of the **largest purchasers of renewable energy**
- Sound campus has been **zero waste certified since 2016**
- **Invested $50 million** in AI for Earth to accelerate innovation to directly address sustainability challenges

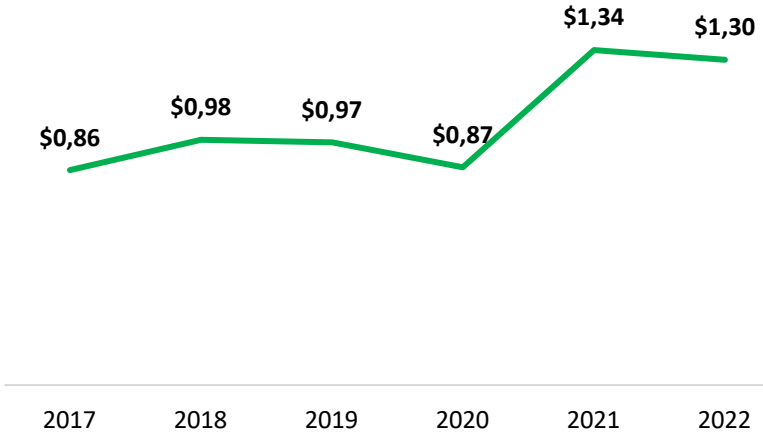
Microsoft 2022 annual Earning Per Share was **USD9.65**, an **increase of 67.5%** as compared to 2020



Schneider Electric

- In 2021 a European multinational energy and automation provider, **Schneider Electric was named the most sustainable company in the world**
- Schneider Electric was **recognised for its early and sustained commitment to environmental, social and governance issues.** Key achievements through their products and solutions include:
  - **Saved 120mil tons in CO2 emissions** from the atmosphere and given about 30mil more people access to energy
  - Helped local **NGO partners train 300,000 people** in energy management
  - Initiated the Energize consortium between 10 global pharmaceutical companies to ensure **strong emphasise on ESG as part of the supply chain**

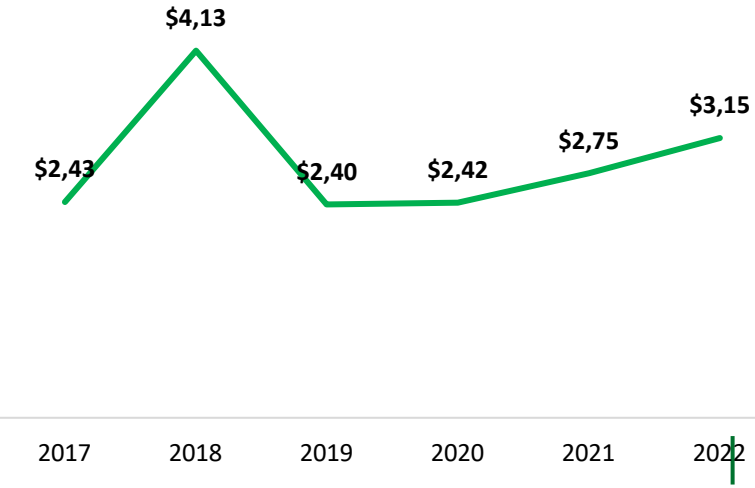
Schneider's Electric 2022 annual Earning Per Share was **USD1.30**, an **increase of more than 49.4%** as compared to 2020



Unilever

- **13 % virgin plastic reduction** from 2019 baseline
- **21 % (145,000 tonnes) plastic packaging** designed for recycling
- **97% of waste (548,000 tonnes)** reused, recycled and recovered
- Launched the **Unilever Supplier Climate Programme** in 2021 to accelerate the decarbonisation of supply chains.
- **29 million m³ water use reduction** in Unilever factories
- **€ 94.3 millions** spent on community investment including charity donations
- **36 % women** in total workforce with **34% women occupying senior management** positions

Unilever 2022 annual Earning Per Share was **USD3.15**, an **increase of more than 30.2%** as compared to 2020



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