



Course material

Course:

Understanding the digital supply chain and its stakes for humanitarian actors

Video:

3.3.2 Semi-conductor and natural resources

Concepts (extracted from automatically generated subtitles):

Geopolitical issue. Electronic components. Essential components of our daily life. Supply chains. United states. Natural resources. Limited number of countries. Various technologies. Rare earth. Potential disruptions. Central component of batteries. Geopolitical significance. Essential role. Production of a variety of electronic components. European union.



[to video sequence search](#)

(within Understanding the digital supply chain and its stakes for humanitarian actors.)



[to video](#)

Center for Digital Education. More educational support material here:

<https://www.epfl.ch/education/educational-initiatives/cede/educational-technologies-gallery/boocs-en/>
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GEOPOLITICS AND THE DIGITAL ECOSYSTEM



Semi-conductor and Natural Resources

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summary

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Semi-Conductor and Natural Resources



Semiconductors have become a geopolitical issue, as you have already seen in this course. They are called the new black gold

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summary

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Semi-Conductor and Natural Resources



and are essential components of our daily life.

notes

summary

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Semi-conductor strategic relevance

Essential Role

Crucial in consumer electronics and military systems.

International Alliances

Nations forming partnerships to reinforce supply chains.

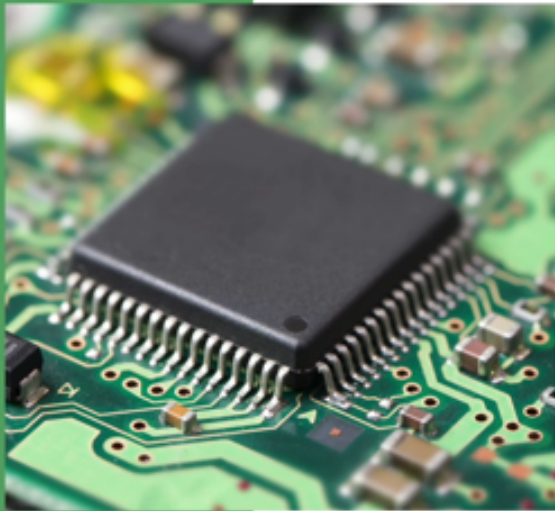
This is where the geopolitical significance are such due to their essential role in various technologies,

notes

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Semi-conductor strategic relevance

Essential Role

Crucial in consumer electronics and military systems.

International Alliances

Nations forming partnerships to reinforce supply chains.

from consumer electronics to military systems. This has led to alliances between nations with complementary trends in the ecosystem,

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Semi-conductor strategic relevance

Essential Role

Crucial in consumer electronics and military systems.

International Alliances

Nations forming partnerships to reinforce supply chains.

aimed at reinforcing supply chains. Countries are increasingly aware of the geopolitical stakes tied to semiconductor control, particularly concerning potential

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Competition for Dominance



Key Players : United States, China, and European Union.

Strategic Policies : US CHIPS Act and China's "Made in China 2025" initiative.

Supply Chain Disruptions : COVID-19 and geopolitical tensions cause market realignments.

disruptions related to Taiwan. The competition for dominance in semiconductor technology has become a focal point of international power struggles.

notes

summary

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Competition for Dominance



Key Players : United States, China, and European Union.

Strategic Policies : US CHIPS Act and China's "Made in China 2025" initiative.

Supply Chain Disruptions : COVID-19 and geopolitical tensions cause market realignments.

The United States, China, and the European Union are key players in this arena.

notes

summary

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Competition for Dominance



Key Players : United States, China, and European Union.

Strategic Policies : US CHIPS Act and China's "Made in China 2025" initiative.

Supply Chain Disruptions : COVID-19 and geopolitical tensions cause market realignments.

In response to growing competition,

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Competition for Dominance



Key Players : United States, China, and European Union.

Strategic Policies : US CHIPS Act and China's "Made in China 2025" initiative.

Supply Chain Disruptions : COVID-19 and geopolitical tensions cause market realignments.

governments are implementing strategic policies to secure their positions,

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Competition for Dominance



Key Players : United States, China, and European Union.

Strategic Policies : US CHIPS Act and China's "Made in China 2025" initiative.

Supply Chain Disruptions : COVID-19 and geopolitical tensions cause market realignments.

like the US CHIPS Act or the China's "Made in China 2025" initiative. Recent disruptions in the semiconductor supply chain have underscored its strategic importance.

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summary

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Competition for Dominance



Key Players : United States, China, and European Union.

Strategic Policies : US CHIPS Act and China's "Made in China 2025" initiative.

Supply Chain Disruptions : COVID-19 and geopolitical tensions cause market realignments.

The COVID-19 pandemic and geopolitical tensions have led to shortage and realignments in the semiconductor market.

notes

summary

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Key natural resources and the Digital Supply Chain

Lithium

Central component of batteries, limited extraction locations.

Rare Earths

Used in electronic components, produced by few countries.

Geopolitical Leverage

Resources potential tools for international political influence.

These disruptions highlight the need for resilient and diversified supply chains. In addition, it is important to note as well that natural resources needed to produce electronic components used in the digital supply chain are also the source of international competition.

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Key natural resources and the Digital Supply Chain

Lithium

Central component of batteries, limited extraction locations.

Rare Earths

Used in electronic components, produced by few countries.

Geopolitical Leverage

Resources potential tools for international political influence.

Lithium, a central component of batteries, for instance,

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Key natural resources and the Digital Supply Chain

Lithium

Central component of batteries,
limited extraction locations.

Rare Earths

Used in electronic components,
produced by few countries.

Geopolitical Leverage

Resources potential tools for
international political influence.

is extracted only in a limited number of countries, and is the source of geopolitical tensions. Rare Earth, which are used in the production of a variety of electronic components,

notes

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2m 13s



Image Reference



In order of appearance

PICTURE1 : Photo provided by ICRC

PICTURE2 : Eletronic chip by Kenishirotie from Adobe Stock

PICTURE3 : Lithium minig exploration by Christian from Noum Project

are also produced by only a few countries and have the potential to be used as leverage for international politics.

notes

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