THE HETEROGENEITY OF STEEL DECARBONISATION PATHWAYS

worldsteel Open Forum
September 12, 2023

Cécile Seguineaud (cecile.seguineaud@oecd.org)

Directorate for Science, Technology and Innovation
Structural and Industry Policy Division / Steel Unit
About the OECD Steel Committee

A long-standing structure supporting the steel policy community

- Established in 1978, more than 30 Members & 7 Participants (major steel producing countries, OECD & non-OECD), engagement with steel associations
- Providing sectoral expertise, addressing policy issues, supporting cooperation & dialogue

**AREAS OF WORK**

- Steel Markets
- Steelmaking Capacity
- Decarbonisation
- Trade
- Industry Viability & Competitiveness
- Raw Materials

www.oecd.org/industry/ind/steel-committee.htm
Context & Objectives of the Report

A report prepared for the 2023 Japan Presidency of the G7 –

Industrial Decarbonisation Agenda

- To map the heterogeneity of the steel industry...
- ... and to assess the implications on decarbonisation pathways,
- on definitions for near zero / low emission steel, emission measurement standards, data collection frameworks

Common goal, common challenges to decarbonise…

**STEEL & EMISSIONS**

- 8% of global emissions,
- 30% of global industrial emissions

- More than 90% of global capacity in countries with Net-Zero targets

**A CRITICAL DECADE FOR IMPLEMENTATION**

- A Deep *Transformation* Required

- Multiple *Challenges* (*Technology, Investments, Competitiveness, Strategic Inputs, Market, Social…*)

… but different steel industry’s characteristics
Why Considering Heterogeneity?

Considering heterogeneity for a more efficient steel industry decarbonisation

Achieve **climate goals**, as multiple mitigation options are needed

Ensure **inclusiveness**, fostering collaboration & a level playing field

Leverage the multiple decarbonisation efforts of the steel industry

Consider the national circumstances (including uneven access to resources)

Considering **Heterogeneity** is crucial to…
Key Aspects of Heterogeneity

**Assets Characteristics**
*Capacity, type, performance…*

**Inputs for Production**
*Raw materials & energy sources*

**Market & Business Environment**
*Types of products, exports, companies…*

**Innovation**
*R&D, patents…*

**Indicators at the country level**
- Age of assets
- Capacity development
- Crude steel production / process
- DRI production
- Scrap availability
- Electricity price
- Low carbon power generation
- Import dependencies on raw materials
- Fragmentation
- Exports
- Direction of export/imports and net export/imports
- Product specialisation
- Profitability
- Patents
- Hydrogen
- CCUS
Highlight the diversity of the steel industry, reflecting the different circumstances of each economy.
Implications for Decarbonisation Pathways

Heterogeneity in key factors shape various decarbonisation pathways

DECARBONISATION OPTIONS

DIFFERENT PATHWAYS

Impact on

Pace of Implementation

Differences in steel industry structures

Sources: MPP, 2022
Implications of Heterogeneity for Definitions

Heterogeneities shape differences in **starting points** & in capabilities to **transform**…

… resulting in a different **positioning** towards emission **thresholds**

**Different in…**

**Emission Reduction Objectives**

**Fairness**

**Abilities**

**Incentives**

**Time horizons**

**Product Quality**
Implications for Emission Measurement Standards (EMS) & Data Collection Frameworks (DCF)

**Comprehensiveness**
- Diverse production routes, raw materials, energy sources to be covered
- New routes / inputs to be included
- For product types, appropriate scope boundaries to be reflected
- Across firms, uneven abilities towards data collection, infrastructure, reporting

**Abilities**

**Trade & Inter-operability**
- For trade, need for EMS / DCF to enable data comparability & inter-operability between definitions
Heterogeneity – Considerations for implementation

Acknowledging **heterogeneity** should go hand in hand with **ambitious** emission **reduction objectives**

Taking heterogeneity into account requires **accompanying policies** for implementation

>> **Heterogeneity** across countries in **policy** choices / tools

Different views, but crucial that potential different definitions / methodologies enable **like-for-like comparison (trade)**

**Level playing field**: Ensuring practical implementation of definitions may include adjustments mechanisms or temporary measures
Conclusions & Recommendations

Heterogeneity in the steel industry and in decarbonisation pathways should be taken into account when developing definitions, emission measurement standards, data collection frameworks.

Differences in abilities, time horizons, incentives, innovation, quality products should be acknowledged to ensure that standards and definitions are fit for circumstances across countries.

Ensure an inclusive and comprehensive approach when developing standards and definitions for an efficient steel decarbonisation agenda (lead market, technologies, trade..)

Include the steel industry, policy makers in relevant domains & other stakeholders when developing standards & definitions to foster policy support on steel decarbonisation and encourage standards adoption.
Heterogeneity – Wider policy implications

Heterogeneity implies different policy choices across countries

Differences in...

Granularity / Level of implementation

- Climate, energy, industrial policies
- Cross-sectoral policies / cross-cutting technologies
- Steel sectoral policies

Targeted field

- Innovation
- Production
- Demand / market
- Trade
- Social / jobs
- ...

Policy Tools

- Financial support,
- Tax incentives, Revenue guarantees,
- Carbon price, Taxonomies
- Standards, GPP
- Sectoral targets,
- Trade measures...
Heterogeneity – What’s next?

Link with other international fora

• **Climate Club: initiative from the German 2022 G7 Presidency**
  – Objective is to **accelerate industrial decarbonisation** in an inclusive way
  – Focus in the coming period will be on **steel & cement**
  – Interim Secretariat by **OECD & IEA**

• **OECD Steel Committee**
  – Heterogeneity of **companies’** decarbonisation strategies & **policy options**
  – Heterogeneity in **scrap** supply /demand /trade in a net-zero context
THANK YOU FOR YOUR ATTENTION