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Research into Market Distortions in the Steel Sector

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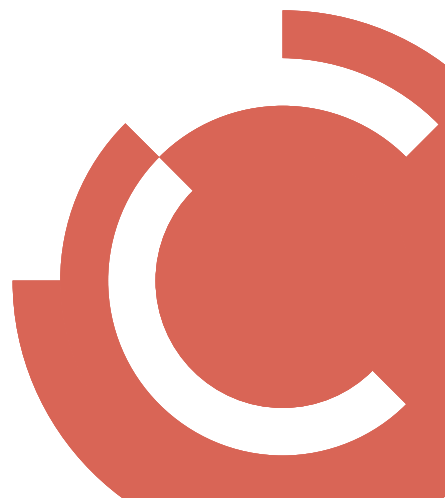


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Abbreviations

ASEAN	Association of Southeast Asian Nations
AM/NS	ArcelorMittal and Nippon Steel Corporation
BF-BOF	Blast Furnace-Basic Oxygen Furnace
BIS	Bureau of Indian Standards
BRI	Belt and Road Initiative
CEZ	Coastal Economic Zones
CIL	Coal India Limited
CIS	Commonwealth of Independent States
CPSE	Central Public Sector Enterprises
CV&IC	Coal Videsh & International Cooperation Division
DMI&SP	Domestically Manufactured Iron & Steel Products Policy
DRI	Direct Reduced Iron
E-TUYS	Electronic Incentive Implementation and Foreign Capital Information System
EAEU	Eurasian Economic Union
EAF	Electric Arc Furnace
EBITDA	Earnings before interest, taxes, depreciation, and amortization
ECGC	Export Credit Guarantee Corporation
ELCGS	Emergency Line Credit Guarantee Scheme
EU	European Union
EUR	Euro
Exim	Export-Import
FEU	Forty-Foot-Equivalent-Unit
FOB	Freight on Board
FYP	Five-Year Plan
GBP	British Pound
GDP	Gross Domestic Product
GJ	Gigajoule
HSBI	Hebei Iron and Steel Group Co.
IDF	Industry Development Fund
IF	Induction Furnace
IGE	Export Development Joint Stock Company
IPO	Initial Public Offering
ISS	Input Supply Strategy
JSW	Jindal Southwest Group
KIOCL	Kudremukh Iron Ore Company Limited
KMA	Kursk Magnetic Anomaly

KOSGEB	Small Industry Development Center
kWh	Kilowatt-hour
LNG	Liquified Natural Gas
MECON	Metallurgical & Engineering Consultants Limited
MEIS	Merchandise Exports from India Scheme
MENR	Ministry of Energy and Natural Resources
MET	Mineral Extraction Tax
MIIT	Ministry of Industry and Information Technology
MMK	Magnitogorsk Iron & Steel Works
MMT	Metric Million Tonnes
MNRE	Ministry of New and Renewable Energy
MOF	Ministry of Finance
MOIL	Manganese Ore (India) Limited
MSME	Micro, Small and Medium Enterprises
MSTC	Metal Scrap Trade Corporation Limited
MT	Metric Tonnes
MWh	Megawatt-hour
NARCL	National Asset Reconstruction Company Limited
NEEAP	National Energy Efficiency Action Plan
NEIA	National Export Insurance Account
NLMK	Novolipetsk Steel
NMDC	National Mineral Development Corporation
OECD	Organisation for Economic Co-operation and Development
OIZs	Organised Industrial Zones
PA	Per Annum
PRC	People's Republic of China
PLIS	Production Linked Incentive Scheme
R&D	Research and Development
RoDTEP	Remission of Duties and Taxes on Exported Products
RUB	Rubel
S&P	Standard & Poor's
SOE	State-Owned Enterprises
SRs	Security Receipts
TANGEDCO	Tamil Nadu Generation and Distribution Corporation
TCC	Turkish Coal Corporation
TIM	Turkish Exporters Assemble
TKI	Turkish Coal Enterprises
TMT	Thermo-mechanically treated, refers to bars

TRY	Turkish New Lira
TTK	Turkish Hard Coal Enterprises
TUBUTAK	Scientific and Technological Research Council of Türkiye
TWh	Terawatt-hour
UK	United Kingdom
USA	US of America
VAT	Value Added Tax
WISCO	Wuhan Iron and Steel Corporation
WSA	World Steel Association
WTO	World Trade Organization

Executive Summary

A steady rise of market distortions can be observed in global trade with increasing impacts on costs, prices, and market behaviours, especially in recent years. This trend has been reinforced by the Covid-19 pandemic when many governments have supported domestic industry with various measures. Accordingly, governments have prioritised the need for a better understanding of situations in which such distortions take place in the markets of key trading partners, and how the mechanisms of these distortions work on the ground.

It is of vital importance to better understand how government-induced market interventions affect prices and competition in domestic industries, and what the reasons are for market distortions to occur. Market distortions can be caused by different factors, including intervention by governments, market structure, or behaviour by companies operating in national and foreign markets. Government measures imposed in response to international crises, such as the ongoing war in Ukraine, the Covid-19 pandemic, or the Global Financial Crisis in 2008, can also be at the root of market distortions.

The UK Trade Remedies Authority (TRA) commissioned independent research from LSE Consulting to inform analytical approaches to assess the existence and scale of government-induced market distortions in steel industries in major steel producing countries. This research provides a first step towards building an improved understanding of some of the relevant issues at a high level. It does not, however, constitute a comprehensive or exhaustive source of information on all relevant market distortions that can be directly applied in trade remedy investigations. Although some of the potential market distortions identified in this research could be considered in trade remedies investigations on a case-by-case basis, the outputs of this research would likely need to be supplemented with further evidence at a more granular level to enable assessments of Particular Market Situations in specific markets for narrowly defined products.

This report focuses on the impact of activities of public bodies and State-Owned Enterprises (SOEs) which can distort the markets in which they operate. These interventions are of key relevance in understanding steel markets developments, including the markets of intermediary products used in the steelmaking industry.

Note that the findings from this research should not be interpreted as the UK government's views of or commentary on other countries' policies. Rather, the research aims to provide an objective and evidence-based overview of potential market distortions that affect the context within which the TRA undertakes its investigations.

The analysis seeks evidence that is recent and showcases the relevance of potential market distortions in the steel sector, and how they are caused. The identification is based on various sources, including existing domestic legislation, government plans, regulatory guidance as well as the activities of SOEs in key markets. The findings of the analysis can help trade investigation authorities in considering the extent of government-induced distortions on a case-by-case basis and inform further evidence-gathering and more detailed analysis.

The report starts by identifying four countries that are characterised by high degrees of government intervention in the domestic economy, various specific measures targeted at

the domestic steel manufacturing industry, and high domestic steel making capacities. Based on a broad spectrum of relevant selection criteria, including production and export capacities, indicators of government involvement in the economy as well as the frequency of trade remedy measures imposed, the four key markets that have been chosen for analysis in this report are the Republic of India, the People's Republic of China (PRC)¹, the Russian Federation, and the Republic of Türkiye.

The report continues with an outline of relevant policies with potentially market-distorting effects in the steel manufacturing industries in the four countries, followed by a detailed analysis of related policies in key steelmaking intermediate inputs. For the four countries analysed in this report, the analysis clearly reveals that national governments apply a broad range of regulation and support programmes which, through several mechanisms, contribute to market distortions in their national steelmaking industries. These market interventions, to various extents, impact the prices of steel in countries' domestic markets.

Policies with potentially market-distorting effects were identified for all countries and include various measures implemented at national and regional level, for example:

- ◆ direct state aid (e.g., public grants provided for capacity expansion and modernisation;
- ◆ tax incentives (e.g., tax rebates, corporate tax exemptions, VAT, and customs duty exemptions);
- ◆ free land allocation;
- ◆ beneficial labour market-related policies (e.g., social security insurance support, salary support);
- ◆ various forms of state aid measures targeted at intermediary input sectors important to the steelmaking industry, such as energy and raw material providers.

While the overall economic impacts of potentially market-distorting practices are difficult to estimate, the high number of government interventions in each country together with the fact that transparency about them is generally low suggests that more detailed analysis would be required to assess the effects on individual businesses and groups of businesses in these countries.

A summary of major government-induced interventions in the steel industries of the Republic of India, the People's Republic of China, the Russian Federation, and the Republic of Türkiye is provided below.

Republic of India

Large iron ore endowments, along with a young and cheap labour force have been contributing to low costs of production and domestic and international delivery of Indian steel products. The National Steel Policy 2017 is the guiding policy for the development of India's steel sector with targets for 2030–31. It sets out state support instruments which can affect the competitiveness of Indian steelmakers. Despite having identified areas for improvement such as financial risks, land acquisitions, and need for clean energy in the steel industry, only few specific initiatives have so far been introduced to target these input

¹ When we refer to the PRC, we refer only to the customs territory of mainland China.

sectors. At the same time, several government programmes and instruments offer financial and regulatory support to India's steel industry. Government policies generally aim to further upgrade India's technological capacities, increase consumption of domestically produced steel, generate higher value added, and make the country less reliant on imported processed steel products.

Major potentially market distorting measures in India identified as part of this research include:

- ◆ The Production Linked Incentive Scheme (PLIS), which provides significant financial subsidies to the specialty steel sector to increase export capacity and integrate more deeply into global supply chains. The magnitude of subsidies, particularly those on fixed capital investment and the reimbursement of electricity expenditures for export-oriented investment can result in a significant reduction of capital costs and plant operating costs, which lead to lower than market-based costs of domestic steel production in India and lower domestic prices of steel. Trade remedy investigations could therefore examine whether and to which extent Indian steel producers and upstream input providers benefitted from these types of PLIS support.
- ◆ A significant amount of the coking coal needs of the steel industry are met through imports. To increase availability of coking coal, the government has given impetus to overseas acquisitions of coking coal resources. SOE Coal India Ltd. has renewed its efforts to acquire foreign coking coal assets in third countries. Coal India is a SOE steered by the Ministry of Coal for the acquisition of coal assets in third countries. There is no publicly available evidence about direct and indirect government support, such as investment subsidies or guarantees received by Coal India, but this could be explored further in trade remedies investigations. SOEs carry out most coal mining (and power production) in India. Estimates suggest that India's coal exploration sector is benefitting from several billion US\$ annually.
- ◆ The Domestically Manufactured Iron & Steel Products (DMI&SP) policy, which provides preference to domestically produced iron and steel material in government tenders based on the value addition of steel. The policy is applicable to projects where the procurement value of iron and steel products is greater than Rs. 500,000 (approx. \$6,065.4)². It covers a list of 49 manufactured products of iron and steel with a minimum prescribed value addition ranging between 20% and 50%. DMI&SP makes it difficult for imported steel to compete with domestic bidders because steel imports to India usually have lower value addition. The policy is a non-tariff barrier to trade which has a significant impact on steel imports from other countries and has already led to significant steel import substitution. Beneficiaries can increase domestic production, which, due to economies of scale, could result in lower domestic prices.
- ◆ The Steel and Steel Products Quality Control Orders from 2015 and 2018, which is a non-tariff import measure to reduce steel imports to India. The policies are targeted specifically at the steel sector and cover close to 90% of steel products in India. The policy makes it mandatory for all manufacturers of stainless-steel flat products to seek a certification from the Bureau of Indian Standards (BIS). It prohibits the manufacture, storage, sale or distribution of any stainless-steel products which do

² Exchange rates for conversions to USD were obtained from OANDA as of June 13, 2023. See <https://www.oanda.com/currency-converter/en/?from=INR&to=USD&amount=1>.

not conform to the specified standards and do not bear a standard mark of the BIS. The policy has been effective in curbing imports, implying that some Indian companies could have increased domestic production, which due to cost advantages from larger production volumes, may have translated to lower steel prices.

- ◆ Several trade finance schemes create foreign demand for Indian steel in exchange for lines of credit for infrastructure projects in foreign countries. In most of these schemes, the amount of Indian steel required to be imported as part of the agreement conditions is very high, typically between 65 and 75% of the total steel used in the infrastructure project. The policy has been effective in stimulating India exports of steel. Indian companies could benefit from larger domestic production volumes and associated cost advantages which could cause lower steel prices.

Under appropriate circumstances and where supported by further evidence at a more granular level, trade remedy investigations could consider the extent to which Indian steel exporters have benefitted from tariffs and non-tariff barriers. They could assess to what extent Indian steelmakers have been able to expand production of products and enjoy tariff protection or implicit protection through preferential procurement and licensing requirements, and whether Indian steelmakers were able to expand exports at low prices in these product categories. Trade remedy investigations could also assess the extent to which Indian specialty steel producers benefitted from financial subsidies granted for capacity expansion. Generally, due to the broad coverage and size, and the potential magnitude of the support measures by the Indian government, the costs of production of steel by individual manufactures in India are likely lower than they would be under normal market conditions in the domestic market.

The People's Republic of China

The PRC is the biggest producer and consumer of steel globally. In the top 10 global steel producers, 6 are Chinese, out of which 4 are SOEs. To improve competitiveness abroad, the PRC has encouraged the creation of "national champions," through horizontal and vertical integration. SOEs particularly benefit from various types of support from the central government or local governments, to a greater extent than private players.³ Generally, measures directed at the steel sector include tax rebates, land subsidies, grants, tax relief, or green sector grants, helping Chinese steelmakers to operate at lower costs compared to foreign companies that do not benefit from such support in the countries in which they produce.

After the release of the 13th Five-Year Plan (FYP), the PRC's government released the "Supply-Side Structural Reform in the Steel Industry", aimed to address the issue of overcapacity in the steel sector, promote consolidation by creating a few large companies, and establish a more favourable financial environment for iron and steel companies. In the most recent 14th FYP, the Chinese government attempts to improve the sustainability of steel production and consumption, aiming to reduce air pollution. Building on the previous FYP, the 14th FYP also aims to reduce domestic steel capacity. In 2022, the Ministry of

³ E.g., Maincent E., Navarro L., AND European Commission, *A policy for Industrial Champions: From picking winners to fostering excellence and the growth of firms*, in Industrial Policy and Economic Reform Papers No.2, European Commission Directorate General for Enterprise and Industry, B-1049 Brussels, Available at <https://ec.europa.eu/docsroom/documents/1923/attachments/1/translations/en/renditions/native>

Science and Technology and the Ministry of Natural Resources issued the 14th Five-Year Raw Material Industry Development Plan, the first such plan dedicated to raw materials that is linked to the FYP. The Plan aims to improve high-end supply production, while also reducing both the steel production capacity and the amount of energy used in steel and cement. By 2035, the PRC openly aims to dominate raw materials R&D, production and application, while at the same time, to lead in green and low-carbon development.⁴

Major potentially market distorting measures in the PRC identified as part of this research include:

- ◆ Subsidies, which for a long time have created market distortions in the PRC's steel industry. These include cash grants and capital infusion, equity infusions and conversions, preferential loans and directed credit, land-use subsidies, subsidies for utilities, raw material price controls, tax policies and benefits, currency policies, benefits for purchase of domestic inputs and equipment. Cash grants and capital infusion is the most direct form of subsidy used by the Chinese Government to aid the steel industry. Importantly, most of these measures are often intricate and multifaceted, making it difficult for other countries to identify and quantify the specific subsidies provided to the steel industry accurately. Moreover, official information on subsidies provided to specific industries, including steel, may not be readily available or easily accessible to foreign governments or trade partners, hampering the ability to effectively target and address them.
- ◆ An R&D "super deduction" of 100% from the taxable income of manufacturing companies, a measure used by the Chinese government to encourage companies to increase their R&D investments. In addition, many steel companies stipulate in their annual reports that they received R&D subsidies from the Chinese government, whereas additional information is typically lacking.
- ◆ Preferential loans and directed credit based on alignment with central or provincial governments' policy directives rather than creditworthiness or other market-based factors.
- ◆ Raw material price controls helping steel enterprises to buy cheaper raw materials. In 2022, the PRC established the PRC Mineral Resources Group, a state-owned enterprise whose aim is to pool the demand for raw materials from Chinese companies and to negotiate on their behalf with producers, in order to obtain better prices and then redistribute the materials to Chinese enterprises. By centralising the purchasing of raw materials, especially iron ore, the PRC wants to negotiate lower prices for raw materials, including those sourced internationally.
- ◆ Trade distorting policies. In 2021, the Chinese government adjusted tariffs on 20 steel products. Pig iron, crude steel, recycled steel raw materials, and ferrochrome have a zero-import provisional tax. At the same time, in 2021 the PRC's Ministry of Finance announced the increase of export taxes on pig iron from 15% to 20% and on ferrochrome from 20% to 40%. Moreover, the PRC has implemented export restrictions on certain raw materials used in steel making to ensure sufficient supply for its domestic industries. These restrictions could include export quotas, export duties, or export licensing requirements.

⁴ Ministry of Industry and Information Technology, Ministry of Science and Technology and Ministry of Natural Resources. *The 14th Five-Year Plan for Raw Material Industry Development*, published on December 21 2021

- ◆ Government-steered energy markets. The Chinese government sets ceiling prices for energy and subsidises its coal industry. In recent years, the government has put more emphasis on green energy and environmental protection in its quest to become a carbon-neutral country by 2060. In 2022, the Chinese government announced it will allocate ¥3.87 billion (\$541 million) in subsidies for the renewable energy sector. Despite low-carbon targets, the PRC continues to invest in new coal-based capacity, being responsible for 85% of new projects globally. Many of these investments are part of the PRC's Belt and Road Initiative (BRI), among which some of the most well-known are the Hambantota Port and Power Station in Sri Lanka, the Thar Block-1 Integrated Coal Mine and Power Project in Pakistan, the Sengwa Coal Power Plant in Zimbabwe and the Lamu Coal Power Plant in Kenya.
- ◆ Interventions in domestic and international logistics markets. The Chinese government has provided very substantial financial support towards developing its domestic transport infrastructure, but also in building infrastructure abroad. Chinese subsidies target the railways as well as the maritime shipping sectors. The Chinese government also provides rail subsidies for the routes linking the PRC to Europe.
- ◆ Support offered by financial institutions. The Chinese banking sector is dominated by large state-owned banks, while the role of foreign banks is quite limited. State-owned banks are frequently used to implement government plans and achieve government goals. In 2020, the People's Bank of China needed to get involved and inject ¥800 billion (\$111.9 billion) into the banking system in order to appease economic shocks generated by the debt issues of some SOEs. SOEs also receive financial support from Chinese banks through rollovers or debt forgiveness. For example, in 2022, the People's Bank of China announced that it will give ¥100 billion (\$13.9 billion) for the coal industry as part of the "relending" action, a strategy to support certain sectors, used by the Chinese government to also support its strategies and policies. Generally, SOEs receive far greater financial support than private companies. Nonetheless, in their recent annual reports, publicly listed Chinese steelmakers did not mention receiving loans with preferential interest rates or benefitting from debt forgiveness.
- ◆ Land-use policies provide preferential conditions for land use to companies. In the PRC, the land is owned either by the government or by collectives. Steel mills only own land use rights, which themselves come with a cost. However, many SOEs receive subsidies and compensation from the government in order to benefit from real estate.

Generally, due to the broad coverage and size, and the potential magnitude of the support measures by the Chinese government, the costs of production of steel by individual manufactures in the PRC are likely lower than they would be under normal conditions in the domestic market.

The Russian Federation

Russia's steel production sector has for a long time received government support, at the federal and regional levels. The sector has received subsidies from over 90 federal and regional programs, while benefitting indirectly from governmental support targeted at other sectors, such as electricity, natural gas, and rail transport pricing policies, automotive, and real estate, and construction. New measures addressing the Covid-19 pandemic have also

had a significant effect on steelmakers with fiscal measures having a direct response to the crisis and monetary measures having an indirect effect.

Due to the high number of government-induced interventions, Russian steel manufacturers are not exposed to competitive conditions, resulting in artificially deflated costs and excess demand in the domestic market, e.g., through support granted to major steel-demanding industries. Government-induced demand creation has in the past contributed to excess capacity, which may have caused lower than market prices of steel in Russia.

Major potentially market distorting measures in Russia identified as part of this research include:

- ◆ Long lasting government support to Russian gas and electricity sectors has had significantly beneficial effect on Russia's steel industry. Even though most steelmakers are located in regions that enjoy market prices for electricity, they typically benefit from regulated maximum gas and electricity prices set at a lower level. Due to the high share of energy in electric arc furnace (EAF) steel production, regulated gas prices and tariffs for electricity have likely resulted in substantial cost advantages and lower prices for Russian steel compared to normal conditions in the domestic economy.
- ◆ For coal mining, fiscal support includes various regional-specific tax incentives, lower railroad rates, cross-subsidisation of railroad rates for other industrial products, and federally funded infrastructure projects to increase coal transportation capacity. Given that coal is the most important energy input to steel in the Basic Oxygen Furnace (BOF) route, the impacts on domestic costs and derived price reductions of steel products are likely significant.
- ◆ 2020–2021 Covid-19 support measures also targeted Russian steelmakers. Measures included an extension of regulatory easing on restructured loans, subsidies to backbone enterprises, and tax holidays. Some of these measures may have resulted in effective bailouts of companies that were on the verge of bankruptcy, helping to keep Russian steel production and export capacities artificially high.
- ◆ As concerns recent measures, the most significant interventions in Russia's steel market have been associated with the 2022 anti-sanctions measures in favour of steel producers. These include a state reserve creation and export support measures. These measures, which are intended to counter temporary sanctions against Russia (even though some of the sanctions against Russia are in place since 2014), have created artificial demand in Russia and helped to compensate the industry's shortfall in export revenues. Before 2022, about 40–50% of Russia's steel production was exported. The impacts of the creation of a state reserve are difficult to quantify. However, due to economies of scale and less volatile demand for steel in the domestic market, these measures likely have a significant effect on the cost of production and the prices of steel. The state reserve will likely help many Russian steel producers to remain in business despite lacking profitability or factual bankruptcy, contributing to excess capacities maintained in the Russian economy.

Due to the broad coverage and size, and the potential magnitude of the support measures by the Russian government, the costs of production of steel by individual manufactures in the Russian Federation are likely lower than they would be under normal conditions in the domestic market. Under appropriate circumstances and where supported by further

evidence at a more granular level, trade remedy investigations could aim to determine to what extent Russian steel exporters have benefitted from gas price regulation in Russian regions, and energy subsidies in general. They could also assess to what extent Russian steelmakers have benefitted from government measures to create excess demand for steel in the Russian economy, and whether these measures have helped avoiding bankruptcies in the industry.

Republic of Türkiye

Türkiye is a major global producer of steel and steel products in the world and a major exporter. In 2019, the government announced its 11th Development Plan for the period 2019 to 2023. As concerns steel production value chains, the government's main objective is to improve the production structure in the basic metal industry to produce more high value-added products, raise the variety of high value-added products, and increase the share of the ore-based production methods without causing idle capacity.

The Turkish government also aims to expand both exports and improve the domestic supply chains based on quality and size of the steel types used in strategic areas such as the defence industry, railways, mega projects, and nuclear power plants, and guaranteeing input supply. The government of Türkiye and regional governments provide direct and indirect support for investments in up- and downstream industries. Potential distortions from investment incentive policies are primarily created in electricity generation, steel mills, and key markets of steel products. The broad spectrum of direct and indirect government support measures targeted at companies that operate at different stages of the steelmaking value chain suggest that the prices set by producers that either directly or indirectly benefit or in the past benefitted from these measures are not determined by market forces. Detailed information on what and how much support is awarded to companies along the steelmaking value chain is not usually publicly available, neither in government publications nor on the side of companies.

Major potentially market distorting measures in Türkiye identified as part of this research include:

- ♦ The Super Project-based Investment Incentives regime, granting generous support through, for example, corporate tax exemption up to 100% and investment support up to 200%; or a corporate tax exemption exclusively for the profits derived from the investment for the first ten years following the commencement of operations, income tax withholding support, as well as customs duty VAT exemptions. Three companies are from the metallurgical industry. Two steelmakers (Asil Çelik and Tosyali Gübre), received support under the regime. Company information reveals that Tosyali Group may have been the biggest investor in the "Project-Based Incentive System", related to the construction of a new integrated plant in Osmaniye. Beneficiaries could increase domestic capacities at lower than market-based costs of investment, which, together with economies of scale, could have resulted in lower production costs and lower domestic prices respectively.
- ♦ Regional economic development aid programs. State aid is provided based on the regional focus of investment, the degree of technology intensity and the R&D intensity of projects. State support measures include generous funding for investment in steel manufacturing capacities, upgrading of technology, mining, and electricity production.

- ♦ Generous grants are also provided to industries which are key sources of steel demand in Türkiye, such as the defence sector, various manufacturing sectors, and the automotive and transport equipment industry. Total support can add up to more than 50% of the investment amount. Regional incentives of close to 100% of the investment amount are granted for region 6 (economically least developed regions) investments.
- ♦ Under the Investment Incentives for Priority Regions, more than 60% of the investment amount can be provided to companies that are part of the steel production value chain or key sectors of domestic demand for steel products, including mining, energy production, and investment in energy saving technology. Priority investments also include sectors that significantly contribute to steel demand in Türkiye, for example, industrial plant investments, the automotive industry, and the defence sectors.
- ♦ Türkiye's approach to coal mining and coal-fired electricity generation is rooted in a government strategy to reduce dependence on imported natural gas for economic and energy security purposes. Subsidies for fossil fuel exploration and production include a mix of policies such as tax breaks, direct grants, and support from Turkish public finance institutions and state-owned banks. The two state-owned coal mining companies, Turkish Coal Enterprises (TKİ) and Turkish Hard Coal Enterprises (TTK), explore for and produce lignite and hard coal. TKİ and TTK have set low domestic prices for hard coal and lignite. Turkish steel manufacturers relying on coal and electricity may benefit from rates at a cost advantage over commercial rates that may be higher under normal conditions in the domestic economy. The cost savings for energy may result in lower prices for inputs used in the steel sector.

Under appropriate circumstances and where supported by further evidence at a more granular level, trade remedy investigations could identify the extent by which Turkish steel exporters benefitted from the broad spectrum of investment incentives programmes offered by the Turkish government and regional governments. They could assess both incentives regimes directed at large-scale investments and (smaller) investment incentives provided for industrial R&D and machinery equipment.

1. Introduction

Market distortions can significantly affect costs, prices, or market behaviours in a particular industry. They can be the result of a wide range of factors, including market structure, imperfect information, behaviour of market participants, and government intervention.

The steel manufacturing industry is subject to various types of government regulation and direct and indirect subsidisation intended to support domestic producers. Significant government interventions in the steel industry have in the past created significant market distortions and contributed to excess capacities and distorted export markets globally. Frequent distortions created by government intervention in steel markets include government subsidies, tariff, and non-tariff measures (NTMs), support schemes administered by government financial agencies, and multiple interventions along the steel production value chain, for example, measures implemented in the markets for raw materials, energy, and logistics services.

Trade remedy measures can be imposed if dumped or subsidised imports are found to be causing injury to domestic industry. Market distortions may be considered as part of an investigation and may be relevant to determining the subsidy amount and/or dumping margin, but they will not, on their own, lead to the imposition of trade remedy measures.

To impose trade remedies, investigations need to be conducted in accordance with a series of World Trade Organization (WTO) Agreements including the Agreement on the Implementation of Article VI of the GATT 1994 (the Anti-dumping Agreement), and the Agreement on Subsidies and Countervailing Measures. UK legislation contains similar provisions to allow these investigations to be undertaken. Schedule 4 to the Taxation (Cross-border Trade) Act 2018 and the Trade Remedies (Dumping and Subsidisation) (EU Exit) Regulations 2019 describes how dumping and subsidy investigations should be conducted.

The UK Trade Remedies Authority (TRA) commissioned independent research to inform analytical approaches to assess the existence and scale of government-induced market distortions in steel industries in major steel producing countries.

The report provides an overview of potential distortions in the domestic steel markets of the relevant producing countries with a specific focus on interventions that can affect the prices of steel products and prices of inputs in the domestic market and export markets.

This research provides a first step towards building an improved understanding of some of the relevant issues at a high level. It does not, however, constitute a comprehensive or exhaustive source of information on all relevant market distortions that can be directly applied in trade remedy investigations. Although some of the potential market distortions identified in this research could be considered in trade remedies investigations on a case-by-case basis, the outputs of this research would likely need to be supplemented with further evidence at a more granular level to enable assessments of Particular Market Situations in specific markets for narrowly defined products.

The selection of countries followed a scoping exercise considering countries' steel production capacities, export capacities, indicators of government involvement in the economy as well as the frequency of steel-related anti-dumping and countervailing duty measures imposed by trading partners in the recent past. Accounting for this diverse though relevant set of indicators, the countries analysed in this report are the Republic of India, the People's Republic of China (PRC), the Russian Federation, and the Republic of Türkiye.

1.1 Aims

The overarching objective of the report is to identify and provide evidence of potential distortions in steel products markets. The report will outline government-induced interventions that can affect the prices of steel products and prices of relevant inputs in the domestic market of steel producing countries, such as key raw materials inputs, energy/utilities (gas, fossil fuels, electricity, etc.), land and/or property, financing conditions, labour, and transportation.

The report covers:

- ◆ government plans and/or regulatory guidance;
- ◆ potential distortions resulting from contemporary domestic legislation (e.g., industrial and trade policy measures); and
- ◆ known actions of regulatory bodies, competent authorities, and relevant State-Owned Enterprises.

1.2 Methodology

Following the initial scoping and identification of countries for investigation, the analysis mainly draws on the review of a large body of relevant literature, including relevant reports⁵, academic papers, industry positions and analysis, and publications by relevant governmental institutions. The purpose of this review is to get a solid understanding of whether and which interventions applied in the recent past or still apply in steel manufacturing and relevant up- and downstream markets, for example, commodities markets, energy and utilities, land and/or property, financing conditions, and transport markets.

The analysis of potential market distortions relies on a rich set of data and sources of information, including:

- ◆ primary sources (e.g., national legislation, policy documents);
- ◆ national statistical offices and international statistical accounts (WITS);
- ◆ studies by authoritative international organisations (e.g., World Bank, IMF, OECD, WTO);
- ◆ WTO resources on anti-dumping and anti-circumvention investigation;
- ◆ findings in previous trade remedy investigations (e.g., EU, US, AUS);
- ◆ OECD committees;

⁵ European Commission investigations into the economies of PRC and Russia (2020); USTR's 2021 Report to Congress on PRC's WTO Compliance; OECD report on measuring distortions in international markets: aluminium value chain (2019).

- ♦ academic studies; and
- ♦ other sources where appropriate, e.g.:
 - product market and investment restrictiveness indicators (e.g., OECD, Global Trade Alert (GTA) database and thematic reports, the WTO trade monitoring database);
 - industry papers, expert papers, publications by economic consultants and law-firms; and
 - cross-verified available anecdotal evidence based on media and government reporting.

A full quotation of data sources and other sources of information, opinions, legal acts, etc. is provided at the end of the report.

The analysis also partly draws on interviews with several country experts, including representatives from UK producers, importers, overseas exporters, trade remedy investigating authorities and representatives of trade bodies and associations of relevant industries in the UK, and other relevant third parties.

High-level conclusions are presented in the executive summary of the report. For each country, relevant potential distortions are presented in the conclusions part of the report.

1.3 Structure

The report is organised following a thematical approach, beginning with the scoping of relevant countries, an introduction into major market characteristics, an outline of government policies directly influencing the steel sector, and an overview of major government policies in key steelmaking intermediate inputs sectors.

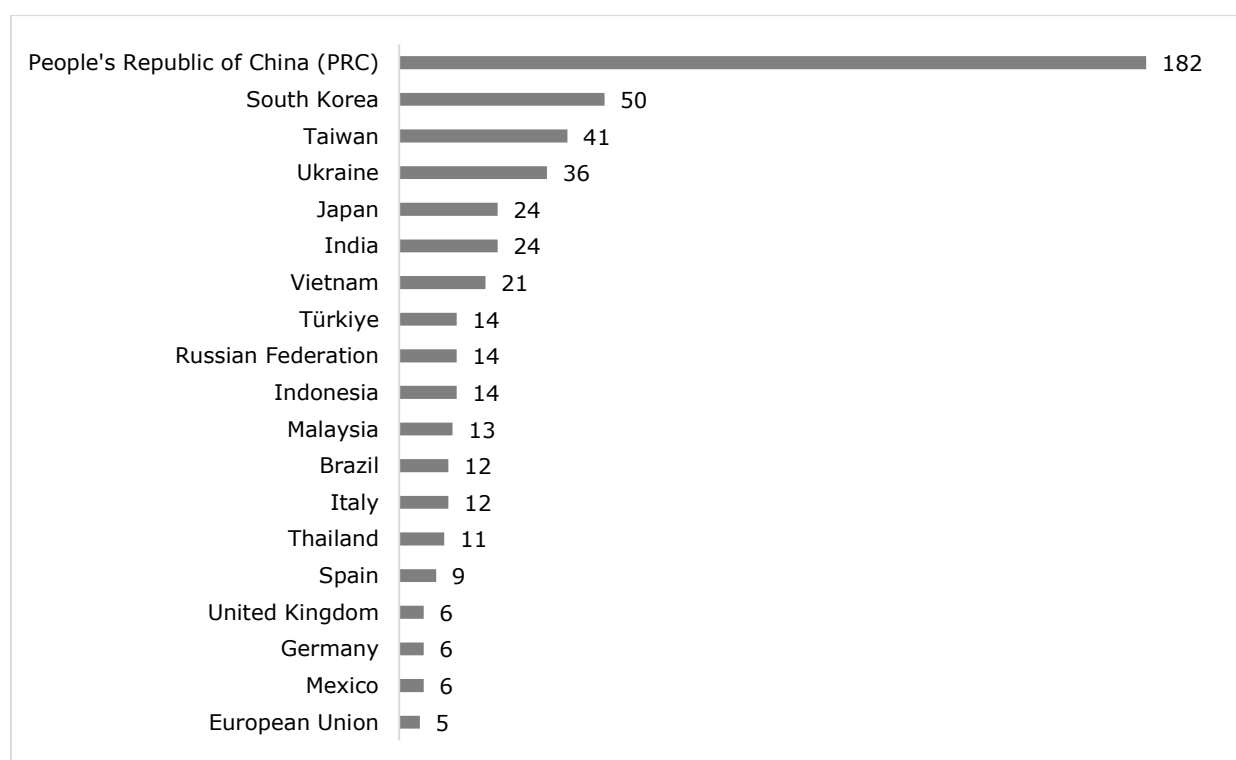
2. Scoping and territory selection

In this section, we provide data and analysis relevant for the selection of the four key countries subject to further analysis within the scope of this report. To make an informed choice of target countries, the report identifies and assesses data of several relevant sources.

2.1 Countries subject to anti-dumping and countervailing duty measures

According to the WTO's database on enforced anti-dumping measures, seven WTO members stand out as target countries for anti-dumping measures imposed on trade in steel products markets: the PRC (with a total of 182 measures, as of December 2022), South Korea (50 measures), Taiwan⁶ (41 measures), Ukraine (36 measures), Japan (24 measures), India (24 measures), and Vietnam (21 measures).

Figure 1: Number of enforced anti-dumping measures in steel products markets, targeted exporters (WTO members), as of December 2022

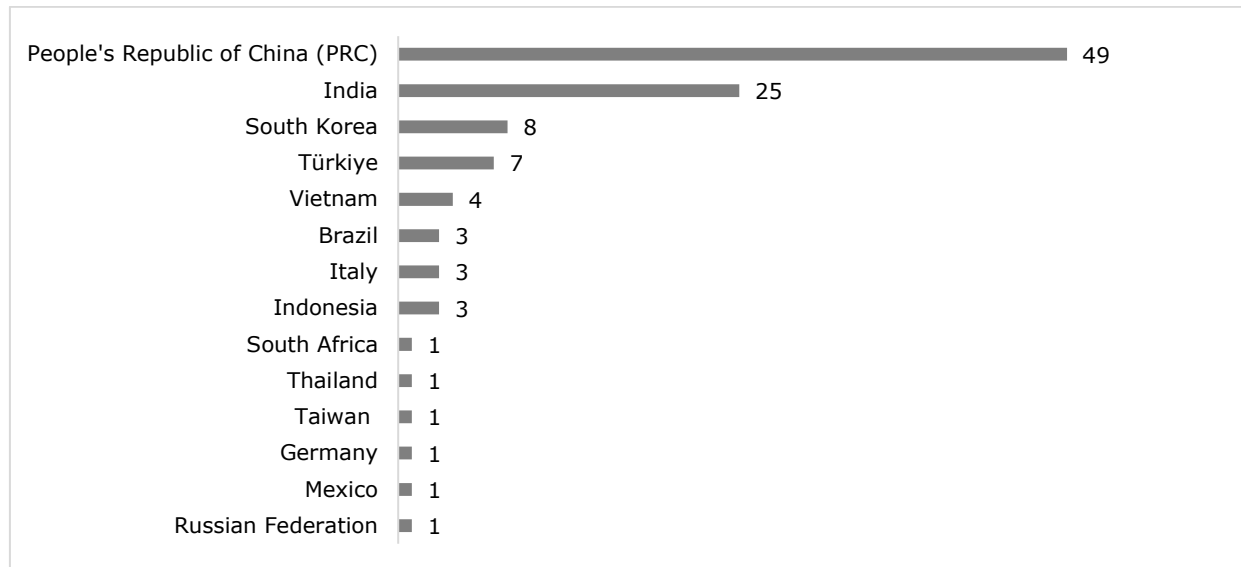


Source: WTO database of anti-dumping measures. Note that data on trade remedy actions refers only to procedures that led to the application of trade remedy measures which were in force on or after 01/01/2020.

⁶ The Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu (Chinese Taipei) has been a member of WTO since 1 January 2002. We refer to Taiwan in the rest of the report, as it is commonly referred to by UK authorities.

According to the WTO's database on enforced countervailing duty measures, eight countries stand out as target countries for countervailing measures imposed on trade in steel products markets: PRC (with a total of 49 measures, as of December 2022), India (25 measures), South Korea (8 measures), Türkiye (7 measures), Vietnam (4 measures), Brazil (3 measures), Italy (3 measures), and Indonesia (3 measures).

Figure 2: Number of enforced countervailing duty measures in force in steel products markets, targeted exporters (WTO members), as of December 2022



Source: WTO database of countervailing duty measures. Note that data on trade remedy actions refers only to procedures that led to the application of trade remedy measures which were in force on or after 01/01/2020.

2.2 Countries targeted by anti-dumping and countervailing duty investigations

According to the WTO's database on anti-dumping investigations since 2019, the PRC is currently targeted in seven investigations, South Korea is being targeted in three investigations, while Malaysia and Türkiye are targeted in two investigations (see Table 1).

Table 1: Anti-dumping investigations in steel products markets (WTO members), since 2019, as of December 2022

Investigation number	Reporting member	Exporting member	Initiation date	HS Section code	Subject product
AD689 CN	European Union	PRC	13.05.2022	XV	Stainless Steel Refillable Kegs
A-489-846	US	Türkiye	26.01.2022	XV	Certain steel nails
A-533-904	US	India	26.01.2022	XV	Certain steel nails
A-542-804	US	Sri Lanka	26.01.2022	XV	Certain steel nails
A-549-844	US	Thailand	26.01.2022	XV	Certain steel nails
AD683 BR	European Union	Brazil	24.09.2021	XV	Electrolytic chromium coated steel

Investigation number	Reporting member	Exporting member	Initiation date	HS Section code	Subject product
AD683 CN	European Union	PRC	24.09.2021	XV	Electrolytic chromium coated steel
6/13/2021-DGTR 1/1	India	PRC	10.09.2021	XV	Stainless-Steel Seamless Tubes & Pipes
AD-502/2021/441 1-03	Ukraine	PRC	01.09.2021	XV	Steel seamless cold drawn and cold rolled pipes
08/21-DEU	Mexico	Germany	31.08.2021	XV	Type I and type H steel beams
08/21-ESP	Mexico	Spain	31.08.2021	XV	Type I and type H steel beams
08/21-GBR	Mexico	United Kingdom	31.08.2021	XV	Type I and type H steel beams
09/21-VNM	Mexico	Vietnam	30.08.2021	XV	Coated flat steel products
6/7/2021-DGTR-1/3	India	South Korea	28.06.2021	XV	Electrogalvanised steel
6/7/2021-DGTR-2/3	India	Japan	28.06.2021	XV	Electrogalvanised steel
6/7/2021-DGTR-3/3	India	Singapore	28.06.2021	XV	Electrogalvanised steel
AD682 RU	European Union	Russian Federation	24.06.2021	XV	Corrosion resistant steel
AD682 TR	European Union	Türkiye	24.06.2021	XV	Corrosion resistant steel
14062021-1	Japan	PRC	14.06.2021	XV	Hot-dipped galvanised steel wire
14062021-2	Japan	South Korea	14.06.2021	XV	Hot-dipped galvanised steel wire
AD2021-01	Thailand	Indonesia	02.06.2021	XV	Flat Cold-Rolled Stainless Steel
AD2021-02	Thailand	Malaysia	02.06.2021	XV	Flat Cold-Rolled Stainless Steel
ADC 578 AD 1	Australia	US	15.03.2021	XV	Quenched and tempered steel plate
277.EU	Türkiye	European Union	09.01.2021	XV	Hot-rolled flat steel
277.KOR	Türkiye	South Korea	09.01.2021	XV	Hot-rolled flat steel
AD-471/2020/441 1-03	Ukraine	PRC	19.12.2020	XV	Coated rolled carbon steel products
AD 02-2019/MYS	Indonesia	Malaysia	23.10.2019	XV	Cold rolled stainless steel (CRS)
AD 03-2019/CHN	Indonesia	PRC	23.10.2019	XV	Cold rolled stainless steel (CRS)

Source: WTO database of anti-dumping investigations. Note that procedures concerning multiple exporters (countries/customs territories) are counted as separate investigations. HS XV indicates sector of base metals and articles of base metal.

According to the WTO's database on countervailing duty investigations since 2019, PRC is currently being subject to 11 investigations, followed by India (6 investigations), Türkiye (4 investigations), Indonesia (4 investigations), Vietnam (4 investigations), and Mexico (2 investigations, see Table 2).

Table 2: Countervailing duty investigations in steel products markets (WTO members), since 2019, as of December 2022

Investigation number	Reporting member	Exporting member	Initiation date	HS Section code	Subject product	Conclusion
C-489-847	US	Türkiye	26.01.2022	XV	Certain steel nails	
C-523-817	US	Oman	26.01.2022	XV	Certain steel nails	
C-533-905	US	India	26.01.2022	XV	Certain steel nails	
C-542-805	US	Sri Lanka	26.01.2022	XV	Certain steel nails	
C-549-845	US	Thailand	26.01.2022	XV	Certain steel nails	
2101365	Brazil	Indonesia	02.06.2021	XV	Cold-rolled stainless steel (304)	
AS678 ID	European Union	Indonesia	17.02.2021	XV	Stainless steel cold rolled flat products	affirmative
AS678 IN	European Union	India	17.02.2021	XV	Stainless steel cold rolled flat products	affirmative
2020/15 CN	United Kingdom	PRC	01.01.2021 (date when measures were transitioned)	XV	Hot rolled flat products of iron, non-alloy or other alloy steel	affirmative
2020/16 IN	United Kingdom	India	01.01.2021 (date when measures were transitioned)	XV	Stainless steel bars (certain)	affirmative
2020/29 CN	United Kingdom	PRC	01.01.2021 (date when measures were transitioned)	XV	Organic coated steel products (certain)	affirmative
C-580-910	US	South Korea	04.08.2020	XV	Seamless carbon and alloy steel standard, line, and pressure pipe	affirmative
C-821-827	US	Russian Federation	04.08.2020	XV	Seamless carbon and alloy steel standard, line, and pressure pipe	affirmative
C-201-854	US	Mexico	27.07.2020	XV	Standard steel welded wire mesh	affirmative
ADC 558 CV 1	Australia	Vietnam	30.06.2020	XV	Aluminium zinc coated steel (=600mm)	negative
ADC 559 CV 1	Australia	PRC	30.06.2020	XV	Aluminium zinc coated steel (<600mm)	negative
ADC 559 CV 2	Australia	Vietnam	30.06.2020	XV	Aluminium zinc coated steel (<600mm)	negative

Investigation number	Reporting member	Exporting member	Initiation date	HS Section code	Subject product	Conclusion
AS667 TR	European Union	Türkiye	12.06.2020	XV	Certain hot-rolled flat products of iron, non-alloy or other alloy steel	withdrawn
ADC 553 CV 1	Australia	PRC	27.05.2020	XV	Painted steel strapping	affirmative
C-489-843	US	Türkiye	13.05.2020	XV	Prestressed concrete steel wire strand	affirmative
C-570-127	US	PRC	22.04.2020	XV	Certain non-refillable steel cylinders	affirmative
ADC 550 CV 1	Australia	PRC	31.03.2020	XV	Precision pipe and tube steel	affirmative
ADC 550 CV 2	Australia	Vietnam	31.03.2020	XV	Precision pipe and tube steel	negative
C-428-848	US	Germany	15.01.2020	XV	Forged steel fluid end blocks	affirmative
C-475-841	US	Italy	15.01.2020	XV	Forged steel fluid end blocks	affirmative
C-533-894	US	India	15.01.2020	XV	Forged steel fluid end blocks	affirmative
C-570-116	US	PRC	15.01.2020	XV	Forged steel fluid end blocks	affirmative
C-533-892	US	India	21.11.2019	XV	Forged steel fittings	affirmative
COR2 2019 IN/AE	Canada	United Arab Emirates	08.11.2019	XV	Corrosion Resistant Steel Sheet 2	negative
COR2 2019 IN/TR	Canada	Türkiye	08.11.2019	XV	Certain corrosion-resistant steel sheet 2	affirmative
COR2 2019 IN/VN	Canada	Vietnam	08.11.2019	XV	Corrosion Resistant Steel Sheet 2	negative
6/16/2019-DGTR-1/1	India	Indonesia	18.10.2019	XV	Flat products of stainless steel	negative
AS660 CN	European Union	PRC	10.10.2019	XV	Certain hot rolled stainless steel sheets and coils (SSHR)	withdrawn
AS660 ID	European Union	Indonesia	10.10.2019	XV	Certain hot rolled stainless steel sheets and coils (SSHR)	withdrawn
C-570-113	US	PRC	03.07.2019	XV	Certain collated steel staples	affirmative
C-533-888	US	India	19.03.2019	XV	Carbon and alloy steel threaded rod	affirmative
C-570-105	US	PRC	19.03.2019	XV	Carbon and alloy steel threaded rod	affirmative
C-122-865	US	Canada	04.03.2019	XV	Certain fabricated structural steel	negative
C-201-851	US	Mexico	04.03.2019	XV	Certain fabricated structural steel	negative
C-570-103	US	PRC	04.03.2019	XV	Certain fabricated structural steel	negative

Source: WTO database of countervailing duty investigations. Note that procedures concerning multiple exporters (countries/customs territories) are counted as separate investigations. HS XV indicates sector of base metals and articles of base metal. Note that all the UK measures are EU measures that have been transitioned to be UK measures rather than the UK concluding its own investigations.

2.3 Annual steel production capacities, reported production and exports

Annual steelmaking production capacity statistics reveal that the PRC is by far the jurisdiction with the highest steelmaking capacity reaching 1,157 mmt in 2020, followed by India (143.5 mmt), Japan (128.5 mmt), the US (113.5 mmt), Russia (89.8 mmt), South Korea (81.6 mmt), Germany (58.1 mmt), and Türkiye (56.9 mmt). Similar patterns emerge for countries' total production volumes, which are generally lower than production capacities (overcapacities), and exports (see Table 3). 2021 export data suggest that the world's largest steel exporters, the PRC, India, Japan, Russia, South Korea, Germany, and Türkiye can have a significant impact on global prices.

Table 3: Annual steel production capacities, actual production and exports, in million metric tonnes (mmt), sorted by steelmaking capacity in 2020 (top 20 custom territories)

Country / Year	Steelmaking capacities (OECD)			Total production of crude steel (World Steel)		Exports of steel products (World Steel)		Apparent steel use (finished steel products) (World Steel)	
	2010	2017	2020	2017	2021	2017	2021	2017	2020
World	2,193.1	2,400.4	2,452.7	1,736.8	1,953.3	462.9	460.2	1,637.4	1,785.5
PRC	1,056.0	1,160.0	1,157.1	870.7	1,032.8	74.8	66.2	773.8	1,006.3
India	84.4	124.2	143.5	101.5	118.2	16.3	20.4	88.7	89.3
Japan	132.0	128.5	128.5	104.7	96.3	37.5	33.8	64.4	52.6
US	117.8	113.6	113.6	81.6	85.8	10.2	8.2	97.7	80.0
Russia	77.7	87.2	89.8	70.5	75.6	31.2	32.6	40.7	42.3
South Korea	76.0	81.6	81.6	71.0	70.4	31.4	26.8	56.3	49.0
Germany	58.4	58.1	58.1	43.3	40.1	26.4	24.0	41.0	31.2
Türkiye	46.0	55.8	56.9	37.5	40.4	16.3	22.1	36.1	29.5
Brazil	51.2	56.3	55.2	34.8	36.2	15.3	11.5	19.5	21.4
Iran	22.5	38.9	52.8	21.2	28.5	7.5	1.6	20.0	17.2
Ukraine	48.8	40.2	38.7	21.4	21.4	15.2	15.7	4.6	4.6
Italy	38.8	34.7	34.7	24.0	24.4	18.2	17.2	24.8	20.4
Taiwan	26.9	29.4	29.4	22.4	23.2	12.1	10.8	17.7	18.8
Mexico	20.3	27.1	27.7	19.9	18.5	5.2	6.0	25.8	21.4
Spain	27.9	26.6	26.6	14.4	14.2	8.9	9.7	13.3	11.6
Vietnam	6.3	20.1	25.8	11.5	23.0	4.0	11.2	21.6	23.3
Indonesia	10.3	14.5	19.6	5.2	14.3	2.4	9.9	13.6	15.1
Malaysia	12.9	15.7	19.2	3.2	6.9	1.7	8.3	9.4	6.8

Country / Year	Steelmaking capacities (OECD)			Total production of crude steel (World Steel)		Exports of steel products (World Steel)		Apparent steel use (finished steel products) (World Steel)	
	2010	2017	2020	2017	2021	2017	2021	2017	2020
France	22.3	19.1	19.1	15.5	13.9	14.8	12.6	14.8	12.2
Egypt	9.5	15.3	15.6	6.9	10.3	1.5	2.0	10.2	9.7
Canada	17.7	15.6	15.3	13.2	13.0	6.5	7.5	14.0	12.2
United Kingdom	18.7	12.1	12.1	7.5	7.2	4.7	3.5	11.0	9.0

Source: OECD and World Steel Association. Latest data available: 2020/2021. Note: Apparent steel use or apparent steel consumption is also referred to as 'steel demand'. It is deliveries by a customs territory's producers plus imports minus receipts (that is, imports by a country's producers themselves of material that is further processed), minus exports to third countries.

Many of the largest steel producing custom territories show relatively high-capacity utilisation rates compared to high overcapacities in territories with smaller capacities (see Table 4). However, due to high production capacities, the largest steel-producing countries' share in global steelmaking overcapacity is also high. The PRC ranks first, accounting for 25% of global steelmaking overcapacity, followed by Japan (6%), the US (6%), India (5%), Iran (5%), Brazil (4%), Germany (4%), Ukraine (3%), and Türkiye (3%, see Figure 3).

Table 4: Steel Capacity Utilisation 2017 and 2021

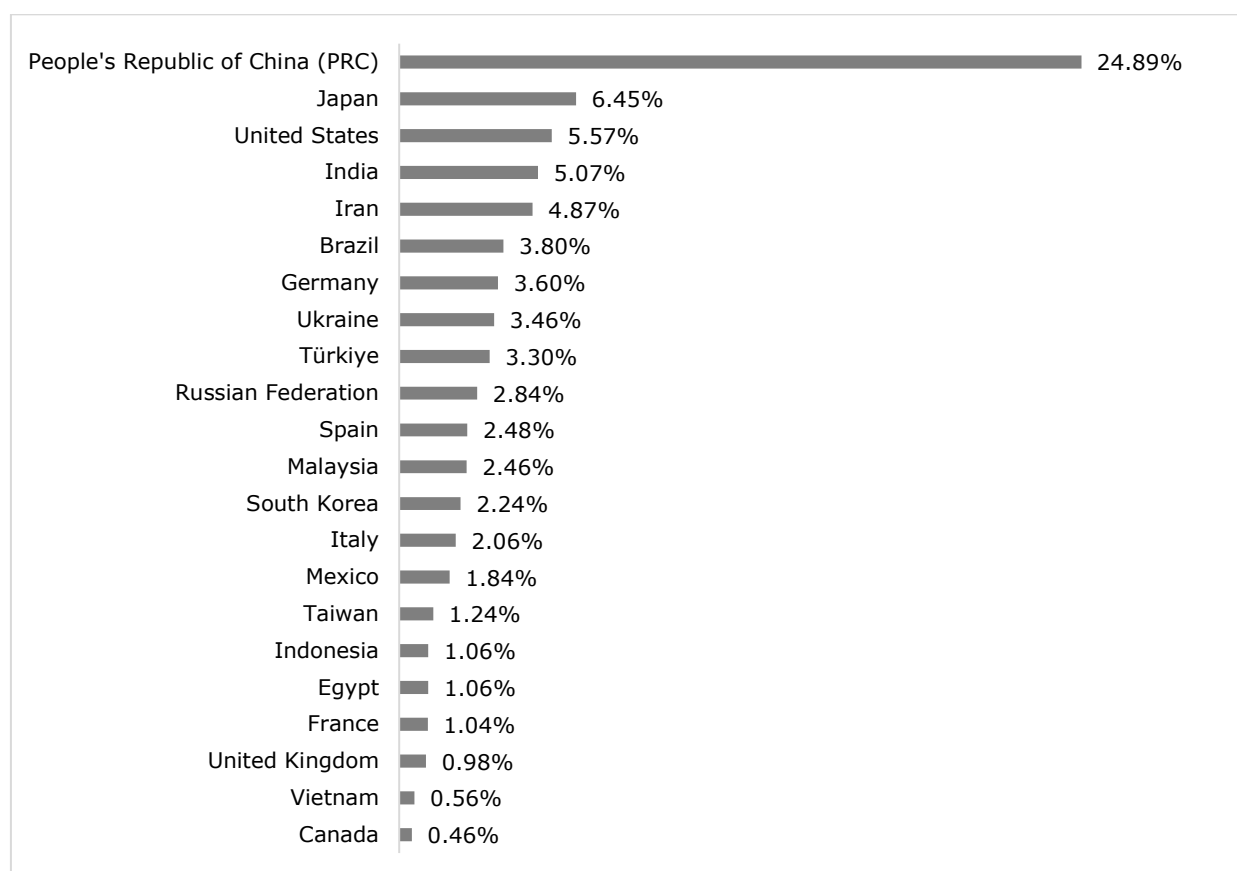
Country	2017 capacity utilisation (2017 production / 2017 capacity)	2021 capacity utilisation (2021 production / 2020 capacity) ⁷
World	72.4%	79.6%
Malaysia	20.4%	35.9%
Spain	54.1%	53.4%
Iran	54.5%	54.0%
Ukraine	53.2%	55.3%
United Kingdom	62.0%	59.5%
Brazil	61.8%	65.6%
Egypt	45.1%	66.0%
Mexico	73.4%	66.8%
Germany	74.5%	69.0%
Italy	69.2%	70.3%
Türkiye	67.2%	71.0%
France	81.2%	72.8%
Indonesia	35.9%	73.0%
Japan	81.5%	74.9%
US	71.8%	75.5%
Taiwan	76.2%	78.9%

⁷ 2021 capacity data was unavailable when the report was prepared.

Country	2017 capacity utilisation (2017 production / 2017 capacity)	2021 capacity utilisation (2021 production / 2020 capacity) ⁷
India	81.7%	82.4%
Russia	80.8%	84.2%
Canada	84.6%	85.0%
South Korea	87.0%	86.3%
Vietnam	57.2%	89.1%
PRC	75.1%	89.3%

Source: OECD and World Steel Association. Latest data available: 2020/2021.

Figure 3: Relative steel overcapacity in global overcapacity



Source: OECD and World Steel Association. Latest data available: 2020/2021.

2.4 Exports to the UK

According to World Integrated Trade Solution (WITS) 'trade value' data for the steel products, the UK's major import partners for steel products are EU27 countries, particularly, Germany, Spain, France, the Netherlands, Belgium, and Italy. The UK's major non-EU import partners are Türkiye, India, Vietnam, the PRC, Norway, and Japan.

**Table 5: Countries of origin of UK iron and steel imports in 2021 in 1,000 \$
(SITC rev. 4, category 67)**

Rank	Partner Name	Trade Value in 1,000 \$	in %	Rank	Partner Name	Trade Value in 1,000 \$	In %
1	Germany	931,911	10.3%	21	Poland	99,523	1.1%
2	Spain	841,648	9.3%	22	Ireland	86,825	1.0%
3	France	639,009	7.1%	23	Luxembourg	81,388	0.9%
4	Türkiye	621,220	6.9%	24	Norway	77,165	0.9%
5	Netherlands	616,404	6.8%	25	Japan	75,868	0.8%
6	Belgium	580,104	6.4%	26	United Arab Emirates	70,249	0.8%
7	Italy	565,195	6.3%	27	Denmark	69,746	0.8%
8	India	487,691	5.4%	28	South Africa	47,901	0.5%
9	Sweden	357,859	4.0%	29	Algeria	28,419	0.3%
10	Vietnam	354,455	3.9%	30	Slovak Republic	26,796	0.3%
11	PRC	322,170	3.6%	31	Switzerland	25,835	0.3%
12	Ukraine	321,094	3.6%	32	Brazil	25,623	0.3%
13	Korea, Rep.	278,900	3.1%	33	Romania	25,563	0.3%
14	Other Asia, nes	247,409	2.7%	34	Greece	23,009	0.3%
15	Finland	218,757	2.4%	35	Thailand	19,565	0.2%
16	Portugal	170,456	1.9%	36	Australia	14,231	0.2%
17	Czech Republic	149,739	1.7%	37	Egypt, Arab Rep.	13,312	0.1%
18	US	144,692	1.6%	38	Malaysia	12,571	0.1%
19	Austria	143,038	1.6%	39	Mexico	11,654	0.1%
20	Russian Federation	111,138	1.2%	40	Indonesia	11,635	0.1%

Source: World Integrated Trade Solution (WITS). EU27 countries highlighted in orange.

2.5 Indicators of government involvement in the economy

To give an overview of potential behind-the-border issues and the overall legislative framework in countries with high steelmaking capacities, we use the Economic Freedom Index published by the Fraser Institute. It is based on a range of relevant measures on legal systems and the freedom to trade internationally. The results include scores that often synthesise complex national situations and are thus open to discussion and interpretation. For all countries identified as having leading steelmaking and steel exporting capacities, the numbers show that key sub-indicators, notably transfers and subsidies, government investment, state ownership of assets, regulatory trade barriers and non-tariff trade barriers show very high degrees of government involvement in the economy, especially when compared to the world's best performing countries and the larger group of OECD countries (see Table 6).

Table 6: Economic Freedom Index sub-measures of government involvement in the economy, 2020

Country	Economic Freedom Summary Index	Rank	Transfers and subsidies	Government investment	State Ownership of Assets	Non-tariff trade barriers	Regulatory trade barriers
Brazil	6.33	18	5.35	10.00	8.18	4.04	5.95
Canada	7.81	3	4.45	8.97	7.21	5.94	7.91
PRC	6.27	19	8.29	3.87	3.98	5.81	7.22
Egypt	5.61	21	7.07	0.00	3.09	5.75	3.89
France	7.33	11	2.45	9.63	7.16	6.01	8.00
Germany	7.65	6	1.83	10.00	8.62	6.56	7.87
India	6.72	14	8.23	7.40	8.35	5.76	6.55
Indonesia	7.09	13	9.56	10.00	4.71	5.53	4.96
Iran	4.96	22	7.99	9.37	4.15	4.94	4.66
Italy	7.40	9	2.26	10.00	7.81	6.02	8.00
Japan	7.82	2	4.12	8.31	9.37	6.26	7.49
Malaysia	7.35	10	8.05	7.13	4.84	6.89	7.72
Mexico	7.12	12	8.35	10.00	7.23	6.11	7.29
Russia	6.62	15	5.30	8.02	4.62	5.19	6.06
South Korea	7.42	8	6.45	9.49	7.22	5.63	7.60
Spain	7.63	7	4.81	10.00	7.78	6.61	8.29
Taiwan	7.68	5	9.18	9.31	7.50	6.59	7.68
Türkiye	6.48	16	6.04	10.00	6.00	5.56	7.57
Ukraine	6.11	20	5.62	8.15	7.20	5.41	6.33
United Kingdom	7.71	4	4.21	9.25	8.29	6.62	7.97
US	7.97	1	3.93	9.23	9.31	6.52	8.16
Vietnam	6.42	17	n/a	6.87	4.86	4.88	5.32

Source: Fraser Institute

2.6 Concluding remarks and in-depth study selection

Based on scoping analysis presented above, a deep and comprehensive territory-specific analysis will be conducted for the PRC, India, Russia, and Türkiye. As outlined above, the selection of countries is based on relevant criteria in terms of annual steel production and trade volumes, but also political-economic indicators such as anti-dumping and countervailing duty measures that have been implemented against a country's exports or have been considered by trading partners. The selection of countries is also based on a wide range of institutional indicators, which are known to be closely related to government-induced, potentially market-distorting, measures and whose restrictiveness levels suggest that there may exist government interventions in steel production and trade, and distortions in relevant upstream and downstream sectors.

A summary of the scoping analysis is provided in Table 7 below. The PRC is included in the analysis because of high production and high export volumes. At the same time, the PRC is subject to a high number of trade remedy measures and investigations and has a low ranking on economic freedom.

Similar considerations apply for India, Türkiye, and Russia. As concerns Russia, under HS chapters 72 and 73, there are sanctions currently applied by the UK to Russian imports (either partially or fully). The list of iron and steel sanctions is available under Schedule 3B of the Russia (Sanctions) (EU Exit) Regulations of 2019.⁸ The decision to include Türkiye rather than South Korea is based on differences in the ranking of both countries in the number of ongoing countervailing duty investigations by trading partners, the level of steel exports to the UK, and domestic steel capacity utilisation.

⁸ The Russia (Sanctions) (EU Exit) Regulations 2019. Available at <https://www.legislation.gov.uk/uksi/2019/855/schedules>. (Accessed 27 April 2023).

Table 7: Summary table for custom territory selection

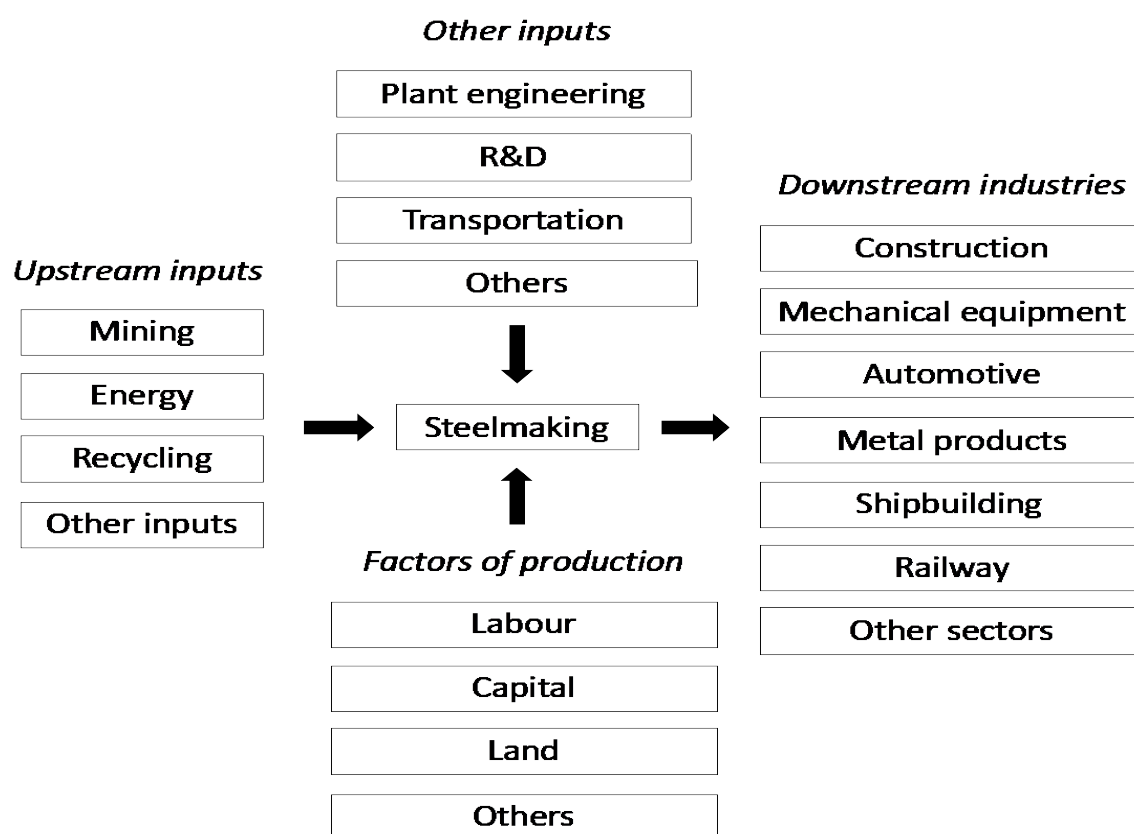
Country	Anti-dumping measures	Anti- dumping investigations	Counter-vailing duty measures	Counter-vailing duty investigations	Steel production capacities	Steel export volume	Relative steel over-capacity in domestic production	Relative steel over-capacity in global overcapacity	Government involvement in the economy
Brazil	++		++		++	+	++	+	+
PRC	++	++	++	++	++	++	+	++	++
Egypt							++	+	++
India	++		++	++	++	++	+	+	++
Indonesia	++		++	++			+	+	++
Iran	+				++		++	+	++
Japan	++				++	++	+	+	++
South Korea	++	++	++		++	++	+	+	++
Malaysia	++	+					++	+	++
Mexico	+		+	++	+		++	+	++
Russia	++		+		++	++	+	+	++
Taiwan	++		+		+	+	+	+	+
Türkiye	++	+	++	++	++	++	++	+	++
Ukraine	++				++	+	++	+	++
Vietnam	++		++	++	+	+	+	+	++

Legend: + relatively low relevance as indicated by low or very low level of indicator; ++ relatively high relevance as indicated by high or very high level of indicator.

3. The Steelmaking Value Chain and Government Support Measures

Steel is a globally traded commodity and is produced worldwide. The steelmaking value chain is complex and costs of production of crude steel vary significantly across countries. The value chain for crude steel spans several input industries and factors of production. As outlined by Figure 4, the production of steel products hinges upstream on the mining and transformation of iron ore, the mining of coal and coke, as well as electricity due to energy-intensive smelting and transformation processes. Some plants intensively use scrap waste rather than iron ore as a key input to production. In addition, labour, capital and land are needed to facilitate investments in production capacities and to operate steelmaking sites. Additional inputs are engineering and research and development activities which impact the quality, value-added, and efficiency of steel production.

Figure 4: The steelmaking value chain



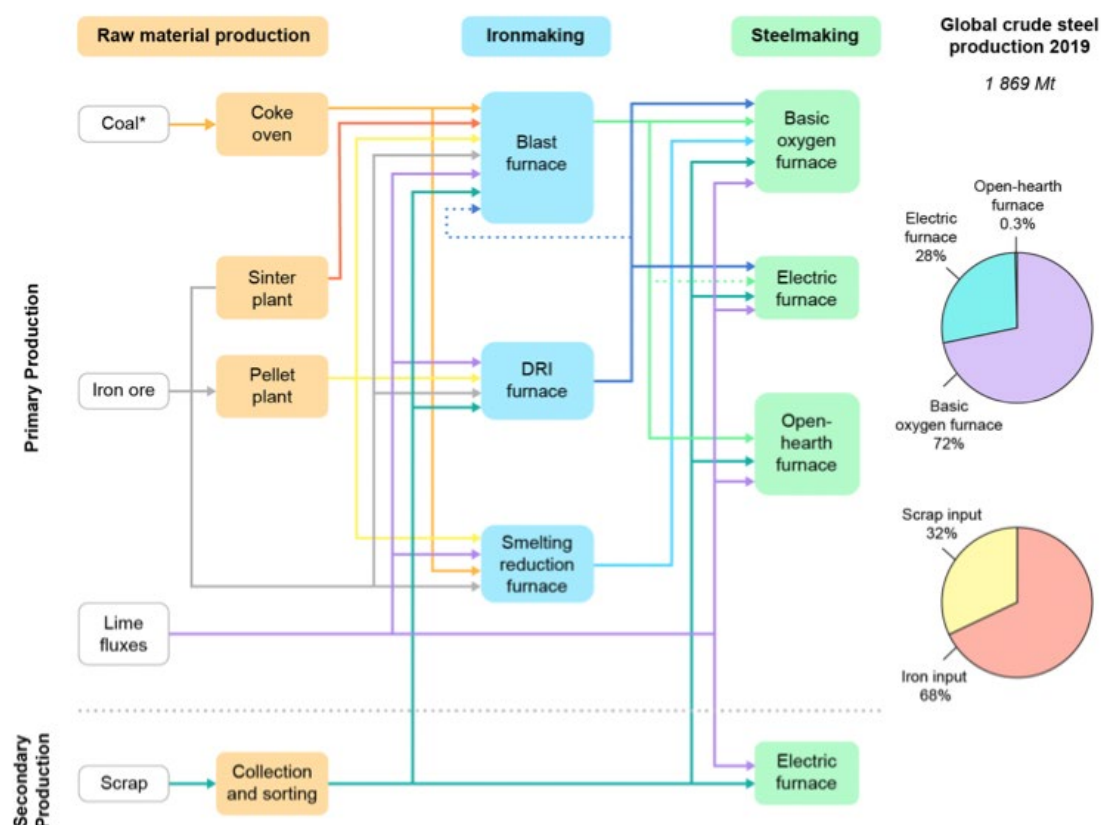
Source: OECD (2017)⁹

⁹ OECD (2017). A first look at the steel industry in the context of global value chains. Accessed at [https://one.oecd.org/document/DSTI/SC\(2017\)4/en/pdf](https://one.oecd.org/document/DSTI/SC(2017)4/en/pdf). (Accessed 27 April 2023).

The principal inputs to steelmaking are iron ore, energy (mainly coal, coke, natural gas and electricity)¹⁰, limestone and steel scrap. Major production processes for steel are the primary (integrated) route (Blast Furnace and Basic Oxygen Furnace: BF-BOF) and the secondary (recycling) route (Electric Arc Furnace: EAF).

The primary route is based on production of iron from iron ore. The secondary route uses scrap iron as the main iron-bearing input material in electric arc furnaces. In both cases, energy consumption is related to fuels (gas, coal and coke) and electricity. The recycling route, however, tends to have a much lower energy consumption: the BF-BOF route consumes around eight times as much final energy as the recycling route. Primary production routes generally consume large amounts of coal and natural gas. It should be noted that in many steelmaking sites crude steel is produced by mixing iron from iron ore and iron derived from scrap waste, i.e., they operate integrated and recycling routes. An overview of major steel production routes is provided by Figure 5.

Figure 5: Main steel production pathways and material flows



Source: IEA (2020).¹¹

¹⁰ It should be noted that coke has a dual role in the steelmaking process. First, it provides the heat needed to melt the ore, and second, when it is burnt, it has the effect of stripping the oxygen from the iron ore, leaving only the pure iron behind. In primary steel production, reducing agents such as coal, coke and natural gas supply energy for the heat needed.

¹¹ IEA (2020). Iron and Steel Technology Roadmap. Accessed at https://iea.blob.core.windows.net/assets/eb0c8ec1-3665-4959-97d0-187ceca189a8/Iron_and_Steel_Technology_Roadmap.pdf. (Accessed 27 April 2023).

A 2020 analysis of the cost of steel production of 318 large production facilities in the EU27 and 10 non-EU countries indicates that in the countries subject to analysis in this report the BF-BOF route is the dominating route of technology, except for Türkiye where the electricity-intensive EAF route prevails.¹²

Table 8: Number of plants by country and technology route, as of October 2019

Production routes	Type of plants	Country	BF-BOF	BF-BOF and EAF	EAF
Production of flat products and long products	Hot rolled coil	PRC	15	1	0
		India	3	4	0
		Türkiye	1	0	1
		Russian Federation	1	0	0
	Hot rolled coil and wire rod	PRC	16	3	0
		India	1	1	0
		Türkiye	0	0	0
		Russian Federation	0	3	0
	Wire rod	PRC	13	2	0
		India	2	0	0
		Türkiye	1	0	2
		Russian Federation	0	0	0

Source: JRC (2020).¹³

The overall cost of producing steel critically depends on the cost of the major inputs to the production processes, particularly the cost of iron ore, scrap and energy inputs. Together, raw material and energy inputs account for around 60-80% of the total cost of steel production.¹⁴ Accordingly, the prices of the critical metallic inputs (iron ore and scrap) and energy strongly impact the final production cost of crude steel.

For the BF-BOF production route, a breakdown of cost data from 2021 indicates that raw materials account for the largest share of steel production costs globally (ranging from approximately 56% in Japan to 71% in the PRC), followed by energy costs (approximately 6% in the Russian Federation to 20% in Germany), other costs such as fluxes and other consumables as well as overhead and interest costs (approximately 15% in Germany to 23% in India), and labour costs (approximately 2% in India to 5% in Germany).¹⁵

¹² JRC (2020). Production costs from iron and steel industry in the EU and third countries. Accessed at https://www.eurofer.eu/assets/news/eu-technical-report-on-production-costs-from-the-iron-and-steel-industry-in-the-eu-and-third-countries/production_costs_from_the_iron_and_steel_industry_-_final_online.pdf. The analysis includes detailed information from 153 production facilities in the EU27 and 10 other countries (Russia, Turkey, United States, United Kingdom, Ukraine, China, India, Japan, South Korea and Brazil). The information is based on data from October 2019, i.e., the last available data before the COVID-19 pandemic affected the iron and steel industry.

¹³ JRC (2020). Production costs from iron and steel industry in the EU and third countries. Accessed at https://www.eurofer.eu/assets/news/eu-technical-report-on-production-costs-from-the-iron-and-steel-industry-in-the-eu-and-third-countries/production_costs_from_the_iron_and_steel_industry_-_final_online.pdf. (Accessed 27 April 2023).

¹⁴ IEA (2020). Iron and Steel Technology Roadmap. Accessed at https://iea.blob.core.windows.net/assets/eb0c8ec1-3665-4959-97d0-187ceca189a8/Iron_and_Steel_Technology_Roadmap.pdf. (Accessed 27 April 2023).

¹⁵ See Transition Zero (2022). Global Steel Production Costs - A country and plant-level cost analysis. Accessed at <https://static1.squarespace.com/static/63d1607c35efbd5cbfee1529/t/640773e1cbf6510575740a6d/16782100205>

Similar patterns hold for the EAF production route, whereas labour costs in EAF steelmaking tend to be much smaller compared to BF-BOF production facilities. In EAF production, raw materials also account for the largest share of steel production costs globally (approximately 61% in Germany to 72% in Russia), followed by energy costs (approximately 7% in the Russian Federation to 15% in Germany), other costs (approximately 6% in Germany to 18% in India), and labour costs (approximately 1% in India to 3% in the United States).¹⁶

As concerns plant-level production costs, data indicate that for BF-BOF steel production costs in different countries generally show low levels of heterogeneity. Exceptions are, however, the United States, India, and the PRC, due to differences in regional electricity and fuel prices as well as differences in transportation costs resulting from distances between mining and steelmaking facilities. Like BF-BOF plants, EAF sites within the same country operate in a relatively similar cost range. One exception is India, where costs vary to a larger extent between high- and low-cost EAF steelmakers.¹⁷ The data outlined above provides information about how the costs of companies in the countries of analysis are made up on average. A dedicated case-by-case analysis of company and financial reports is required to arrive at a reasonable assessment of the extent to which direct and indirect government support measures have had an impact on the production costs of individual companies and groups of companies.¹⁸

Government-induced market distortions can exist in up- and downstream sectors. In upstream sectors, including financial and non-financial measures, government-induced distortions impact the cost structure of steel producing companies. In downstream sectors, market distortions can result from government interventions in sectors that intensively use steel products for production, especially the construction industry and steel-intensive manufacturing industries such as the automotive and wider transportation equipment industry. Government interventions in these sectors can impact on demand for domestic steel. Interventions in downstream market can thus result in mitigations or the delay of insolvencies or, due to economies of scale, contribute changes in the efficiency of steel production.

38/Global%2BSteel%2BProduction%2BCosts%2B-%2BJan2022_final.pdf. Note: cost categories taken into consideration include: raw materials cost (all major raw materials used for any of the two main processing routes considered, including iron ore, scrap, pig iron and direct reduced iron; some supplementary raw materials are not considered), energy cost (split between electricity and fuel, whereas the fuel component includes energy and heat created from charcoal, coal, fuel oil, liquefied petroleum gases (LPGs) and natural gas), labour cost (the cost of labour for the steel industry in each country is considered in this study), other costs (purchased oxygen and inert gases (argon), electrodes, refractories, limestone, other fluxes, oils and acids used in rolling and finishing, and overhead costs). Overhead costs have been modelled separately and include accounting fees, advertising, insurance, interest, legal fees, labour burden, rent, repairs, supplies, taxes and utilities. No information is available for the share of interest costs.

¹⁶ Note that other costs include a variety of costs factors, such as purchased oxygen and inert gases (argon), electrodes, refractories, limestone, other fluxes, oils and acids used in rolling and finishing, and overhead costs.

¹⁷ Ibid at 13.

¹⁸ These data are largely line with the findings of JRC (2020). Production costs from iron and steel industry in the EU and third countries. Accessed at [https://www.eurofer.eu/assets/news/eu-technical-report-on-production-costs-from-the-iron-and-steel-industry-in-the-eu-and-third-countries/production costs from the iron and steel industry - final online.pdf](https://www.eurofer.eu/assets/news/eu-technical-report-on-production-costs-from-the-iron-and-steel-industry-in-the-eu-and-third-countries/production%20costs%20from%20the%20iron%20and%20steel%20industry%20-%20final%20online.pdf). (Accessed 27 April 2023).

The European Union applies a relatively broad taxonomy of direct and indirect government support measures that could lead to market distortions. Common measures include:¹⁹

- ◆ Various forms of support granted to enterprises which operate under the ownership, control or policy supervision or guidance of the authorities of the exporting country;
- ◆ Government presence in firms allowing government representatives to interfere with respect to prices or costs;
- ◆ Public policies or measures discriminating in favour of domestic suppliers or otherwise influencing free market forces;
- ◆ The lack, discriminatory application or inadequate enforcement of bankruptcy, corporate or property laws;
- ◆ Measures causing the costs of wages being distorted; and
- ◆ Access to finance granted by institutions which implement public policy objectives or otherwise are not acting independently of the government.

Common sources of market distortions in metallurgic industries are outlined by the OECD for the aluminium value chain. The OECD's report provides a more detailed taxonomy of government interventions that can lead to market distortions in up- and downstream market (see Table 9 below). The analysis of this report reveals that for India, the PRC, Russia and Türkiye several of these measures are also common for the steel manufacturing value chain. However, the lack of transparency often makes it difficult to identify specific state support measures, including pecuniary measures (such as wage support, tax credits, direct grants) and non-pecuniary measures (such as concessions, government induced-demand, loan guarantees) and their impacts. Moreover, market distortions may be the result of horizontal (cross-sectoral) policies, of which some could be the result of non-financial policies, such as restrictive labour market policies. For example, in the European Commission's investigation of market distortions in the PRC, it is noted that labour registration requirements and restrictions to the mobility of workers can have an impact on wages and as such impact the costs of labour.²⁰

¹⁹ European Commission. (2020). Commission Staff Working Document on significant distortions in the economy of the Russian Federation for the purposes of trade defence investigations. Accessed at https://policy.trade.ec.europa.eu/news/trade-defence-eu-publishes-report-market-distortions-russia-2020-10-23_en. (Accessed 30 July 2023). Also see point (c) of Article 2 (6a) of Regulation (EU) 2016/1036 of the European Parliament and the Council of 8 June 2016 on protection against dumped imports from countries not members of the European Union. Accessed at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32016R1036> (Accessed 30 July 2023).

²⁰ European Commission. (2017). Commission Staff Working Document on significant distortions in the economy of the People's Republic of China for the purposes of trade defence investigations. Accessed at [https://ec.europa.eu/transparency/documents-register/detail?ref=SWD\(2017\)483&lang=en](https://ec.europa.eu/transparency/documents-register/detail?ref=SWD(2017)483&lang=en) (Accessed 30 July 2023).

Trade investigation authorities should pay particular attention to these sources of government-induced distortions. It should be noted, however, that the fluid relationship between the government, its authorities, and corporations, as especially observed in the PRC and the Russian Federation, creates problems in transparency regarding the whole range of government support policies and practices. Also, the definition of government support itself becomes blurred when the government is heavily involved in the day-to-day funding and management of businesses along steelmaking value chains, making it difficult to identify the precise policies and documents underlying the support provided.²¹

²¹ As highlighted in OECD (2019). Measuring distortions in international markets: The aluminium value chain, OECD Trade Policy Papers No. 218. Accessed at https://www.oecd-ilibrary.org/trade/measuring-distortions-in-international-markets-the-aluminium-value-chain_c82911ab-en. (Accessed 27 April 2023). The analysis below demonstrates that these findings also apply for the steel industry. Also see OECD (2022). 91st Session of the OECD Steel Committee - Chair's Statement. Accessed at <https://www.oecd.org/sti/ind/91-oecd-steel-chair-statement.htm>. (Accessed 27 April 2023).

Table 9: Taxonomy of common sources of government-induced market distortions along the metallurgical value chain

Statutory or formal incidence (to whom and what a transfer is first given) Source: OECD (2019). ²²							
	Production Note that, based on the extensive research underlying this report, most types of government-induced market distortions found by the OECD for the aluminium industry are, to varying extents, also found in the steel manufacturing value chain in the countries subject to analysis in this report.						Consumption (upstream distortions)
Transfer Mechanism	Output returns	Enterprise income	Cost of intermediate inputs	Labour	Capital	Knowledge	Direct support to consumers
1: Direct transfer of funds	Output bounty or deficiency payment	Operating grant	Input-price subsidies	Wage subsidies	Grant tied to the acquisition of assets, including foreign ones	Government sponsored R&D	Unit subsidy
2: Tax revenue forgone	Production tax credit	Reduced rate of income tax	Reduction of excise tax on input	Reduction in social security charges (payroll taxes)	Investment tax credit	Tax credit for private R&D	VAT of excise concession
3: Other government revenue forgone		Waiving of administrative fees or charges	Under-pricing of a government good or service		Debt forgiveness or restructuring	Government transfer of intellectual property rights (IPR)	Under-pricing of access to a natural resource harvested by final consumer
4: Transfer of risk to government	Government buffer stock	Third-party liability limit for producers		Assumption of occupational health and accident liabilities	Loan guarantee; non-market-based equity conversion		Price-triggered subsidy
5: Induced transfers	Import tariff or export subsidy; local-content requirements; discriminatory government procurement	Monopoly concession	Monopsony concession; export restriction; dual pricing		Credit control, e.g., sector-specific non-market mergers and acquisitions)	Deviations of standard IPR rules	Regulated price; cross subsidy
	-- Including advantages conferred through state enterprises				Below-market rate loans, incl. by SOEs		

²² OECD (2019). Measuring distortions in international markets: The aluminium value chain. OECD Trade Policy Papers No. 218. Accessed at https://www.oecd-ilibrary.org/trade/measuring-distortions-in-international-markets-the-aluminium-value-chain_c82911ab-en. (Accessed 27 April 2023).

4. Country-specific Market Developments

This Section provides an overview of steel market characteristics and industry developments in the countries subject to analysis in this report.

4.1 Republic of India

The steel industry has been a core pillar of industrial development in India. Economic reforms by the government of India in 1991 had a significant impact on this sector. Licensing requirements for capacity creation were abolished and steel was removed from the list of industries reserved for the public sector.²³ Currently, the Indian steel industry is dominated by private sector players, with public sector companies responsible for less than 20% of Indian crude steel production.²⁴

In 2023, India, along with China accounts for around half of the world's steelmaking capacity.²⁵ This is the result of a strong capacity growth trajectory over the previous years. For instance, between 2018-2022, the Indian steel capacity increased by more than 13 mmt at a growth rate of 11%. In 2021, Indian capacity increased by 5.1 mmt.²⁶ However, the increase in steelmaking capacity is also being complemented by an increase in domestic demand in India for steel. Increasing the domestic consumption of steel in India is a priority goal of the National Steel Policy 2017. It aims to increase per Capita Steel Consumption to 160 Kgs by 2030-31.²⁷ In fact, India is one of the countries where capacity growth was outpaced by domestic demand for steel. In 2022, India's steel demand grew almost two times faster than its capacity.²⁸ These efforts are being undertaken to ensure that India's rapidly growing steelmaking capacity does not sit idle. At the same time, it is important to note that India also aims to domestically meet the entire demand of high-grade automotive steel, electrical steel, special steels and alloys for strategic applications by 2030-31. Therefore, it is also increasing its steelmaking capacity in higher value added and high-grade steel, which will also be servicing global demand.²⁹

A rapid rise in production has resulted in India becoming the 2nd largest producer of crude steel during the last four years (2018–2021), from its 3rd largest status in 2017.³⁰ Crude

²³Ministry of Steel. Development of Indian Steel Sector since 2010-11. Accessed at: <https://steel.gov.in/development-indian-steel-sector-1991>. (Accessed 27 April 2023).

²⁴Ministry of Steel. Annual Report 2021-22. Accessed at: https://steel.gov.in/sites/default/files/Download_0.pdf. (Accessed 27 April 2023).

²⁵ OECD (2023), Latest Developments in Steelmaking Capacity. DSTI/SC(2023)3/FINAL. Available at: <https://www.oecd.org/industry/ind/latest-developments-in-steelmaking-capacity-2023.pdf>

²⁶ OECD (2022), Global Forum on Steel Excess Capacity (GFSEC) 2022 Progress Report. Available at: <https://www.steelforum.org/gfsec-2022-progress-report.pdf>

²⁷ Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf

²⁸ OECD (2023), Latest Developments in Steelmaking Capacity. DSTI/SC(2023)3/FINAL. Available at: <https://www.oecd.org/industry/ind/latest-developments-in-steelmaking-capacity-2023.pdf>

²⁹ Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf

³⁰Ministry of Steel. An Overview of Steel Sector. Accessed at: <https://steel.gov.in/overview-steel-sector>. (Accessed 27 April 2023).

steel production levels reached 118 mmt in 2021.³¹ India was the eighth largest exporter of steel in 2021, with 20.4 mmt.³² The steel sector has been pivotal in driving economic growth and employment generation. In 2018, the steel sector contributed to around 2% of the country's GDP and employed around 250,000 people in steel and related up- and downstream sectors.³³ Moreover, the steel sector has an output multiplier effect of nearly 1.4 times on GDP and an employment multiplier factor of 6.8 times.³⁴

In terms of steelmaking production capacity, annual statistics reveal that in 2020, India had the second highest global capacity of 143.5 mmt³⁵ and exported semi-finished and finished steel products of 20.4 million tonnes in 2021. India's apparent steel use in 2021 amounted to 106.1 million tonnes.³⁶ This is also the case for India in 2021 where it had a capacity utilisation rate of 82.4%³⁷ and accounted for 5% of global steelmaking overcapacity.³⁸ The steel industry in India has several large players that have become globally important. Companies such as Tata Steel Group, JSW Steel Limited, Steel Authority of India, Jindal Steel and Power Limited, and ArcelorMittal and Nippon Steel Corporation (AM/NS, both include 60% and 40% of Arcelor Mittal Nippon Steel India Ltd. respectively), have made their way into the top 60 world steel producers.³⁹ These companies together were responsible for almost 70% of crude steel production in India and 4.2% globally (see Table 10). All of them are vertically integrated and present throughout the steel value chain. They are largely self-sufficient producers and provide a range of steel-making raw materials (iron ore and coke coal) as well as a range of semi-finished and finished steel products. In addition to this, many also own energy companies. For instance, Tata Group owns Tata Power (and Tata UK), which is one of the largest power generating companies in India, JSW Group owns JSW Energy, while Jindal Steel and Power owns power plants in 2 states in India.⁴⁰ AM/NS India is also planning to enter the energy sector to secure its value chain with the acquisition of power plants and integrating renewables into its energy supply chain.⁴¹ In addition, private steel companies in India own mines for the supply of raw material commodities and, downstream the value chain, they produce a variety of intermediate and final steel products.

³¹Ministry of Steel. Annual Report 2021-22. Accessed at: https://steel.gov.in/sites/default/files/Download_0.pdf. (Accessed 27 April 2023).

³²World Steel Association (2022). World Steel in Figures. Accessed at: <https://worldsteel.org/wp-content/uploads/World-Steel-in-Figures-2022.pdf>. (Accessed 27 April 2023).

³³Ministry of Steel. Annual Report 2018-19. Accessed at: <https://steel.gov.in/sites/default/files/MoS%20AR%20Eng.pdf>

³⁴Ministry of Steel (2019). Safety Code for Iron & Steel Sector. Accessed at: <https://steel.gov.in/sites/default/files/Draft%20Framework%20Document%20for%20Safety%20Code%20for%20Iron%20%26%20Steel%20Sector%20%281%29.pdf>. (Accessed 27 April 2023).

³⁵OECD. Latest data available: 2020/2021. (Accessed 27 April 2023).

³⁶World Steel Association (2022). World Steel in Figures. Accessed at: <https://worldsteel.org/wp-content/uploads/World-Steel-in-Figures-2022.pdf>. (Accessed 27 April 2023).

³⁷OECD and World Steel Association. Latest data available: 2020/2021. (Accessed 27 April 2023).

³⁸ Ibid.

³⁹World Steel Association. 2021 Top Steel Producing Companies. Accessed at: https://worldsteel.org/wp-content/uploads/2020_2021-top-steel-producers_tonnage.pdf. (Accessed 27 April 2023).

⁴⁰Jindal Steel and Power. Annual Report 2021-22. Accessed at: https://d2lptvt2ijig6f.cloudfront.net/jindalsteelpower/post/1663761457_Annual-%20Report-%20FY22.pdf. (Accessed 27 April 2023).

⁴¹ArcelorMittal (2022). AM/NS India investor visit. Accessed at: <https://corporate.arcelormittal.com/investors/equity-investors/shareholders-events/am-ns-india-investor-visit>. (Accessed 27 April 2023).

Table 10: India's Largest Steel Producers

Company	Crude steel production (mmt)	Share of India's production	Share of global production	Main products
Tata Steel Group	30.59	25.9%	1.5%	Raw material segment: iron ore, coking coal, manganese, chromite. Steel segment: hot rolled, cold rolled, coated coil, tubes, rebar, wire rods. Energy segment: Tata Power is part of the Tata Group of companies.
JSW Steel Limited	18.59	15.7%	0.95%	Raw material segment: iron ore, coal. Steel segment: hot rolled, cold rolled, colour coated products, galvanised, galvalume, avante doors, TMT bars, wire rods, special alloy steel. Energy segment: JSW Energy is a part of the JSW Group. They also have interests in infrastructure, cement, paints, sports, and venture capital.
Steel Authority of India	17.33	14.6%	0.89%	Raw material segment: iron ore, coking coal. Steel segment: TMT bars, galvanised, wire rods, plates, railway products, wheels and axles, hot rolled, cold rolled, pipes, electrical steels, stainless steel products, semis, pig iron.
Jindal Steel and Power Limited	7.98	6.7%	0.41%	Raw material segment: iron ore, coal. Steel segment: rails, parallel flange beams and columns, plates and coils, angles and channels, wire rods, round bars, speedfloors, TMT bars, cement, fabricated sections, semi-finished. Energy segment: JSP also has interests in power, infrastructure, and construction.
AM/NS India	6.80 ⁴²	5.7%	0.35%	Raw material segment: iron ore. Steel segment: hot rolled, cold rolled, galvanised, pre-painted galvanised, pipelines.

Source: World Steel Association and company websites.

The steel market in India also has many Mini Steel Plants / Processing Units.⁴³ These are composed of production units with widely varying product range, technology, and scale of operation. These units produce either products that serves as a basic raw material to steelmaking such as pig iron or sponge iron or they produce semi-finished or intermediate steel products to be converted into other products of higher value. These for example include Sponge Iron Plants, Mini-Blast Furnace Units, Electric Arc Furnaces, Re-rolling Mills, Cold-rolling Mills and Cooling Units. These production units are generally small in size compared to integrated steel units. Not only do they play an important role in production of primary and secondary steel, but also contribute through substantial value addition in terms of quality, innovation, and cost effectiveness.⁴⁴

There are seven Central Public Sector Enterprises (CPSEs) under the administrative control of the Ministry of Steel (Steel Authority of India, Rashtriya Ispat Nigam, NMDC, MOIL, MECON, KIOCL, and MSTC). They contributed to 19.3% of Indian crude steel production in 2021, amounting to 22.8 mmt. Of the seven, only the Steel Authority of India Ltd. and the Rashtriya Ispat Nigam Ltd. are producers of steel. Several, such as the NMDC Ltd., MOIL

⁴²AM/NS Annual Report (2021). Accessed at <https://www.amns.in/storage/statutory-documents/October2022/i3li0DyGIN2FDmiD6R2H.pdf>. (Accessed 27 April 2023).

⁴³Ministry of Steel (2019). Safety Code for Iron & Steel Sector. Accessed at: <https://steel.gov.in/sites/default/files/Draft%20Framework%20Document%20for%20Safety%20Code%20for%20Iron%20%26%20Steel%20Sector%20%281%29.pdf> (Accessed 27 April 2023).

⁴⁴Ministry of Steel. Annual Report 2021-22. Accessed at: https://steel.gov.in/sites/default/files/Download_0.pdf. (Accessed 27 April 2023).

Ltd., and KIOCL Ltd. are involved in mining activities in the country and producing raw materials needed for steel production. For instance, NMDC Ltd. and KIOCL Ltd. are primarily engaged in exploring minerals and mines to produce raw materials and other value-added products for the industry, such as iron ores, manganese ores, sponge iron, iron pellets, and foundry-grade pig iron. Similarly, MOIL Ltd. is the largest producer of manganese ores in the country and manufactures electrolytic manganese dioxide and ferromanganese. MSTC along with its subsidiary Ferro Scrap Nigam provide services in disposing and recycling steel scrap and waste. MECON Ltd. is a multi-disciplinary Design, Engineering, Consultancy and Contracting organization in the field of Metals and Mining, Energy (Power, Oil & Gas), and Infrastructure, among others.⁴⁵

In 2021, 45% of India's steel production was produced via the blast furnace-basic oxygen furnace (BF-BOF) route which uses iron ore, coal, and recycled steel relatively intensely as raw materials. 27% was produced via the EAF route which uses mainly recycled steel and electricity, and 28% was produced using the induction furnace route (IF).⁴⁶

4.2 The People's Republic of China

The PRC has embraced steel production to measure its state of economic development. After coming to power and establishing the PRC, Mao Zedong started the "Great Leap Forward" campaign that was meant to transform the PRC into a great power, promoting the slogan of "Exceeding the UK, catching the USA"⁴⁷ in steel production.

After decades of state involvement, investments and subsidies, the PRC's steel production has indeed exceeded both that of the UK and the US. Today, the PRC produces and consumes more than half of the world's steel.

In 2021, 32% of the Chinese Gross Domestic Product (GDP) was represented by the industrial sector.⁴⁸ The steel industry represented 5% of the Chinese GDP in 2021⁴⁹. The importance of the steel industry is also felt at the social level, both in the PRC and worldwide, because it generates 4.2 million jobs in the PRC⁵⁰ and 6 million jobs in total globally.⁵¹ While globally, in 2022, steel production capacity increased for the fourth year in

⁴⁵ Ministry of Steel. Annual Report 2021-22. Accessed at: https://steel.gov.in/sites/default/files/Download_0.pdf. (Accessed 27 April 2023).

⁴⁶ Ibid.

⁴⁷ The Financial Times (2020). China turns to steel to galvanise post Covid economy. Available at: <https://www.ft.com/content/aec6b668-4452-4f27-a42d-ec0e83059cc9> (Accessed 15 October 2023).

⁴⁸ Statista (2022) Distribution of the gross domestic product (GDP) in PRC in 2021, by industry, Available at: <https://www.statista.com/statistics/1124008/PRC-composition-of-gdp-by-industry/> (Accessed 20 January 2023).

⁴⁹ Jonathan Woetzel, Xu Hao, Wang Xia fan and Liao Xuchang (n.d.) "中国加速迈向碳中和"钢铁篇：钢铁行业碳减排路径 ("PRC Accelerates Towards Carbon Neutrality" Iron and Steel: The Path to Carbon Emission Reduction in the Iron and Steel Industry), Available at: <https://www.mckinsey.com.cn/中国加速迈向碳中和钢铁篇：钢铁行业碳减排/> (Accessed 20 January 2023).

⁵⁰ Michael Lelyveld (2016) PRC Stalls on Steel Capacity Cuts, Available at: https://www.rfa.org/english/commentaries/energy_watch/PRC-stalls-on-steel-capacity-cuts-07252016105858.html?fbclid=IwAR0Su7gaea9uErXgSv83qIubilfnmBU9roSBV-vCpi5JcHUvhn9Jq8TzCH8 (Accessed 20 January 2023).

⁵¹ Eldar Askerov (2019) Blog – Economic impact of the global steel industry, Available at: <https://worldsteel.org/media-centre/blog/2019/economic-impact-of-the-global-steel-industry/> (Accessed 20 January 2023).

a row⁵² with a 1.2% increase from the level of 2021,⁵³ in the PRC steelmaking capacity has remained constant at around 1,147 mmt, similar to 2019.⁵⁴ Steel overcapacity has been the concern for the Chinese government for the past few years, with measures meant to address this, reflected in the stagnating capacity of the last four years.

According to an OECD report, globally, total steel production capacity in 2022 was expected to be around 2,460 mmt,⁵⁵ while in 2021 it was 2,452.7 mmt.⁵⁶ The same report stipulated that the gap between global capacity and steel production will potentially increase in 2022 to 562.9 mmt from 521.6 mmt in 2021⁵⁷. Expressed in percentages, global steel production as a share of capacity reached 77.1% in 2022, decreasing from 78.5% in 2021⁵⁸. In 2021, total global steel production was 1,951 million tonnes⁵⁹.

In the PRC, steel production was 1,032.8 million tonnes in 2021, which represents 52.9% of total crude steel production.⁶⁰ The PRC ranks first in the ranking of the largest steel producers, followed at a distance by India (118.2 mmt), Japan (96.3 mmt), the US (85.8 mmt) and Russia (75.6 mmt).⁶¹ A Chinese company, PRC Baowu Group (119.95 mmt), is placed on the first rank as the top steel-producing company in 2021. It is followed by ArcelorMittal (79.26 mmt), Ansteel Group (55.65 mmt), Nippon Steel Corporation (49.46 mmt) and Shagang Group (44.23 mmt).⁶² The PRC has around 500 steel mills and its top 10 largest steel companies account for 40% of its national steel production.⁶³ Among them are Baosteel Group, HBIS Group Steel, Hunan Valin Steel, Angang Group and Shandong Iron & Steel Group.

In the first half of the 2010s, the PRC had a problem with so-called zombie steel mills, which it later started closing, in its quest to fight pollution. Zombie mills are steel mills (usually state-owned) that stopped production but were not closed, primarily in order to avoid laying off workers, which could lead to social tensions. Hebei, the province that hosts the biggest number of steel mills (around 100) and accounts for a quarter of the PRC's

⁵²Tomohiro Hijikata (2022) Latest Developments in Steelmaking Capacity, Available at: <https://www.oecd.org/industry/ind/latest-developments-in-steelmaking-capacity-2022.pdf>, p. 8, (Accessed 20 January 2023).

⁵³Ibid, p. 8.

⁵⁴ Ibid, p. 51.

⁵⁵Ibid, p. 5.

⁵⁶The OECD Steel Committee (2021) Latest Developments in Steelmaking Capacity, Available at: <https://www.oecd.org/industry/ind/latest-developments-in-steelmaking-capacity-2021.pdf>, p. 10, (Accessed 20 January 2023).

⁵⁷Tomohiro Hijikata (2022) Latest Developments in Steelmaking Capacity, Available at: <https://www.oecd.org/industry/ind/latest-developments-in-steelmaking-capacity-2022.pdf>, p. 12, (Accessed 20 January 2023).

⁵⁸Ibid, p. 5.

⁵⁹World Steel Association (2022) World Steel in Figures 2022, Available at: <https://worldsteel.org/steel-topics/statistics/world-steel-in-figures-2022/#world-crude-steel-production-1950-to-2021> (Accessed 20 January 2023).

⁶⁰Ibid.

⁶¹Ibid.

⁶²World Steel Association (2021) 2021 Top steel-producing companies, Available at: https://worldsteel.org/wp-content/uploads/2020_2021-top-steel-producers_tonnage.pdf (Accessed 20 January 2023).

⁶³Alfred Cang (2022) How and Why PRC Is Centralizing Its Billion-Ton Iron Ore Trade, Available at: https://www.washingtonpost.com/business/energy/how-and-why-PRC-is-centralizing-its-billion-ton-iron-ore-trade/2022/07/24/7d9fdbec-0bb4-11ed-88e8-c58dc3dbaee2_story.html (Accessed 20 January 2023).

steel production, pledged in 2016 to eradicate all zombie mills.⁶⁴ Over the past few years, the number of zombie mills in the PRC has decreased.

In 2021, the PRC exported 66.2 mmt of its produced 1,032.8 mmt⁶⁵ of crude steel.⁶⁶ In 2019, domestic consumption amounted to 825.5 mmt.⁶⁷ Thus, steel is an important industry for the PRC's central and local governments and a subject frequently approached in different policies and in the Five-Year Plans (FYP).

4.3 The Russian Federation

The share of the metallurgical sector in the Russian GDP as of 2019 did not exceed 5% and the turnover of the sector accounted for 3.3% of the country's total turnover across all industries.⁶⁸ However, the sector is of strategic importance for the Russian state and other key sectors in the economy. Three primary sectors of the Russian economy – manufacturing, construction, and fuel and energy, which collectively account for 58% of the national GDP – highly depend on the metallurgical sector.⁶⁹ In addition, according to the report of the Federal State Statistics Service for 2021, 447 thousand persons were employed in metallurgical production, which also includes the steel sector.⁷⁰

At the global scale, Russia is a major supplier of steel. In 2021, Russia was ranked 5th among the top steel producing countries with a production of 75.6 million tonnes of crude steel.⁷¹ The PRC, US, India, and Japan precede Russia, with the PRC's production situated at about 57% of the world steel production (1,877.5 million tonnes).⁷²

The steel market in the Russia is currently dominated by enterprises with public and private participation. The most significant of them are Severstal,⁷³ Novolipetsk Steel (NLMK, among the top 21 steel companies in the world in 2021),⁷⁴ Magnitogorsk Iron & Steel Works ('MMK'),⁷⁵ Evraz,⁷⁶ Metalloinvest Management Company and TMK (Table 11).⁷⁷ In 2021,

⁶⁴Reuters (2017) UPDATE 3-Hebei aims to shut last 'zombie' steel mills in small victory on excess, Available at: <https://www.reuters.com/article/china-parliament-steel/update-3-hebei-aims-to-shut-last-zombie-steel-mills-in-small-victory-on-excess-idINL3N1GK1UG> (Accessed 3 April 2023).

⁶⁵World Steel Association (2022) World Steel in Figures 2022, Available at: <https://worldsteel.org/steel-topics/statistics/world-steel-in-figures-2022/#world-crude-steel-production-1950-to-2021> (Accessed 20 January 2023).

⁶⁶Ibid.

⁶⁷Ibid.

⁶⁸European Commission (2020) EU's 2020 Report on significant distortions in the economy of the Russian Federation for the purposes of trade defence investigations. Available at : [https://ec.europa.eu/transparency/documents-register/detail?ref=SWD\(2020\)242&lang=en](https://ec.europa.eu/transparency/documents-register/detail?ref=SWD(2020)242&lang=en) (Accessed 13 October 2023).

⁶⁹Khasanov. K. Bound by one purpose. Kommerant. 25.04.2019. Available at: <https://www.kommersant.ru/doc/3947600>.

⁷⁰Strategy for Development of the Metallurgical Industry in Russia for the Period till 2030, available at: <https://pandia.ru/text/81/089/58758.php>. (Accessed 27 April 2023).

⁷¹World Steel Association. World Steel in Figures. Available at: <https://worldsteel.org/steel-topics/statistics/world-steel-in-figures-2022/>. (Accessed 27 April 2023).

⁷²World Steel Association. PRESS RELEASE – December 2022 crude steel production and 2022 global crude steel production totals. Available at: <https://worldsteel.org/wp-content/uploads/December-2022-crude-steel-production.pdf>. (Accessed 17 Jan 2024).

⁷³Severstal. The official web site of the company. Available at: <https://severstal.com/eng/>. (Accessed 27 April 2023).

⁷⁴NLMK. The official web site of the company. Available at: <https://nlmk.com/ru/>. (Accessed 27 April 2023).

⁷⁵Magnitogorsk Magnitogorsk Iron and Steel Works PJSC. The official web site of the company. Available at: <https://mmk.ru/en/>. (Accessed 27 April 2023).

⁷⁶EVRAZ. The official web site of the company. Available at: <https://www.evraz.com/ru/company/>. (Accessed 27 April 2023).

⁷⁷TMK. The official web site of the company. Available at: <https://www.tmk-group.com/>. (Accessed 27 April 2023).

these six largest producers accounted for more than 90% of Russia's production of crude steel.⁷⁸ The public sector accounts for only 0.2% of metallurgical industry output. Similarly, the government's share in related industries, such as coal industry (that is represented by more than 180 enterprises) is also low and does not exceed 1%.⁷⁹

The steel sector is characterised by vertical integration along the steelmaking value chain. It includes iron ore, fuel and energy basis, modern smelting of iron and steel, and metal production.⁸⁰ The "Development Strategy of the Steel Industry for 2014-2020 and the Perspective until 2030" is one of the central legal documents, stipulating the main priorities and perspective developments in Russia's steel industry. According to the Strategy, more than 80% of production is expected to be produced by large vertically integrated companies.⁸¹

Table 11: Russia's Largest Steel Producers (2021)

Company	Crude steel production (mmt)	Global rank	Main products	Share of Russia's production	Share of global production
Novolipetsk Steel (NLMK)	17.29	21	Steel segment: hot-rolled, cold-rolled, galvanised, pre-painted and electrical steel; a variety of long products and metalware.	24%	1.01%
Magnitogorsk Iron & Steel Works (MMK)	13.59	32	Steel segment: high-strength and wear-resistant steel grades, coated, long, shaped products; steel pipes and curved sections.	18%	0.76%
EVRAZ	13.57	34	Steel segment: steel products for mechanical engineering, construction, energy.	20%	0.83%
Severstal	11.65	40	Steel segment: steel products for mechanical engineering, construction, energy.	16%	0.69%
Metalloinvest Management Company	4.9	77	Raw materials: iron ore. Steel segment: metallised products; high-quality steel products.	7%	0.28%
TMK	4.14	91	Steel segment: line pipes; large diameter pipes; stainless pipes welded industrial pipes; seamless pipes.	6%	0.21%
Mechel	3.54	103	Steel segment: flat products; long products; rail profiles; wire and wire products; forged bars and stampings; ferrosilicon.	6%	0.25%

Source: Compiled by author based on the World Steel Association and company websites.

⁷⁸World Steel Association. 2021 Top steel-producing companies. Available at: <https://worldsteel.org/steel-topics/statistics/top-producers/>. (Accessed 27 April 2023).

⁷⁹The Ministry of Energy of Russia. About the coal industry (in Russian). Available at: <https://minenergo.gov.ru/node/433>. (Accessed 27 April 2023).

⁸⁰European Commission (2020) EU's 2020 Report on significant distortions in the economy of the Russian Federation for the purposes of trade defence investigations. Available at: [https://ec.europa.eu/transparency/documents-register/detail?ref=SWD\(2020\)242&lang=en](https://ec.europa.eu/transparency/documents-register/detail?ref=SWD(2020)242&lang=en) (Accessed 13 October 2023).

⁸¹Garant. (2014). The Development Strategy of the Steel Industry for 2014-2020 and the Perspective until 2030. The Government of Russian Federation. (in Russian). Available at: <https://www.garant.ru/products/ipo/prime/doc/70595824/>. (Accessed 27 April 2023).

With US, EU and UK⁸² sanctions having come into force in 2022, production in the Russian steel sector has become more volatile. According to preliminary data of Rosstat, steel production has decreased in 2022 by more than by 5% compared to the previous year. The debt/EBITDA ratio of Russian steel makers has exceeded two times by the end of 2022.⁸³ According to the OECD, steel production was generally declining in most countries in 2022 as it was pressured by lower demand for housing and construction materials, resulting from the growth of key interest rates of the central banks and the increase in demand for coking coal to Europe for use in the energy sector.⁸⁴

However, after the initial decline during the first few months in 2022, the rate of decline in steel production had slightly slowed down by August 2022 due to a growth in demand from the construction sector. In addition, steel producing companies witnessed an increase in profitability due to cheaper access to coal in Russia.⁸⁵

Until 2022, Russian steelmakers produced significantly more than the domestic market consumed. Before 2022, about 40%–50% of Russia's steel production was exported.⁸⁶ Due to the recent sanctions, steel output could be potentially reoriented towards Russia's internal market by stimulating extra national consumption (including within the construction sector). In the future, steel production may be supported by growth in demand for steel both from the construction industry, demand from Russian railways (planning to expand the Trans-Siberian Railway), and demand generated by oil and gas companies in need of new pipelines. Moreover, exports may be stimulated by several large projects. For example, a gas hub in Türkiye is currently being considered, and the construction of Power of Siberia-2⁸⁷ to the PRC may soon begin.⁸⁸

4.4 Republic of Türkiye

Steel manufacturing is a traditional industry in Türkiye. Following Türkiye's gradual implementation of an import substitution system in the 1960s⁸⁹, the Turkish economy has increased steel exports primarily to neighbouring countries such as Iran and Iraq as well as North African countries. Following these early developments, the Turkish economy realised a major production and export boom. The steel industry has become one of the most

⁸² Mining Technology. UK imposes sanctions on major Russian steelmaker Evraz. 06.05.2022 URL:

<https://www.mining-technology.com/news/uk-sanctions-steel-evraz/>

⁸³ Zhilnikov E. PSB: Rosstat published the results of ferrous metallurgy production for September 2022, 31.10.2022 (in Russian), available at: <https://www.banki.ru/news/daytheme/?id=10974787>. (Accessed 27 April 2023).

⁸⁴ OECD (2022) Steel Market Developments, Q4 2022. Available at: <https://www.oecd.org/industry/ind/steel-market-developments-Q4-2022.pdf>. (Accessed 27 April 2023).

⁸⁵ RZD-Partner. The fall in steel production slowed down (in Russian), 23.09.2022. Available at: <https://www.rzd-partner.ru/other/news/padenie-proizvodstva-stali-zamedlilos/>. (Accessed 27 April 2023).

⁸⁶ The Prime (2022) It became known how much Russian steel is exported. 30.11.2022 (in Russian). Available at: https://1prime.ru/industry_and_energy/20221130/839004443.html. (Accessed 27 April 2023).

⁸⁷ The Power of Siberia-2 is a planned gas pipeline between Siberian gas fields and the Xinjiang Uygur Autonomous Region in western PRC. There, it can connect with the Chinese West-East gas pipeline, which will bring gas to Shanghai. Reuters (2023). Russia's Putin upbeat on Power of Siberia 2 gas pipeline to China. Available at: <https://www.reuters.com/business/energy/russias-putin-upbeat-power-siberia-2-gas-pipeline-china-2023-10-17/> (Accessed 17 October 2023).

⁸⁸ Litova E. (2022) Has the peak of the crisis for steelmakers been passed? Vedomosti. 19.10.2022 (in Russian). Available at: <https://www.vedomosti.ru/investments/articles/2022/10/19/946232-proiden-li-pik-krizisa-u-staleliteichikov>. (Accessed 27 April 2023).

⁸⁹ See, e.g., Saleh, D. (2016), An Exploratory Approach to Import Substitution Industrialization (ISI) in Turkey Available at <https://ssrn.com/abstract=4261488> or <http://dx.doi.org/10.2139/ssrn.4261488>.

developed sectors in the country and today counts as the 4th largest contributor to the Turkish economy, indicating high political relevance in economic policymaking.

Türkiye's steel industry is powered to the largest extent by scrap-fed electric arc furnace production.⁹⁰ As reported by Turkish Steel, an industry association, Türkiye currently has 26 electric arc furnace mill plants, 11 induction furnace plants and 3 basic oxygen furnace plants. 72% of steel production in Türkiye is based on steel scrap. At the same time, Turkish steelmakers continue to pursue technological developments to enhance the competitiveness of the industry in the global marketplace.⁹¹

The country is a major global producer of steel and steel products in the world and a major exporter. Türkiye already was the world's 10th largest steel producer in 2001. Steel production in Türkiye has increased significantly since, growing from 15 mmt in 2001 to 40.4 mmt in 2021. Overall, the country has become the 7th biggest producer globally and largest steel producer in Europe in 2021.⁹² The Turkish Steel Exporters' Association's data suggest Türkiye moved down to the 8th largest in the world and second largest in Europe in 2022.⁹³ Türkiye is the world's leading rebar exporter and the world's largest importer of scrap metal. In 2021, 73% of crude steel production in Türkiye was from scrap metal.⁹⁴

Growth of the industry has been driven by strong domestic consumption. Türkiye's domestic crude steel consumption has increased by 13.2% to 33.4 mmt in 2021 (YOY) and is expected to continue to grow in the medium-to-long term. Steel exports rank 3rd in total goods exports from Türkiye, accounting for some 10% of total goods exports (compared to 11% for chemicals products and 13% for the automotive industry).⁹⁵

Turkish foundries produce various kinds of alloyed or unalloyed ferrous castings. Many specialise in the production of cast parts for domestic industries. According to Turkish Steel, all steel manufacturing companies in Türkiye are privately held. Concerning the geographical distribution of the sector, the major foundries are located in Istanbul, Kocaeli, Bursa, Eskisehir, Bilecik, Izmir and Ankara. Small scale family-owned casting companies are widely spread in almost all regions across Türkiye.⁹⁶

As reported by the World Steel Association, four of the world's 113 largest steel-producing companies are based in Türkiye: Erdemir Group (rank 48; 9 mmt of annual steel production), Tösyali Holding (rank 83; 4.7 mmt), Habaş (rank 85; 4.5 mmt) and İçdaş

⁹⁰Recycling Today (2023). Turkey's tragedy spurs questions in scrap market. Available at <https://www.recyclingtoday.com/news/turkey-earthquake-steel-industry-rebuilding-ferrous-scrap-demand-prices/>. (Accessed 27 April 2023).

⁹¹Turkish Steel Exporters Association (2023). Overview of Türkiye's steel industry. Available at <https://www.cib.org.tr/en/statistics.html>. (Accessed 27 April 2023).

⁹²World Steel Exporters Association (2023). World Steel in Figures. Available at <https://worldsteel.org/steel-topics/statistics/world-steel-in-figures-2022/>. (Accessed 27 April 2023).

⁹³Turkish Steel Exporters Association (2023). Industry Key Facts and Figures. Accessed at <https://www.cib.org.tr/en/about-us-why-turkish-steel.html>. (Accessed 27 April 2023).

⁹⁴Turkish Steel Exporters Association (2023). Turkish Steel Catalogue 2022, available at <https://www.cib.org.tr/en/about-us-catalogue.html>. (Accessed 27 April 2023).

⁹⁵Turkish Steel Exporters Association (2023). Overview of Türkiye's steel industry. Available at <https://www.cib.org.tr/en/statistics.html>. Also see Turkish Steel Catalogue 2022, available at <https://www.cib.org.tr/en/about-us-catalogue.html>. (Accessed 27 April 2023).

⁹⁶Turkish Ministry of Trade (2019). Iron and Steel and Articles of Iron and Steel. Available at <https://www.trade.gov.tr/data/5b8fd5bf13b8761f041fee9b/Iron%20and%20Steel,%20Articles%20of%20Iron%20and%20Steel.pdf>. (Accessed 27 April 2023).

(rank 104; 3.5 million metric tonnes).⁹⁷ These four largest companies are vertically integrated, especially linking steel production to distribution and energy production.

Table 12: Türkiye's largest steel producers (2021)

Company	Crude steel production (million MT)	Main operations /products
Erdemir Group	9	Erdemir is the main company of the OYAK Mining Metallurgy and one of the most valuable industrial companies of Türkiye. It was established in 1960 under a special law, in order to be the first domestic producer of flat steel. Erdemir currently produces plates, hot and cold rolled, tin, chromium and zinc coated flat steel and supplies basic inputs to automotive, white goods, pipes and tubes, rolling, manufacturing, electrics-electronics, mechanical engineering, energy, heating equipment, shipbuilding, defence, and packaging industries. OYAK Mining Metallurgy own subsidiaries in mining (Erdemir Madencilik San. ve Tic. A.Ş.) and energy production (Erdemir Enerji A.Ş.)
Tosyalı Holding	4.7	Tosyalı Holding is one of the major integrated steel producers in Türkiye. The company operates several rolling mills and is well established in the flat product and welded tube markets. It owns several domestic and foreign subsidiaries and engages in several joint ventures. These include steel and energy production facilities (e.g., Tosyalı Elektrik Enerjisi Toptan Satış İth. İhr. A.Ş.). Tosyalı is one of the biggest investors in "Project-Based Incentive System" declared by President Recep Tayyip Erdoğan in May 2018. It aims to manufacture 8 million tonnes of steel including stainless steel when the planned investments are completed.
Habaş	4.5	Habaş has an annual production capacity of 4.5 million tonnes of liquid steel. It is one of the leading Turkish steel producers and has a high export performance. Having total 1,100 MW power generating capacity, Habaş is one of the outstanding electricity providers for the domestic market. Habaş has aimed to grow further in the energy market with new power plant investments. Habaş also is the leading producer of industrial and medical gases and distributor of LNG and CNG in Türkiye. Having LPG storage and filling stations, sea terminals and LPG sea transportation service, Habaş is one of the outstanding companies in the national LPG sector. Habaş LPG Group is active at five management zones to deliver countrywide bulk and packaged LPG and bulk LPG having higher propane content as fuel.
İçdaş	3.5	İçdaş has been producing construction steel and alloyed steel since 1970, is the second biggest steel producer of Türkiye with its production capacity. İCDAS ranked in the 6th place among the 500 Biggest Industrial Enterprises of Türkiye (in 2014). İçdaş operates several electric-arc furnaces and rolling mill facility. It also operates facilities in energy production (İçdaş Power Plant run by coal), logistics and port operations (agency services and seaway transportation. The company is also operating a shipyard specialised in producing cargo vessels.

Source: company information⁹⁸

⁹⁷World Steel Association (2023). 2021 Top steel-producing companies. Available at https://worldsteel.org/wp-content/uploads/2020_2021-top-steel-producers_tonnage.pdf. (Accessed 27 April 2023).

⁹⁸Erdemir Group: <https://www.erdemir.com.tr/homepage/>, Tosyalı Holding: <https://www.tosyaliholding.com.tr/en>, Habaş: <https://www.habas.com.tr>, İçdaş: <https://www.icdas.com.tr/pages/5752/3725/f/en-US/History.aspx>. (Accessed 27 April 2023).

5. Governance

5.1 Republic of India

The steel sector in India is governed by the Ministry of Steel. The main functions of the Ministry of Steel include:

- ◆ Co-ordination and planning of the growth and development of the Iron and Steel Industry in the country (including Re-rolling Mills, Alloy Steel, and Ferro Alloy Industries, Refractories) both in the Public and Private Sectors;
- ◆ Formulation of policies to address production, pricing, distribution, import and export of iron & steel, ferro alloys and refractories; and
- ◆ Development of input industries relating to iron ore, manganese ore, chrome ore and Refractories etc., required mainly by the steel industry.

Based on the vision of the Ministry of Steel, the development of the steel sector in India is guided by the National Steel Policy.⁹⁹ Currently, the National Steel Policy 2017 is in effect. Prior to this, the National Steel Policy 2005 was the governing policy guiding the development of the steel sector in India¹⁰⁰. The long-term goal of the policy was for India to have a modern and efficient steel industry of world standards, catering to diversified steel demand. The focus of the policy was to achieve global competitiveness not only in terms of cost, quality, and product-mix but also in terms of global benchmarks of efficiency and productivity. In its SWOT analysis it saw the PRC becoming a net exporter, protectionism in the West, and dumping by competitors are potential threats to the industry. Although exports were seen as a potential opportunity, more focus was placed on the growing domestic demand for steel and the unexplored rural market in India. For exports, a growth rate of around 13% per annum was envisaged up to 2019–20.

The current policy aims to create a technologically advanced and globally competitive steel industry to promote economic growth in the country. Some key objectives of the policy include self-sufficiency in steel production in India, domestic and cost-efficient availability of iron ore, coking coal, and natural gas, increased per capita steel consumption to 160kgs by 2030–31, a wider presence globally in value added/high grade steel, increased investments in overseas acquisitions of raw materials, and to domestically meet the entire demand of high-grade automotive steel, electrical steel, special steels and alloys for strategic applications by 2030–31. The steel policy is focused more on increasing domestic demand of steel rather than widening its global presence because of weak global economic prospects and a large idle steel capacity in the world.

The key competitive advantages of the industry, as identified in the Policy, come from the indigenous availability of high-grade iron ore and non-coking coal – the two critical inputs

⁹⁹Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf. (Accessed 27 April 2023).

¹⁰⁰ Ministry of Steel (2005). National Steel Policy 2005. Accessed at: https://minerals.jharkhand.gov.in/Application/uploadDocument/Content/Nation_Steel_Policy_2005.pdf. (Accessed 27 April 2023).

of steel production. It has a vast and rapidly growing market for steel, a strong MSME sector, and a relatively young workforce which offers competitive labour costs.¹⁰¹

At the same time, according to the Policy, several initiatives, mainly affordable housing, expansion of railway networks, development of a domestic shipbuilding industry, opening up of the defence sector for private participation, and the anticipated growth in the automobile sector, are expected to create significant demand for steel in the country.¹⁰² In order to take advantage of these developments, the government has planned to encourage usage of steel in all buildings and structures by emphasizing the lower lifecycle costing while evaluating projects rather than looking at just the upfront cost in isolation. The rationale for this is that steel structures are highly cost effective and have shorter lead time for erection and have greater durability with high design comfort. The Government also chalked out an extremely ambitious plan of Housing for all by 2022 for which the Ministry will take the necessary measures to promote the increased usage of steel intensive structures/designs. Necessary efforts are also planned in conjunction with Ministry of Road, Transport & Highways to evaluate the replacement benefits of the existing bridges, pavements and crash barriers with steel bridges, steel reinforced pavements and steel crash barriers respectively.

Key weaknesses of the Indian steel industry, as identified in the Policy, are the limited availability of some of the essential raw material such as high-grade lumpy manganese ore, chromite, coking coal, steel grade limestone, refractory raw material, nickel, and ferrous scrap. More recently, cancellations of iron ore and coal mine allocations, delays in land acquisition, environmental clearances, and higher costs of logistics and raw materials have also led to adverse impacts for the steel industry. To address these challenges in the availability of raw materials, the government has planned to promote intensive and deeper exploration to augment resource base, encourage acquisitions and development of global projects, allocate resources exclusively to the steel sector, and develop steel clusters.

5.2 The People's Republic of China

As discussed in 3.1, steel has a central place in different policies and in the Five-Year Plans. In 2009, the State Council of the PRC launched the "Steel and Iron Industry Restructuring and Revitalization Plan." The Plan underlines the important role that the steel industry plays in its national economy and aims to tackle several problems, including overcapacity, the lack of advanced production technology or high-end product development, the suboptimal industrial layout as well as resources and environmental conservation.¹⁰³

In 2010, the PRC's Ministry of Industry and Information Technology (MIIT) issued the "Standard Conditions of Production and Operation of the Steel Industry." According to this document, the steel enterprises should meet certain standard conditions regarding production, environmental protection, quality, resources utilisation, technology and

¹⁰¹Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf. (Accessed 27 April 2023).

¹⁰²Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf. (Accessed 27 April 2023).

¹⁰³The Central People's Government of the People's Republic of PRC (2009) 钢铁产业调整和振兴规划 (Iron and Steel Industry Adjustment and Revitalization Plan), Available at: http://www.gov.cn/jwqk/2009-03/20/content_1264318.htm (Accessed 20 January 2023).

equipment and safety measures.¹⁰⁴ If they do not meet these standard conditions, the steel companies will have to gradually withdraw from steel production and they will not be granted “new projects, allocate[d] new mine resources and land, issue[d] new product production licenses, and provide[d] credit support.”¹⁰⁵ The 12th FYP (2011–2015) outlined that the PRC should “focus on the development of steel for express railway, high-grade non-oriented silicon steel, high magnetic induction-oriented silicon steel, high strength machine steel and other key steel varieties and support such technical development efforts as non-blast furnace iron making, clean steel production and integrated resources utilisation.”¹⁰⁶

In the 13th FYP (2016–2020), the objectives regarding the steel industry were related to the optimisation of the industry. Tackling overcapacity is one of the goals of the Chinese government for the steel industry, thus it “encourages more of the PRC’s equipment, technology, standards, and services to go global by engaging in international cooperation on production capacity and equipment manufacturing through overseas investment, project contracting, technology cooperation, equipment exporting, and other means, with a focus on industries such as steel, nonferrous metals, building materials, railways, electric power, chemical engineering, textiles, automobiles, communications, engineering machinery, aviation and aerospace, shipbuilding, and ocean engineering.”¹⁰⁷

After the release of the 13th FYP, the PRC’s MIIT elaborated a special plan for the steel industry. Titled the “Steel Industry Adjustment and Upgrading Plan for 2016–2020”, the plan aimed to reduce overcapacity, upgrade the steel production, restructuring and reorganising the industry by setting up a few large companies called “national champions”, creating a better financial environment for the iron and steel companies, reducing crude steel production capacity by 100-150 million tonnes, diversifying the location of steel enterprises, reducing the debt ratio, increasing innovation, improving the quality of the products, and creating smarter and greener production.¹⁰⁸ In the 14th FYP (2021–2025), the most recent plan, the Chinese government approaches the steel production and consumption from a sustainability angle in order to reduce air pollution. The Chinese government aims to “implement clean production transformations for 850 million tonnes of cement clinker, 460 million tonnes of coking capacity, and about 4,000 kilns in the non-ferrous industry, complete ultra-low emission transformation for 530 million tonnes of steel production capacity, carry out governance and transformation for volatile organic compounds in key industries such as petrochemicals, chemicals, coatings, medicine, and packaging and printing, and promote the clearing of disaggregated coal in key areas for air

¹⁰⁴The Central People’s Government of the People’s Republic of PRC (2010) 钢铁行业生产经营规范条件(Standard conditions for production and operation of the iron and steel industry), Available at: http://www.gov.cn/jwqk/2010-07/13/content_1652715.htm (Accessed 20 January 2023).

¹⁰⁵Ibid.

¹⁰⁶Asia Pacific Energy (n.d.) Transforming growth pattern, create a new scenario for scientific development, Available at: <https://policy.asiapacificenergy.org/sites/default/files/12th%20Five-Year%20Plan%20%282011-2015%29%20for%20National%20Economic%20and%20Social%20Development%20%28EN%29.pdf>, p.8, (Accessed 20 January 2023).

¹⁰⁷ Compilation and Translation Bureau, Central Committee of the Communist Party of PRC (2016) The 13th Five-year Plan for Economic and Social Development of the PRC, Available at: <https://en.ndrc.gov.cn/policies/202105/P020210527785800103339.pdf>, p.142, (Accessed 20 January 2023).

¹⁰⁸ European Commission (2017) Commission Staff Working Document on Significant Distortions in the Economy of the PRC for the Purposes of Trade Defence Investigations, Available at: <https://bccci.net/wp-content/uploads/2017/12/China-Economic-DISTORTIONS.pdf>, (Accessed 20 January 2023).

pollution prevention and control.”¹⁰⁹ Creating the “perfect” blueprint to implement a cleaner and sustainable steel industry will be an important task for the Chinese government during the next years. Added to the PRC’s “double carbon”¹¹⁰ goal, this task will be the main concern of the Chinese government.

Compared to the 13th FYP’s resolutions for the steel industry, which referred to the sector as “an important, fundamental sector of the Chinese economy, a national cornerstone,”¹¹¹ the 14th FYP approached the steel industry through a sustainability lens. It aims to reduce even more steel capacity. The ferrous industry is one of the biggest polluters, accounting for about 15% of the PRC’s greenhouse emissions.¹¹² In 2021, the PRC’s crude steel production was around 1,032.8 mmt, down by 35 mmt from 2020, which is a reduction of around 3%.¹¹³ On the same note, in the January-June 2022 period, the PRC reduced its crude steel production by 6.5% compared with the same period in 2021.¹¹⁴ In January 2022, the MIIT, the National Development and Reform Commission, and the Ministry of Ecology and Environment jointly issued the “Guiding Opinions on Promoting the High Quality Development of the Iron and Steel Industry” which states that between 2021–2025 (the 14th FYP), “The PRC’s steel industry still faced problems, such as excess capacity pressure, insufficient industrial safety assurance capacity, low levels of green and low-carbon development, and low industrial concentration.”¹¹⁵ At the same time, the guidelines see the iron and steel industry as “an important basic industry of the national economy, an important support for building a modern and powerful country, and an important field for realizing green and low-carbon development.”¹¹⁶ Thus, the guidelines specify that “The PRC’s iron and steel industry aims to basically form a high-quality development pattern featuring reasonable layout and structure, stable supply of resources, advanced technical equipment, high quality products and outstanding brands, high use of artificial intelligence, strong global competitiveness, as well as green, low-carbon, and sustainable development by 2025.”¹¹⁷

¹⁰⁹ Center for Security and Emerging Technology (2021) Outline of the People’s Republic of PRC 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035, Available at: <https://cset.georgetown.edu/publication/china-14th-five-year-plan/>, p. 97, (Accessed 20 January 2023).

¹¹⁰ Proclaimed in 2020 at the UN by Xi Jinping, the “double carbon” objectives seek to reduce pollution by using green and low-carbon elements in order to achieve carbon neutrality by 2060.

¹¹¹ European Commission (2017) Commission Staff Working Document on Significant Distortions in the Economy of the PRC for the Purposes of Trade Defence Investigations, Available at: [Commission Staff Working Document On Significant Distortions In The Economy Of The People’s Republic Of China For The Purposes Of Trade Defence Investigations \(bccci.net\)](https://ec.europa.eu/economy_finance/commission-staff-working-document-on-significant-distortions-in-the-economy-of-the-peoples-republic-of-china-for-the-purposes-of-trade-defence-investigations-bccci-net_20170510_en.pdf), (Accessed 20 January 2023).

¹¹² Reuters (2022) PRC to keep 2022 crude steel output lower than last year’s level, Available at: <https://www.reuters.com/article/PRC-steel-output-idUSKCN2MB05W> (Accessed 20 January 2023).

¹¹³ Xinhua (2022) PRC’s steel output declines in 2021, Available at: <https://english.news.cn/20220110/e5948ea1ff3c454b85f86e4430360de1/c.html> (Accessed 20 January 2023).

¹¹⁴ Vadim Kolisnichenko (2022) PRC reduced steel production by 6.5% in H1 2022, Available at: <https://qmk.center/en/news/PRC-reduced-steel-production-by-6-5-in-h1-2022/> (Accessed 20 January 2023).

¹¹⁵ Jungseok Choi, Woohyoung Kim and Seokkyu Choi (2022) The Economic Effect of the Steel Industry on Sustainable Growth in PRC—A Focus on Input–Output Analysis, Available at: <https://www.mdpi.com/2071-1050/14/7/4110>, p. 1, (Accessed 20 January 2023).

¹¹⁶ Ministry of Industry and Information Technology of the PRC (2022) 三部门关于促进钢铁工业高质量发展的指导意见 (Guiding Opinions of the Three Departments on Promoting the High-quality Development of the Iron and Steel Industry), Available at: https://www.miit.gov.cn/jgsj/ycls/qt/art/2022/art_368e1aae99704e9281a618dc73c046f7.html (Accessed 20 January 2023).

¹¹⁷ National Development and Reform Commission of PRC (2022) PRC issues roadmap for high-quality development of iron and steel industry, Available at: https://en.ndrc.gov.cn/news/mediarousources/202203/t20220325_1320408.html (Accessed 20 January 2023).

Apart from the most recent official documents like the 14th Five-Year Plan and “Guiding Opinions on Promoting the High-Quality Development of the Iron and Steel Industry,” the Chinese government is basing its steel industry on acts such as “Policies for Development of Iron and Steel Industry” which was adopted in 2005.

The law acknowledges that the PRC is an important producer and consumer of steel and that “the iron and steel industry is an important basic industry of the national economy, a supporting industry for realising the industrialisation and an intensive industry in technologies, capital, resources and energy.”¹¹⁸ More recently, in 2021, the PRC adopted some policies regarding the steel industry in its quest to reduce pollution. One of the policies stipulates cancelling VAT rebate rates for the export of several steel products like stainless steel, wire rod, hot rolled and cold rolled sheet.¹¹⁹ This will affect the production and export of steel and may “redirect the additional volume from exports to the domestic market, bringing downward pressure on high steel prices.”¹²⁰ Another policy cancels import tariffs for crude steel, pig iron, recycled steel raw materials, ferrochrome, and other products.¹²¹ This measure helps steelmakers to acquire cheaper raw materials and makes them less vulnerable to (volatile) iron ore market prices.¹²²

At the subnational level, there is the case of Tangshan, the PRC’s biggest steelmaking hub, which is located near Beijing, in the Hebei province. Tangshan is known for its steel production, but also for its high levels of pollution, which the central government wants to curb.¹²³ The Tangshan government announced recently, through a guideline draft for 2022, that “there will be no more direct government intervention in local steel production.”¹²⁴ While the Tangshan municipality will not play a direct role in limiting steel production anymore, it aims at implementing “environmental protection measures, capacity swaps and industry consolidation, a move that encourages emissions control and aligns with the PRC’s decarbonisation drive.”¹²⁵ In the past, the government required Tangshan’s five biggest steel enterprises to reduce the emissions of their daily production by 50%, but starting with 2021 the ratio dropped to 30% because they have passed the evaluation of ultra-low emission transformation.¹²⁶ The other steel enterprises were tasked with a percentage reduction of 20%.¹²⁷

¹¹⁸AsianLII (2005) Policies for Development of Iron and Steel Industry, Available at: <http://www.asianlii.org/cn/legis/cen/laws/pfdoiasi501/> (Accessed 20 January 2023).

¹¹⁹PR Newswire (2021) PRC Makes Policy Changes to Curtail Crude Steel Production: Beroe Inc., Available at: <https://www.prnewswire.com/news-releases/PRC-makes-policy-changes-to-curtail-crude-steel-production-beroe-inc-301317109.html> (Accessed 20 January 2023).

¹²⁰Ibid.

¹²¹Ibid.

¹²²Ibid.

¹²³Reuters (2021) PRC environment minister urges crackdown on steel mills' illegal production, Available at: <https://www.reuters.com/article/us-prc-tangshan-steel-idUSKBN2B407Q> (Accessed 20 January 2023).

¹²⁴S&P Global (2022) PRC's key steel hub policy set to lead to long-term decline in steel output, Available at: <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/022522-PRCs-key-steel-hub-policy-set-to-lead-to-long-term-decline-in-steel-output> (Accessed 20 January 2023). Also see CSPG (2022). China's Key Steel Hub Policy Set to Lead to Long-term Decline in Steel Output. Accessed at <http://si.cnspipes.net/news/china-s-key-steel-hub-policy-set-to-lead-to-lo-55690217.html>

¹²⁵Ibid.

¹²⁶Global Times (2021) Tangshan reportedly to ease emission restrictions on steel production, Available at: <https://www.globaltimes.cn/page/202106/1225045.shtml> (Accessed 20 January 2023).

¹²⁷Ibid.

Despite this environmental commitment, Tangshan's municipal government continues to develop the steel sector. In 2022, it signed three new steel projects valued at \$8 billion, with a capacity of 20 million mt.¹²⁸ There is no detailed information publicly available about direct and indirect state aid measures.

With respect to the structure of Chinese steelmakers, currently the PRC's steel industry is not very well organised, and "the market concentration isn't very high, with lots of enterprises decentralisation, low level of socialisation and specialisation, lack of large enterprises that can lead the healthy development of the industry which leads to prominent problems such as repeated construction, overcapacity, and distorted competition, and will potentially result in long-term overcapacity."¹²⁹ An analysis by S&P indicates that mergers and acquisition activities in the Chinese steel industry increased in 2021, raising the share of the PRC's five largest steelmakers from 26% to 30% of the country's total steel production.¹³⁰ As concerns the top 10 steel producers, production data indicate that they together accounted for about 43% of total crude steel production in 2021.¹³¹

A large share of the Chinese steelmaking companies is represented by SOEs. In the global top 10 steel producing companies, 6 are Chinese, of which 4 are SOEs. Out of the top 50 steel companies, 26 are Chinese, of which 16 are SOEs, while 10 are private companies.¹³²

The involvement of SOEs is important as it may lead to significant market distortions, which are, however, very difficult to estimate due to lacking data about government support and ownership structures.¹³³ As the steel industry is one of the strategic industries, a government may be inclined to offer aid or other types of preferential treatment to SOEs, unlike private companies in competitive markets. Both the central and local governments tend to offer more state aid to SOEs than to private companies, which have generally suffered from harsher operating conditions in the PRC. In addition, Chinese law and other Chinese institutions also favour SOEs, which have priority over private companies, including

¹²⁸Steel Orbis (2022) Tangshan Plans to Build Three Steel projects with just under 20 million mt Capacity, Available at: <https://www.steelorbis.com/steel-news/latest-news/tangshan-plans-to-build-three-steel-projects-with-just-under-20-million-mt-capacity-1258726.htm> (Accessed 20 January 2023).

¹²⁹Pian Feng, Yao Xue and Pang Shihua (2020) Comparative Study on Industrial Concentration Degree of PRC, Japan, USA, Korea Steel Industry, Available at: https://www.e3s-conferences.org/articles/e3sconf/pdf/2021/11/e3sconf_netid2021_02002.pdf, p. 1, (Accessed 20 January 2023).

¹³⁰S&P Global (2021). Analysis: China's steel industry consolidation gathers pace, to aid output and emission cuts. Accessed at <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/metals/090721-analysis-chinas-steel-industry-consolidation-gathers-pace-to-aid-output-and-emission-cuts>. (Accessed 27 April 2023).

¹³¹Statista (2023). Leading 10 steel manufacturers in mainland China in 2021, based on crude steel production volume. Accessed at <https://www.statista.com/statistics/1069961/china-leading-steelmakers-based-on-production-volume/>

¹³²Data calculated by the author based on the following list: World Steel Association (2021) 2021 Top steel-producing companies, Available at: https://worldsteel.org/wp-content/uploads/2020_2021-top-steel-producers_tonnage.pdf (Accessed 20 January 2023). It should be noted that some private companies might have minority state owned share

¹³³ See, e.g., Monopolkommission (2020). *Chinese state capitalism: A challenge for the European market economy*. Available at https://www.monopolkommission.de/images/HG23/Main_Report_XXIII_Chinese_state_capitalism.pdf. Also see OECD (2021). *Measuring distortions in international markets - Below-market finance*. Available at [https://one.oecd.org/document/TAD/TC\(2020\)5/FINAL/En/pdf](https://one.oecd.org/document/TAD/TC(2020)5/FINAL/En/pdf).

preferential access to credit, low-interest loans, and various financial incentives.¹³⁴ For example, between 2008 and 2015, some local Chinese governments offered subsidies to their local steel companies to avoid an increase of the unemployment rate if these companies were to lay off employees or go bankrupt.¹³⁵ Moreover, by controlling numerous SOEs, a state can facilitate consolidation by merging different companies, something that has happened often in the PRC. At the same time, SOEs may prioritise political and social objectives over purely market-driven considerations, which further results in inefficient resource allocation and investment decisions that are not solely based on market demand and profitability. Finally, government support to SOEs can lead to price distortions, which may hinder the entry and growth of private competitors, thus limiting competition and innovation in the market.

The PRC's steel producers are highly vertically integrated.¹³⁶ Both SOEs and private companies tend to operate on multiple levels of production. For example, Baowu (the former Baoshan Iron and Steel Group Corporation), the world's largest steel producer, started in 1998 a horizontal integration with the acquisition of Shanghai Metallurgical Holding Group Corporation and Shanghai Meishan Group. Thus, Baoshan became Shanghai Baosteel Group Corporation. Thereafter, it invested into vertical integration, by expanding its production capacity and acquiring related industries along the supply chain.¹³⁷ Wuhan Iron and Steel Corporation (WISCO) is another large Chinese steel company whose business activities go beyond steel. WISCO is also involved in technology-intensive industrial activities and international trade.¹³⁸ In 2016, Baosteel Group merged with WISCO.¹³⁹

The global iron and steel market size was valued at \$1,538.72 billion in 2021¹⁴⁰ and it is expected to rise between 2022–2023 by 5.1% annually¹⁴¹ due to the increased demand in construction. The PRC is still the leading country in the production and consumption of steel products and this status may not change substantially in the medium term as the PRC will continue the development of cities as well as industrial and transportation infrastructure.

¹³⁴Mariko Watanabe (2021) Competitive Neutrality of State-owned Enterprises in PRC's Steel Industry: Causal Inference on the Impacts of Subsidies, Available at: <https://deliverypdf.ssrn.com/delivery.php?ID=761026119090109093081064070105089007060032006019028017122099069005121014024126018093026012049028000097038074103090025108125005005055092013072121106010118108116073001046008010006090000066080120020127116070024030122001019084064091090003080081103126112031&EXT=pdf&INDEX=TRUE>, p. 7, (Accessed 20 January 2023).

¹³⁵Ibid, p.8.

¹³⁶Loren Brandt, Feitao Jiang, Yao Luo, and Yingjun Su (2022) Ownership and Productivity in Vertically Integrated Firms: Evidence from the Chinese Steel Industry, Available at: <https://direct.mit.edu/rest/article-abstract/104/1/101/97674/Ownership-and-Productivity-in-Vertically?redirectedFrom=fulltext>, p.11, (Accessed 20 January 2023). (Accessed 27 April 2023).

¹³⁷Ibid.

¹³⁸Runhui Lin, Jean Jinghan Chen and Li Xie (2020) Corporate Governance of Chinese Multinational Corporations, Available at: <https://link.springer.com/book/10.1007/978-981-15-7405-4>, p.114, (Accessed 20 January 2023).

¹³⁹Wikipedia (n.d.) Wuhan Iron and Steel Corporation, Available at: https://en.wikipedia.org/wiki/Wuhan_Iron_and_Steel_Corporation (Accessed 20 January 2023).

¹⁴⁰Grand View Research (2022) Iron And Steel Market Size, Share & Trends Analysis Report By Application (Building & Construction, Automotive & Transportation, Heavy Industry, Consumer Goods), By Region, And Segment Forecasts, 2022 – 2030, Available at: <https://www.grandviewresearch.com/industry-analysis/iron-steel-market> (Accessed 20 January 2023).

¹⁴¹Ibid.

5.3 The Russian Federation

Historically the steel sector has been a beneficiary of industrial policy measures by the Russian government. Before the Covid-19 crisis and Russia's invasion of parts of Ukraine, several federal laws and programs had been introduced to support Russian steelmakers.

The Federal Law on Industrial Policy in the Russian Federation is the central document outlining the main priorities of the governmental policy.¹⁴² The provisions of the Federal Law are operationalised by a set of the National Programs and Subprograms. The State Program on Development of Industry and Increasing its Competitiveness was introduced on 15 May 2014, outlining several priorities for industrial development.¹⁴³ The program is based on nine priority subprograms.^{144,145} The priorities of the 4th subprogram "Development of the Production of Traditional and New Materials" also cover the metallurgical industry, which is considered by the government to be one of the main providers of the resources for Russian manufacturing industries.¹⁴⁶ As a priority, the metallurgical industry is intended to deliver the products to the civil industries and to foreign markets. It also aims to stimulate the production and consumption of high-technological products.

The main program was intended to be financed by federal budget and consolidated regional budgets accumulating more than RUB 2 trillion (/ \$ 24.05 billion) for the period of 2020–2023.¹⁴⁷ The budget of the 4th subprogram in the years 2020–2023 was agreed at about RUB 4 billion (/ \$ 48.1million).¹⁴⁸ However, information on allocation of these funds is not detailed enough to show exactly how much support is/was granted to support individual steelmakers or which parts of the steel production value chain benefitted from government support. The available financial support of the program can take several forms, including

¹⁴²Federal Law N.o 488-FZ of 31 December 2014 "On Industrial Policy in the Russian Federation", available at: <http://base.garant.ru/70833138/>. (Accessed 27 April 2023).

¹⁴³The Government of the Russian Federation. The State program "Development of industry and increase of its competitiveness" (as amended on 06.10.2022). Available at: <http://government.ru/rugovclassifier/862/events/>. (Accessed 27 April 2023).

¹⁴⁴ The Government of the Russian Federation. Decision No. 66 of January 28, 2021, on amendments to the state program of the Russian federation "Development of industry and increasing its competitiveness". Available at: <https://rulings.ru/government/Postanovlenie-Pravitelstva-RF-ot-28.01.2021-N-66/>. (Accessed 27 April 2023).

¹⁴⁵"Development of transport and special engineering", "Development of production of means of production", "Development of light and textile industries, folk art crafts, children's goods industry", "Development of production of traditional and new materials", "Assistance in the implementation of investment projects and support for manufacturers of high-tech products in civilian industries", "Promotion of scientific research and experimental development in civil industries", "Development of industrial infrastructure and infrastructure to support activities in the industry", "Development of a system of technical regulation, standardization and ensuring the uniformity of measurements", "Liquidation of consequences activities of storage facilities and facilities for the destruction of chemical weapons in the Russian Federation".

¹⁴⁶ The Government of the Russian Federation. *Decree of the Government of the Russian Federation of March 29, 2019, No. 355-23*. Available at: <http://government.ru/docs/all/121475/> (Accessed 24 July 2023).

¹⁴⁷ The Government of the Russian Federation. Development of industry and increasing its competitiveness" GP – 16 (in Russian), available at: <https://ach.gov.ru/upload/iblock/007/00722c93cbd60321d51ac5f23dc156a0.pdf>.

¹⁴⁸"Development of industry and increasing its competitiveness" GP – 16. Available at: <https://ach.gov.ru/upload/iblock/007/00722c93cbd60321d51ac5f23dc156a0.pdf> (in Russian). (Accessed 27 April 2023).

R&D subsidies,¹⁴⁹ subsidies to interest rate payments on investment loans,¹⁵⁰ subsidies of interest payments on loans aiming at increasing the working capital,¹⁵¹ financial support in the form of tax and fees exemptions.¹⁵²

Some measures of governmental policy relevant to the program and the metallurgical sector are reflected in a wide range of legal acts of the Russian Ministry of Industry and Trade, including limiting the import of metal products, stimulating exports of products, protecting Russian exporters from competition in foreign markets, and reducing the dependence of Russian metallurgical enterprises on the import of raw materials.¹⁵³

The program also allocates financial resources to support seven federal projects, which are part of four national projects.¹⁵⁴ In particular, the program provides for the implementation of certain activities on the territory of the Far Eastern Federal District, including the territory of the Chukotka Autonomous District.

The Development Strategy of the Steel Industry for 2014–2020 and the Perspective until 2030 has also become a key legal guideline for the steel industry.¹⁵⁵ According to this strategy, the development of ferrous metallurgy is expected to stimulate the development of metal-consuming industries and expected to promote investments in associated

¹⁴⁹The Government of the Russian Federation. Government Decree N.o 1312 of 30 December 2013, "on the Approval of the Rules for the Provision of Subsidies from the Federal Budget to Russian Organizations for the Compensation of Part of the Costs of Research and Development in Priority Areas of the Civil Industry as Part of the Implementation of Complex Investment Projects by such Organizations" (in Russian). Available at: <http://ivo.garant.ru/#/document/70555982/paragraph/1509:0>. (Accessed 27 April 2023).

¹⁵⁰ The Government of the Russian Federation. Government Decree N.o 3 of 3 January 2014, "on Approval of the Rules for the Provision of Subsidies from the Federal Budget to Russian Organizations for the Reimbursement of Part of the Cost of paying Interest on Loans received in 2014-2019 in Russian Credit Organizations and State Corporations [...]" (in Russian), available at: <http://ivo.garant.ru/#/document/70558574/paragraph/26349/doclist/0/selflink/0/context/%D0%BF%D0%BE%D1%81%D1%82%D0%B0%D0%BD%D0%BE%D0%B2%D0%BB%D0%B5%D0%BD%D0%B8%D0%B5%20%D0%BE%D1%82%20%20%D1%8F%D0%BD%D0%B2%D0%B0%D1%80%D1%8F%202014%20%D0%B3.%20%E2%84%96%203:5>. (Accessed 27 April 2023).

¹⁵¹The Government of the Russian Federation. Government Decree N.o 214 of 12 March 2015, "on Approval of the Rules for the Provision of Subsidies from the Federal Budget to Industrial Organizations in 2015-2019 to Reimburse Part of the Costs incurred in 2015-2019 for paying Interest on Loans received from Russian Credit Organizations and the State Corporation Bank for Development and Foreign Economic Affairs (Vnesheconombank), as well as in International Financial Organizations established in Accordance with International Treaties in which the Russian Federation is involved, to Replenish Working Capital" (in Russian), available at: <http://ivo.garant.ru/#/document/70889986/paragraph/16235/doclist/0/selflink/0/context/214:2>. (Accessed 27 April 2023).

¹⁵²The Government of the Russian Federation. Government Decree N.O 623 of 24 May 2017 "on the Procedure for the Formation and Maintenance of a List of Investment Projects, the Implementation of which gives the Right to Subjects of Activity in the Industry to receive Financial Support in the Form of Tax and Levies Benefits until 2025 in Accordance with Tax and Fee Legislation" (in Russian), available at: <http://ivo.garant.ru/#/document/71687260/paragraph/1/doclist/0/selflink/0/context/24%20%D0%>.

¹⁵³The website of the Ministry of Industry and Trade. Section Current Tasks (in Russian). Available at: <http://minpromtorg.gov.ru/activities/industry/otrasli/metal/>. (Accessed 27 April 2023).

¹⁵⁴"Development of transport and special engineering", "Development of production of means of production", "Development of light and textile industries, folk art crafts, children's goods industry", "Development of production of traditional and new materials", "Assistance in the implementation of investment projects and support for manufacturers of high-tech products in civilian industries", "Promotion of scientific research and experimental development in civil industries", "Development of industrial infrastructure and infrastructure to support activities in the industry", "Development of a system of technical regulation, standardization and ensuring the uniformity of measurements", "Liquidation of consequences activities of storage facilities and facilities for the destruction of chemical weapons in the Russian Federation".

¹⁵⁵The Government of the Russian Federation. Development Strategy of the Steel Industry for 2014-2020 and for the perspective until 2030, approved by the Order of the Ministry of Industry and Trade N.o 839 of 5 May 2014 "on Approval of the Strategy for the Development of ferrous Metallurgy in Russia for 2014-2020 and for the long Term until 2030 and the Strategy for the Development of non-ferrous Metallurgy in Russia for 2014-2020 and for the long Term until 2030" (in Russian). Available at <http://www.garant.ru/products/ipo/prime/doc/70595824/>. (Accessed 27 April 2023).

industries. The document details companies and the nature of investment projects, which are to be implemented during the outlined period. Investment projects are to the largest extent about new production lines and the modernisation of existing production plants. While information is provided for the total amount of expected financial investment on the basis of companies' own and borrowed funds, no information is stated for the amount of government support directed to individual projects. Relevant projects are outlined in Table 13.¹⁵⁶ Although detailed data is difficult to obtain on a company-by-company basis, the industry support measures justify a cautious analysis of the prices for steel products in the domestic market. It is very likely that beneficiary steel producers may be exporting steel at prices below the normal value in the domestic market.

¹⁵⁶ Order of the Ministry of Industry and Trade of the Russian Federation dated May 5, 2014, No. 839. Available at <https://www.garant.ru/products/ipo/prime/doc/70595824/#14000>. (Accessed 27 April 2023).

Table 13: The main investment projects of the enterprises of the metallurgical industry (relevant for the period of research)

Company name	Structure of projects	Purpose of projects	Approx. term of project implementation	Approx. volume of investments Billion RUB (USD)
OJSC "Magnezit"	To increase the production of products for RH-type degassers from melted powders (import in 2012 90%) by reconstructing the corresponding production	To increase the production of items for degassers to 7,000-8,000 tonnes a year.	2030	1 (\$12 million)
OJSC "Dinur", OJSC "BKO" and LLC "Group Magnezit"	To expand the production of functional refractories for all units, primarily for CCMs, at OAO Dinur, OAO BKO, and OOO Magnezit Group.	To increase in volumes and improvement of the range of refractories.	2027	28 (336.7 million)
JSC "Magnezit"; at JSC "BKO"; JSC "SOZ"; JSC "BOZ"; JSC "Ogneupor" (Magnitogorsk); LLC "North-West refractory", LLC "Aliter-Aksi"	To expand the production of modern unshaped refractory materials and products	To expand the production of modern unshaped refractory materials and articles made from them to 250,000 tonnes.	2025	1 (\$12 million)
OJSC "EvrazHolding" OAO NTMK	To construct a blast furnace and an oxygen-converter shop	To increase in production of metal products and vanadium slag	2017–2025	40 (\$481 million)
OJSC "MECHEL" Chelyabinsk Iron and Steel Works	To reconstruct rolling shop No. 5	To increase the production of stainless-steel cold rolled products, improving quality	2022–2024	2.2 (\$26.45 million)
OJSC "Beloretsk Metallurgical Plant"	A set of measures to replace obsolete equipment; To develop promising products	To expand the output of products with high added value	2015–2030	6.7 (\$80.6 million)
JSC "TAGMET" JSC "TMK"	To modernise auxiliary facilities and finishing of finished products	To reduce the costs and improvement of service characteristics of products	2015–2030	6.8 (\$81.8 million)
JSC "TAGMET" JSC "TMK"	To construct facilities for the production of 2.2 million tonnes of electric-welded pipes of medium and small diameter	To meet the demand for pipes for the construction industry and housing and communal services	2026–2030	1.8 (\$21.65 million)
JSC "Lysva Metallurgical Plant"	To commission capacities for the production of 3.5 million tonnes of rolled products with protective coatings - nine shops	To provide consumers with coated metal	2021–2030	45 (\$541 million)

Source: Order of the Ministry of Industry and Trade of the Russian Federation dated May 5, 2014, No. 839. Accessed at <https://www.garant.ru/products/ipo/prime/doc/70595824/#14000>.

The Strategy has also provided three scenarios for steel production development in Russia, a conservative, a moderately optimistic, and a forced development scenario. Given the current economic decline, the conservative scenario may be more likely to unfold for the Russian steel industry. In the conservative scenario it is predicted that it will be impossible to implement new long-term large-scale projects and programs, resulting in a decrease in the technological competitiveness of manufacturing industries, and a stagnation in the development of the fuel and energy industry. As a result, growth in domestic demand for steel products under this scenario would have to be guided by the development of the construction industry which, in turn, will cause the preservation of mainly long products in the production structure. The increase in capacities in the metallurgical industry will be stimulated by the reconstruction and modernisation of existing facilities.

Effects of sanctions on steel market

Sanctions have significantly impacted the steel market in the Russian Federation. Initial effects can be attributed to the ban on the export of steel produced by the Russian company Severstal to the European Union in February 2022 after the EU imposed sanctions against its owner Alexey Mordashov.¹⁵⁷ Later, the US¹⁵⁸ and UK¹⁵⁹ joined the EU sanctions.

On 15 March 2022, the European Commission announced its fourth package of sanctions against Russia. The import of Russian steel products was prohibited. Russian companies have lost revenue worth an estimated EUR 3.3 billion due to export reduction as a result of the sanctions.¹⁶⁰ According to the European Steel Association (EUROFER), in 2021 the EU imported about 3.74 million tonnes of steel products.¹⁶¹ Later the EU decision has been also supported by the government of Switzerland, which decided to ban the import of Russian iron and steel, including intermediaries.¹⁶² The ban was also supported by respective UK sanctions, which have prohibited the import of steel and iron from Russia.¹⁶³

The sectorial steel sanctions were reinforced by personal and industry-specific sanctions imposed in other sectors, such as the energy sector. Moreover, the Russian government's response to overcome the negative consequences of sanctions (in forms of subsidies and other government support) often led to further market interventions in the steel sector and will be discussed in chapters 5 and 6.

Sanctions have heavily contributed to the uncertainty in the Russian market in general and the steel market in particular. According to the forecast of the World Steel Association

¹⁵⁷REN TV. Severstal stopped deliveries of products to Europe due to sanctions (in Russian). Available at: <https://ren.tv/news/ekonomika/945824-severstal-prekratila-postavki-produktsii-v-evropu-iz-za-sanktsii>. (Accessed 27 April 2023).

¹⁵⁸Lenta. The US imposed sanctions against Severstal and its owner Mordashov (in Russian). 02.06.2022. Available at: <https://lenta.ru/news/2022/06/02/severstal/>. (Accessed 27 April 2023).

¹⁵⁹Meduza. The Great Britain included in the sanctions list Mishustin, Medvedev, Shoigu, Zakharova, Solovyov and Simonyan. 15.03.2022. (In Russian). Available at: <https://meduza.io/news/2022/03/15/velikobritaniya-vklyuchila-v-sanktsionnyy-spisok-mishustina-medvedeva-shoygu-zaharovu-solovieva-i-simonyan>. (Accessed 27 April 2023).

¹⁶⁰European Commission. Ukraine: EU agrees fourth package of restrictive measures against Russia. 15.03.2022. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1761. (Accessed 27 April 2023).

¹⁶¹RBC. The profile association estimated the volume of rolled products redirected to the eastern market at 4 million tonnes. 04.04.2022. (In Russian). Available at: <https://www.rbc.ru/newspaper/2022/04/04/6242c26f9a79474e49d2f17e>.

¹⁶²European Integration. Switzerland approved new sanctions against Russia in coordination with the EU 25.03.2022 (in Russian). Available at: <https://www.eurointegration.com.ua/news/2022/03/25/7136652/>. (Accessed 27 April 2023).

¹⁶³UK Government. The Russia (Sanctions) (EU Exit) (Amendment) (No. 8) Regulations 2022. 14.04.2023. Available at: <https://www.legislation.gov.uk/uksi/2022/452/regulation/4/made>. (Accessed 27 April 2023).

(WSA) as of April 2022, steel consumption in 2022 would fall in Russia by 20–35.1%.¹⁶⁴ However, as per Rosstat's estimates, the decline was about 5%. Moreover, according to the EIU Commodities Outlook, Russian steel sector is expected to grow 4% in 2023. The release of the wrong forecast by WSA in 2022 could be a result of overestimating the cumulative effect of the Western sanctions against Russian economy.¹⁶⁵

The decline has negatively affected some regions in Russia (like Novokuznetsk, Lipetsk, Magnitogorsk, Nizhny Tagil, Cherepovets), because more than 70% of enterprises in the Russian metallurgy industry are city-forming. They employ residents and generate income for local budgets and social funds. This explains why the current state of steel manufacturing as the structure-forming sector seriously affects the economic and social development of these regions.¹⁶⁶ The measures to address these challenges will be discussed in chapters 6 and 7.

5.4 Republic of Türkiye

In July 2019, the government of Türkiye announced its 11th Development Plan for the period 2019 to 2023. The plan lays out the development vision for the country with a long-term perspective. It is intended to serve as the basic roadmap for Türkiye's economic development.¹⁶⁷ As concerns steel production value chains, the government's main objective is to improve the production structure in the basic metals industry to produce more high value-added products, raise the variety of high value-added products, and increase the share of ore-based production methods without causing idle capacity.

The Turkish government also lays out the objective to expand both exports and export markets, prevent the imports of non-standard low-quality products, improve the domestic supply chains based on quality and size of the steel types used in strategic areas such as the defence industry, railways, mega projects, and nuclear power plants, and guaranteeing input supply.

The major objective for the mining sector is to ensure the security of raw material supply and to improve the contribution of the mines to the national economy by increasing the domestic value added by processing the minerals in the country. Importantly, the 11th development plan also includes unspecified measures to strengthen the technical and financial structures of mining firms, and to support the development and production of relevant machinery equipment. Other measures suggested by the government target energy productions and freight logistics infrastructure (additional policies are outlined in the next section).

¹⁶⁴WSA. Worldsteel Short Range Outlook April 2022. 14.04.2022. Available at: <https://worldsteel.org/media-centre/press-releases/2022/worldsteel-short-range-outlook-april-2022/>. (Accessed 27 April 2023).

¹⁶⁵ EIU. Commodities outlook 2023. Available at: https://www.eiu.com/n/campaigns/commodities-outlook-2023/?utm_source=google&utm_medium=paid-search&utm_campaign=commodities-outlook-2023&qclid=Cj0KCQiApKagBhC1ARIsAFc7Mc6Sba8IN0vW8c86fTnZz7rQ95dhCKgtxtace_5ISCjQDOADwMNH0R8aApUBEALw_wcB. (Accessed 27 April 2023).

¹⁶⁶RBC. What awaits the metallurgical regions after the sanctions (in Russian). 02.08.2022. Available at: <https://trends.rbc.ru/trends/innovation/62e7ac0f9a7947c2bb3ec4d6>. (Accessed 27 April 2023).

¹⁶⁷Decision of the Grand Assembly of Türkiye (2019). Decision on the approval of the Eleventh Development Plan (2019-2023). 18 July 2019. Available at https://www.sbb.gov.tr/wp-content/uploads/2022/07/Eleventh_Development_Plan_2019-2023.pdf. (Accessed 27 April 2023).

6. Government policies directly influencing the steel sector

6.1 Republic of India

6.1.1 Government's support measures

The National Steel Policy aims to match steel production to the anticipated pace of growth of consumption of steel, for which the government has set a target of increasing steel capacity in India to 300 million MT by 2030–2031.¹⁶⁸ At the same time, the policy wants to ensure that production follows a sustainable path of development in respect of environmental friendliness, mineral conservation, quality of steel products, use of technology and indigenous R&D efforts to ensure that the country can, over time, reach global efficiency benchmarks to become a world leader in steel production technology, as well as in production of high-end steel. To achieve these goals and objectives, the government of India has over the years introduced a variety of regulatory measures pertaining to the steel and related industries. These include preferential public procurement schemes, subsidies, export and import tariffs, export related non-tariff measures, financial grants, and trade finance schemes.

For instance, at the national level, the Government of India introduced the Domestically Manufactured Iron & Steel Products Policy (DMI&SP)¹⁶⁹ on 8 May 2017 to provide preference to domestically produced iron and steel material in Government tenders. The measure acts as an incentive for domestic production which could indirectly reduce domestic production costs and prices through higher domestic production and the exploitation of economies of scale respectively.

The policy is applicable to projects where the procurement value of iron and steel products is greater than Rs. 500,000 (approximately \$ 6,000). It covers a list of 49 manufactured products of iron and steel with a minimum prescribed value addition ranging between 20% and 50%. This requirement makes it difficult for imported steel to compete with domestic bidders for government contracts, because steel imports in India usually have lower value addition. In addition to promoting growth and development of the domestic steel industry, the policy would, according to the Ministry of Steel, also help reduce the inclination to use low quality and low cost imported steel in Government funded projects. According to estimates from the Ministry of Steel Annual Report 2021–2022, the DMI&SP has so far resulted in steel import substitution to the tune of Rs. 22,400 crores (224 million) (approximately \$ 2.7million).

Research and development in the steel sector is also high on the priority list of the Ministry of Steel. It therefore supplements R&D initiatives of the steel sector by providing financial assistance through a Government funded scheme – “Promotion of Research & Development

¹⁶⁸Ministry of Steel (2017). National Steel Policy 2017. Available at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf. (Accessed 27 April 2023).

¹⁶⁹Ministry of Steel. Annual Report 2021–22. Accessed at: https://steel.gov.in/sites/default/files/Download_0.pdf

in the Steel Sector".¹⁷⁰ Priority areas under the scheme include the development of new technologies for use of iron ore fines and non-coking coal, beneficiation of raw materials, the improvement in quality of steel produced, the development of commercially viable technology for utilisation of steel waste, and for achieving global benchmarks in productivity, quality, raw material consumption, energy consumption, water consumption, refractory consumption and reduction in GHG emissions. The budget allocated for the scheme is around Rs. 150 million per year (approximately \$1.82 million). Over the period 2017 to February 2020, 37 R&D projects valued up to Rs. 1.4 billion received support through the scheme. More recently, in 2022–23, ten R&D projects valued at Rs. 48.1 million (approximately \$583,491) received support.¹⁷¹ The organisations that received support included academic institutions such as MNIT Jaipur, BITS Pilani, and PEC Chandigarh. In addition, research laboratories such as CSIR-National Metallurgical Laboratory, CSIR-Institute of Minerals and Materials Technology, and ICAR-Indian Agricultural Research Institute also received support under this scheme. The goal of the policy is to bring R&D spending by Public and Private companies in the sector up to at least 1% of their turnover. These subsidies can, to varying extents, reduce steel manufacturers costs and reduce prices respectively. A precise assessment of the effects on production costs requires an analysis of the cost structure of the companies concerned. However, given that more than 80% of steel production costs in India are comprised of raw material, energy, and labour expenditures¹⁷² and assuming current R&D expenditures of less than 1% of total sales annually¹⁷³, the overall impact of R&D support granted to the steel sector and related institutes in India on the cost of domestic steel production is relatively low.

At the regional level, the most significant initiative has been the launch of Mission Purvodaya, which will create an Integrated Steel Hub in the eastern states in India.¹⁷⁴ Eastern states of India (Odisha, Jharkhand, Chhattisgarh, West Bengal, and Andhra Pradesh) collectively hold close to 80% of the country's iron ore, 100% of coking coal, and significant portions of chromite, bauxite, and dolomite reserves. They also have a significant locational advantage due to the presence of major shipping ports easing the setup of greenfield steel plants. The creation of the hub would require capital investments of more than \$70 billion but would lead to an incremental increase in the gross state

¹⁷⁰Ministry of Steel. Research and Development in the Iron & Steel Sector. Available at: <https://steel.gov.in/sites/default/files/R%26D%20Chapter%20for%20MoS%20Website%20Feb%202020%20update.pdf>. (Accessed 27 April 2023).

¹⁷¹ Ministry of Steel. Amount Disbursed to Grantee Organisations under the R&D Scheme "Promotion of Research & Development in Iron & Steel Sector. Available at: <https://steel.gov.in/sites/default/files/Amount%20disbursed%20under%20R%26D%20Scheme.pdf>. (Accessed 27 April 2023).

¹⁷² See Transition Zero (2022). Global Steel Production Costs - A country and plant-level cost analysis. Available at https://static1.squarespace.com/static/63d1607c35efbd5cbfee1529/t/640773e1cbf6510575740a6d/1678210020538/Global%2BSteel%2BProduction%2BCosts%2B-%2BJan2022_final.pdf. Note that the remainder, other costs, includes several items and cost categories, such as oxygen and inert gases (argon), electrodes, refractories, limestone, other fluxes, oils and acids used in rolling and finishing, and overhead costs.

¹⁷³ According to data for the period 2017–2018. Ministry of Steel (2020). Research and Development in the Steel Sector. Available at <https://steel.gov.in/sites/default/files/R%26D%20Chapter%20for%20MoS%20Website%20Feb%202020%20update.pdf>. (Accessed 27 April 2023).

¹⁷⁴Press Information Bureau, Government of India (2020). Shri Dharmendra Pradhan to launch 'Purvodaya': Accelerated development of Eastern India through an Integrated Steel Hub. Available at: <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1599007>. (Accessed 27 April 2023).

domestic product by more than \$35 billion through steel alone and create over 2.5 million employment opportunities in the region.¹⁷⁵

In addition to this, as part of India's Production Linked Incentive Scheme (PLI)¹⁷⁶, some of the country's largest steel producing and consuming states also provide their own subsidies to steel producers. These are summarised in Table 14. The magnitude of subsidies, particularly those on fixed capital investment and the reimbursement of electricity expenditures for export-oriented investment can result in a significant reduction of capital costs and plant operating costs, which lead to lower than market-based costs of domestic steel production and lower domestic prices of steel in India respectively. Trade remedy investigations could therefore examine whether and to which extent Indian steel producers and upstream input providers benefitted from these types of PLI support.

¹⁷⁵ This was the last update on the project and there has been no mention of it since in any of the major news sources either. Accordingly, the latest news on this mission is for 2020 when the mission was announced.

¹⁷⁶ Ministry of Steel and Invest India. Inside India's Production Linked Incentive Schemes: Specialty Steel. Available at: https://steel.gov.in/sites/default/files/PLI%20Steel%20Report_Final.pdf. (Accessed 27 April 2023).

Table 14: State subsidies to steel producers

State	Capital Subsidy	Interest Subsidy	Tax Reimbursement	Incentives
Maharashtra	Micro, Small and Medium-sized business: 30 - 100% of Fixed Capital Investment (FCI) for 7-10 years. Large Scale Industries (minimum eligibility): FCI Rs. 1,000 million – 7,500 million (\$12.1 million) - \$91 million) (location and level of industrial development specific). Mega industrial units (minimum eligibility): FCI Rs. 2,000 million – 15,000 million (\$24.26 million - \$182 million) (location and level of industrial development specific). Ultra-mega industrial unit (minimum eligibility): FCI INR 40,000 million.	5% p.a. (up to value of electricity bills paid every year) for specified areas under MSME project.	MSME: Gross State Goods and Service Tax paid by the unit on the first sale of eligible products billed and delivered to the same entity within Maharashtra. Large Scale Industries: 40% of the State Goods and Service Tax paid for the first sale of goods sold in Maharashtra and billed and delivered to the same entity.	Customised packaged incentive schemes for mega and ultra-mega projects.
Tamil Nadu	Fixed capital subsidy – 10-15 years. According to district and industrial unit size, ranges from 10% to 25%. Turnover based subsidy – For Mega and Ultra Mega industries; Employment >2000 jobs (1.5-1.8%); Employment >4000 jobs (1.75-2%).	5% as a rebate in the rate of interest shall be provided to Ultra Mega Projects only on actual term loans taken for the purpose of financing the project, up to Rs. 40 million (\$485,000) per annum for a period of 6 years.	State Goods and Service Tax reimbursement for final products – 100% for 15 years (must have traceable end-use in State)	Special package of incentives to entrepreneurs setting up industries in existing / new SIPCOT industrial parks in Southern districts
Gujrat	6-12% of Fixed Capital Investment depending on area of investment. Applicable for 10 years with a max limit of Rs. 400 million per annum. MSME: Capital Subsidy up to 25% of eligible loan amount up to Rs. 3,500,000 (\$42,000). 50% capital subsidy up to Rs. 7,500,000 (\$91,000) for industries practicing at least 50% waste recovery through Zero Liquid Discharge.	MSME: Up to 7% of interest levied on term loan up to INR 3,500,000 (\$42,000). per annum for a period up to 7 years.		The policy will provide support up to Rs. 50 million (\$607,000) to private companies/institutions for setting up R&D and product development centres.
Andhra Pradesh	Reimbursement of State Goods and Service Tax accrued to state or Fixed Capital Investment	3% p/a on term loans, for technology upgradation for 5 years, subject to maximum		The Government will accord customised package of

State	Capital Subsidy	Interest Subsidy	Tax Reimbursement	Incentives
	(FCI) for 5 years (whichever is lower), linked to employment. < 1000 people = 50% 1000 to 2000 = 75% > 2000 = 100%	of INR 300,000 (\$3,600) p.a., to MSME units.		incentives for mega industry status establishments.
Odisha	Capital grant to support quality infrastructure in industrial parks/clusters: ♦ 50% of the infrastructure cost with a ceiling of Rs. 100 million (\$1,200) per green field industrial park/cluster. ♦ 50% of total cost with a ceiling of INR 50 million (\$607,000) for up gradation of brown field clusters. For MSMEs: ♦ 25% subsidy for Micro and Small up to Rs. 10 million (\$121,000). ♦ 30% subsidy for Micro and Small up to Rs. 12.5 million (\$152,000) owned by Schedule Caste, Schedule Tribe, differently abled, women or technical entrepreneurs. ♦ Additional 5% for MSME units in industrially backward districts or up to Rs. 1,000,000 (\$1,200) for units engaged in recycling of E-waste, hospital waste, construction and demolition waste.	5% p/a on term loan for a period of five years, to a maximum of Rs 10 million (\$121,000)	100% State Goods and Services Tax reimbursement for a period of 7 years, to a maximum of 200% of cost of plant and machinery. For New Pioneer units for a duration of 9 years, to a maximum of 200% of cost of plant and machinery. For Anchor units for a duration of 9 years, to a maximum of 200% of cost of plant and machinery.	

Source: Ministry of Steel and Invest India. Inside India's Production Linked Incentive Schemes: Specialty Steel. Accessed at: https://steel.gov.in/sites/default/files/PLI%20Steel%20Report_Final.pdf

6.1.2 Other recent (post-Covid-19) support measures

In response to the disruptions from the Covid-19 pandemic and the rapidly changing dynamics of the 21st century, India launched the Aatma Nirbhar Bharat Abhyan (self-reliant India).¹⁷⁷ Under the initiative, several domestic industries are being strengthened with the help of incentives, subsidies, and funding support. A recent significant measure was the extension of the existing PLI scheme to ten crucial sectors of the economy, including the specialty steel sector.¹⁷⁸ The aim is to strengthen manufacturing and export capacities of domestic firms and industries to put them at the heart of global supply chains. Incentives under the scheme will be provided for a maximum period of 5 years, starting in 2023-24. The approved financial outlay over the 5-year period is Rs. 63.2 billion (\$766 million). Products chosen for the incentives include coated/plated steel products, high strength/wear resistant steel, specialty rails, alloy steel products and steel wires, and electrical steel. For a product-wise incentive outlay, maximum amounts envisioned by the Indian government are outlined in Table 15. It should be noted that Section 6.2.1 above also refers to the PLI regime but outlines different measures than those referred to in Table 15 below.

Out of 79 applications, the government has chosen 67 applications from 30 companies. New investments of close to Rs. 425 billion (\$5.1 billion) are expected.¹⁷⁹ Out of these, 57 MoUs have been signed with companies under the PLI Scheme.¹⁸⁰ Companies chosen for the scheme include Tata Steel, JSW Steel, JSPL, AMNS India and SAIL. Some of the smaller producers include Gallant Metalliks, Shyam Metalics Flat Products, and Sunflag Iron and Steel. Tata Steel has submitted applications to manufacture seven types of specialty steel products, while JSW Steel submitted for six categories. Jindal Steel Odisha, a subsidiary of Jindal Steel and Power Limited, has submitted the highest number of entries to manufacture eight types of specialty steel products. ArcelorMittal Nippon Steel (AMNS) India submitted four entries, while state-owned Steel Authority of India Limited (SAIL) has submitted the least number of applications for just two specialty steel categories.¹⁸¹ While detailed information about company-specific investments and associated government outlays is not publicly available, the ratio of total outlays available to expected investments in the specialty steel industry suggests that the Indian government under this grant scheme is prepared to provide a direct investment subsidy of 14% on average (varying across beneficiaries). Trade remedy investigations could examine whether and to which

¹⁷⁷ Indian Investment Promotion Authority (2020). Atmanirbhar Bharat Abhiyaan - Self-Reliant India. Available at <https://www.investindia.gov.in/atmanirbhar-bharat-abhiyaan>. (Accessed 27 April 2023).

¹⁷⁸ Indian Investment Authority (2020). Cabinet approves PLI Scheme to 10 key sectors. Available at https://static.investindia.gov.in/s3fs-public/2023-04/PLI_10sectors.pdf. (Accessed 27 April 2023).

¹⁷⁹ The Economic Times (2022). PLI Scheme: Government selects 67 applications from 30 companies for specialty steel

Accessed at:

https://economictimes.indiatimes.com/industry/indl-goods/svs/steel/pli-scheme-government-selects-67-applications-from-30-companies-for-specialty-steel/articleshow/96116074.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

¹⁸⁰ Tata Steel. Press Release. Tata Steel signs MoUs with the Ministry of Steel under the PLI Scheme. Available at: [https://www.tatasteel.com/media/newsroom/press-releases/india/2023/tata-steel-signs-mous-with-the-ministry-of-steel-under-the-pli-scheme/#:~:text=Production%2Dlinked%20incentive%20\(PLI\)%20Scheme%20for%20specialty%20steel%20was,up%2Dgradation%20in%20the%20steel](https://www.tatasteel.com/media/newsroom/press-releases/india/2023/tata-steel-signs-mous-with-the-ministry-of-steel-under-the-pli-scheme/#:~:text=Production%2Dlinked%20incentive%20(PLI)%20Scheme%20for%20specialty%20steel%20was,up%2Dgradation%20in%20the%20steel). (Accessed 27 April 2023).

¹⁸¹ PLI Scheme for Specialty Steel in India. List of Approved Applicants. Available at: https://plimos.meconlimited.co.in/ords/plimos/r/138/files/static/v222/Approved_Applicants.pdf. (Accessed 27 April 2023).

extent individual steel producers and upstream input providers in India benefitted from PLI-based support.

Table 15: Product-wise Incentive Outlay under the PLI Scheme

Product Category	Incentive Outlay (Rs. Million / USD)
Coated/Plated Steel Products	7,750 (\$90,981)
High Strength/Wear Resistant Steel	10,880 (\$131,000)
Specialty Rails	13,940 (\$169,000)
Alloy Steel Products and Steel Wires	13,770 (\$167,000)
Electrical Steel	12,930 (\$156,851)

Source: Ministry of Steel and Invest India. Inside India's Production Linked Incentive (PLI) Schemes: Specialty Steel. Accessed at: https://steel.gov.in/sites/default/files/PLI%20Steel%20Report_Final.pdf

6.1.3 Trade policy interventions

Import and export duties also play an important role in the development of the steel sector. In India, custom duties in the steel sector are often revised with the goal to maintain balance between the large industry players and the smaller steel producers in the market, while ensuring that the domestic steel industry has a level playing field from which to operate. For instance, on 12 August 2015, the Indian Ministry of Finance increased the import tariffs on several iron and steel bar products from 10% to 12.5% and on iron and steel flat-roll products from 7.5% to 10%.¹⁸² The measure was a move to protect domestic suppliers on account of the devaluation of its currency by the PRC and the resultant dumping of iron and steel products in India.¹⁸³ Prior to this in June of 2015, India had imposed anti-dumping duties ranging from \$ 180 to \$ 316 per tonne on imports of certain steel products from the PRC, Malaysia, and South Korea, to protect domestic producers from dumped inbound shipments.¹⁸⁴ These anti-dumping duties were supposed to be in force until 2020, and further extended into 2021, however, a spike in prices that hit the domestic steel producing small and medium-size companies led to a temporary withdrawal of duties on some steel products coming from the PRC as part of the 2021–2022 Union Budget.¹⁸⁵ Duties were also imposed in 2022 on certain stainless-steel products for a period of five years.¹⁸⁶ Customs duties were also imposed through the 2019–2020 Union Budget. The customs duty on stainless steel was hiked from 5% to 7.5%¹⁸⁷ to level the playing field for domestic producers after there were concerns of foreign exporters colluding with Indian

¹⁸²Central Board of Indirect Taxes & Customs (2015). Notification No. 45/2015. Available at: <https://www.cbic.gov.in/resources/htdocs-cbec/customs/cs-act/notifications/notfns-2015/cs-tarr2015/cs45-2015.pdf>

¹⁸³The Economic Times (2015). Indian steel imports up by 50 % in first quarter, consumption up 7.1 %. Accessed at: <https://economictimes.indiatimes.com/industry/indl-goods/svs/steel/indian-steel-imports-up-by-50-per-cent-in-first-quarter-consumption-up-7-1-per-cent/articleshow/48052921.cms?from=mdr>. (Accessed 27 April 2023).

¹⁸⁴Reuters (2015). India imposes anti-dumping duty on some steel from PRC, others. Available at: <https://www.reuters.com/article/india-steel-duty-idUSKBN00M0IN20150606>. (Accessed 27 April 2023).

¹⁸⁵Reuters (2021). India suspends anti-dumping duty on some steel products from PRC. Available at: <https://www.reuters.com/article/india-budget-steel-idUSL4N2K73I5>. (Accessed 27 April 2023).

¹⁸⁶See Ministry of Commers (2021). Final Findings Notification (Case No. ADD-SSR-24/2020). Available at: <https://www.dgtr.gov.in/sites/default/files/seamless%20tube%20pipes%20NCV.pdf>. Also see Reuters (2022). India imposes anti-dumping duty on stainless steel tube imports from PRC. Accessed at: <https://www.reuters.com/markets/asia/india-imposes-anti-dumping-duty-stainless-steel-tube-imports-PRC-2022-12-21/>

¹⁸⁷ Union Budget 2019-20. Notification No. 25/2019 –Customs. Available at: <https://www.indiabudget.gov.in/budget2019-20/doc/cen/cus2519.pdf>. (Accessed 27 April 2023).

importers to misuse the ASEAN-India Free Trade Agreement.¹⁸⁸ Due to potential economies of scale on the side of domestic producers, these import tariffs may have resulted in lower production costs and lower prices of steel in India. At the same time, due to less exposure to competition in the domestic steel market the price for steel products subject to import tariffs may still be higher than in a zero-tariff regime.

In order to boost the domestic steel industry and rein in rising steel imports, the government of India has also put to use non-tariff import measures.¹⁸⁹ Generally, tariff and non-tariff measures can incentivise local production, which, through the exploitation of economies of scale, could lead to lower prices of steel products in the domestic market and for steel exports.¹⁹⁰ The Ministry of Steel in 2015 issued a Steel and Steel Products (Quality Control) Order.¹⁹¹ It was an update to the 2012 Steel and Steel Products (Quality Control) Order and Second Order which had twenty steel products under its purview, extended to fifteen additional steel products.¹⁹² It makes it mandatory for all manufacturers of stainless-steel flat products to seek a certification from the Bureau of Indian Standards (BIS). It prohibits the manufacture, storage, sale or distribution of any stainless-steel products which do not conform to the specified standards and do not bear a Standard mark of the BIS. However, to ensure that the exports of Indian steel are not negatively affected, an exception is made for exports which conform to any other specification required by the foreign buyer. The announced order was also an attempt to curb imports of substandard steel in the country. Substandard or defective stainless-steel products which do not conform to the specified standard, are to be disposed as scrap as per the scheme of testing and inspection of the BIS.¹⁹³ This measure was considered stronger and more effective in curbing imports than the earlier moves by the government since most overseas steel producers do not meet BIS norms.¹⁹⁴

In 2018, the Ministry of Steel introduced two new orders – Steel and Steel Products (Quality Control) Order, 2018 and Stainless-Steel Products (Quality Control) Order, 2018 – to bring sixteen additional steel products under the Quality Control ambit.¹⁹⁵ Products brought under the 2021 order were targeted to ensure that the large production and import of inferior quality steel does not impact crucial sectors such as power distribution, human health and safety of infrastructure and construction. According to the Ministry of Steel Annual Report 2021–2022, during the last five years, 115 Indian Standards have been

¹⁸⁸BQ Prime (2019). Budget 2019: Government hikes customs duty on stainless steel items, alloy steel. Accessed at: <https://www.bqprime.com/union-budget-2019/budget-2019-government-hikes-customs-duty-on-stainless-steel-items-alloy-steel?> (Accessed 27 April 2023).

¹⁸⁹The Economic Times (2015). Government issues Stainless Steel Products (Quality Control) Order, 2015. Available at: https://economictimes.indiatimes.com/industry/indl-goods/svs/steel/government-issues-stainless-steel-products-quality-control-order-2015/articleshow/48297100.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

¹⁹⁰ See, e.g., OECD (2022). Subsidies, Competition and Trade, OECD Competition Policy Roundtable Background Note, Available at: <https://www.oecd.org/daf/competition/subsidies-competition-and-trade-2022.pdf>. (Accessed 27 April 2023).

¹⁹¹Government of India (2016). Steel and Steel Products (Quality Control) Order Notified by Government of India. Available at: http://cms.tn.gov.in/sites/default/files/whatsnew/SteelControlOrder_220216.pdf. (Accessed 27 April 2023).

¹⁹²Ibid.

¹⁹³Ibid.

¹⁹⁴The Economic Times (2015). Government plans to ban steel not meeting BIS approval. Accessed at: <https://economictimes.indiatimes.com/industry/indl-goods/svs/steel/government-plans-to-ban-steel-not-meeting-bis-approval/articleshow/50220636.cms?from=mdr>. (Accessed 27 April 2023).

¹⁹⁵Press Information Bureau, Government of India (2018). 16 More Steel Products Brought Under Quality Control Order Covering Overall 85-90% Steel and Steel Products. Available at: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=180154>. (Accessed 27 April 2023).

notified under the Quality Control Order covering carbon steel, alloy steel and stainless steel. This brings the total number of Indian standards covered under the Quality Control Order to 145.¹⁹⁶ Essentially, the government of India has imposed an import control on roughly 85–90% of the steel and steel products consumed in India.¹⁹⁷ Due to potential economies of scale on the side of domestic producers, this policy may have resulted in lower production costs and lower prices of steel in India. However, the impact of prices may have been offset by the effects of reduced competition which tends to result in higher prices offset by domestic producers.

Moreover, export-related measures have also been initiated in India affecting the steel and related sectors. In 2017, India made amendments to Chapter 3 of its Foreign Trade Policy 2015–2020 to remove the absolute limit of export of goods on free of cost basis by Status Holders for export promotion.¹⁹⁸ Status Holders are business leaders who have excelled in international trade and have successfully contributed to the country's foreign trade.¹⁹⁹ The goods affected under this notification are those that are subject to an export duty under the Second Schedule of the Indian Customs Act. This includes finished steel products such as bars, rods, flat rolled, wires, tubes, and pipe, unfinished steel products, as well as raw materials such as pig iron, steel scraps, iron-ores, and manganese ores.²⁰⁰

The effect of this amendment has been the removal of the limit of Rs. 10 million per year (\$121,000) for exports on free of cost exports basis for export promotion for Status Holders. Instead, the limit is revised to 2% of average annual export realisation during the preceding three licensing years.²⁰¹ Since the export of goods is allowed on a free of cost basis, no export customs duty is applicable to these goods, thereby significantly subsidising exports. At the same time, the notification states that no export incentive under any export promotion scheme will be applicable to these exports. The provisions under the Foreign Trade Policy, although initially set to expire on 31 March 2020, have been extended several times. This was in response to the requests from export promotion councils and leading exporters to continue with the current policy and undertake more consultations in view of the given volatile economic situation before formulating a new policy.²⁰²

¹⁹⁶Ministry of Steel. Annual Report 2021-22. Accessed at: https://steel.gov.in/sites/default/files/Download_0.pdf

¹⁹⁷Press Information Bureau, Government of India (2018). 16 More Steel Products Brought Under Quality Control Order Covering Overall 85-90% Steel and Steel Products. Available at: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=180154>. (Accessed 27 April 2023).

¹⁹⁸Directorate General of Foreign Trade (2018). Notification No. 28/2015-2020, Amendment in para 3.24 (j) of Chapter 3 of FTP 2015-2020. Available at: <https://content.dgft.gov.in/Website/Notification%20No.%2028%20English.pdf>. (Accessed 27 April 2023).

¹⁹⁹Directorate General of Foreign Trade. Foreign Trade Policy 2015-2020, Chapter 3. Available at: [https://content.dgft.gov.in/Website/dgftprod/f905c513-4a76-4c1d-8082-12ff616bf709/Updated%20FTP%20Chapter%203%20as%20on%2014%20Nov%202022%20\(1\).pdf](https://content.dgft.gov.in/Website/dgftprod/f905c513-4a76-4c1d-8082-12ff616bf709/Updated%20FTP%20Chapter%203%20as%20on%2014%20Nov%202022%20(1).pdf). (Accessed 27 April 2023).

²⁰⁰Central Board of Indirect Taxes & Customs. The Second Schedule – Export Tariff. Available at: https://www.cbic.gov.in/resources//htdocs-cbec/customs/cst1819-010219/sch2_exptariff_010219.pdf;jsessionid=671D9B14D14EDF1FC5D441375E1C613A. (Accessed 27 April 2023).

²⁰¹Directorate General of Foreign Trade (2018). Notification No. 28/2015-2020, Amendment in para 3.24 (j) of Chapter 3 of FTP 2015-2020. Available at: <https://content.dgft.gov.in/Website/Notification%20No.%2028%20English.pdf>

²⁰²Press Information Bureau, Government of India (2022). Foreign Trade Policy extended for six months. Available at: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1862335#:~:text=In%20view%20of%20this%2C%20it,%2C%20w.e.f.%20October%201st%20%2C%202022>. (Accessed 27 April 2023).

Other export promotion schemes for this sector, have included tax rebates, such as the 2021 Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme.²⁰³ The Scheme rebates various central, state and local duties/taxes/levies which are not refunded under other duty remission schemes for zero-rating of exports.²⁰⁴ Exporters are compensated for the non-creditable duty/tax costs (such as electricity tax, stamp duty, Mandi Fee (a fee on the sale and purchase of agricultural produce paid to state governments), tax on fuel, etc.) that are embedded in the exported goods.²⁰⁵ RoDTEP was introduced as a replacement for the Merchandise Exports from India Scheme (MEIS) which was considered by the US a subsidy in violation of WTO rules.²⁰⁶ The steel sector was only added to the Scheme in 2022 looking at signs of recession in developed markets and supply chain disruptions on account of the Russia-Ukraine conflict.²⁰⁷ The Scheme's objective is to increase the export competitiveness of the steel sector.

Trade finance schemes to support exports from the steel industry have also been used in a variety of countries, given the importance of steel in the infrastructure and construction sectors. For instance, in 2016, Exim Bank of India entered into an agreement with the Government of Tanzania to provide them with a government-supported line of credit worth \$92.18 million for financing rehabilitation and improvement of water supply system in Zanzibar.²⁰⁸ Under the agreement, out of the total credit by Exim Bank, goods and services of the value of at least 75% of the contract price shall be supplied by a seller from India. The contract price refers to the prices of the contracts issued for hiring and buying the goods and services required in the completion of the project, i.e., 75% of this price must be paid to Indian sellers in return for their services and goods. In the same year, a line of credit worth \$2 billion was also made available to the Government of Bangladesh for the purpose of various social and infrastructure development projects in the power, railways, road transportation, information and communication technology, shipping, health, and technical education sectors.²⁰⁹ Goods and services worth at least 75% of the contract price would have to be sourced from India, however this limit was reduced to 65% for civil construction projects. A similar line of credit was made available to Sri Lanka in 2017 worth \$318 million for the purpose of financing:

- ◆ procurement of rolling Stock for Sri Lanka Railway \$177 million;
- ◆ upgrading railway track from Moho-Anuradhapura-Omanthai or any other sector \$136 million; and

²⁰³Central Board of Indirect Taxes & Customs (2021). RoDTEP Scheme. Available at: [rodtep-scheme.pdf \(cbic.gov.in\)](https://cbic.gov.in/rodtep-scheme.pdf) (Accessed 19 October 2023)

²⁰⁴ Central Board of Indirect Taxes & Customs (2021). RoDTEP Scheme. Available at: [rodtep-scheme.pdf \(cbic.gov.in\)](https://cbic.gov.in/rodtep-scheme.pdf) (Accessed 19 October 2023)

²⁰⁵The Economic Times (2021). This is how RoDTEP scheme can impact exports. Available at: <https://economictimes.indiatimes.com/small-biz/trade/exports/insights/this-is-how-rodtep-scheme-can-impact-exports/articleshow/86111263.cms>. (Accessed 27 April 2023).

²⁰⁶ WTO. India – Export Related Measures (DS541). Available at: https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds541sum_e.pdf (Accessed 6 June 2023).

²⁰⁷Press Information Bureau, Government of India (2022). RoDTEP Scheme gets extended to Chemicals, Pharmaceuticals and Articles of Iron & Steel from 15.12.2022. Available at: <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1881602#:~:text=RoDTEP%20is%20based%20on%20the,exempted%20or%20remitted%20to%20exporters>. (Accessed 27 April 2023).

²⁰⁸Reserve Bank of India (2017). Exim Bank's Government of India supported Line of Credit of \$ 92.18 million to the Government of Tanzania. Available at: <https://www.rbi.org.in/commonperson/English/Scripts/Notification.aspx?Id=2465>. (Accessed 27 April 2023).

²⁰⁹Reserve Bank of India (2016). Exim Bank's GoI supported Line of Credit of \$ 2 billion to the Government of the People's Republic of Bangladesh. Available at: <https://rbi.org.in/Scripts/NotificationUser.aspx?Id=10447&Mode=0>. (Accessed 27 April 2023).

- ♦ utilisation of the balance amount in Sri Lanka as may be agreed between the borrower and Government of India.²¹⁰

Out of the total credit by Exim Bank under this agreement, goods, and services of the value of at least 75% of the contract price shall be supplied by the seller from India. The credit is available for financing export of eligible goods and services from India including plant, machinery, equipment, consultancy services. Most recently, in 2022, the Government of Eswatini was provided with a line of credit by the Exim Bank worth \$108 million for the construction of a new parliament building.²¹¹ Under the terms of this credit, at least 65% of the contract price would have to be supplied by the seller from India. These lines of credit provide foreign demand for the Indian steel industry. Due to economies of scale or reduced risk associated with (foreign) demand fluctuation, the export promotion and export financing measures adopted by the Indian government could have resulted in lower production costs and lower domestic prices for steel.

6.1.4 Trade remedies investigations

According to the WTO's trade remedies database²¹², India currently faces 24 anti-dumping measures. India is the target of six countervailing duty investigations. Four of these investigations were launched by the US, while one is from the European Union and one from the United Kingdom (see Table 16). There are 22 countervailing measures currently imposed on exports of steel products (see Table 17).

Table 16: Countervailing duty investigations in steel products markets in India, since 2019

Investigation number	Reporting member	Initiation date	HS Section code	Subject product	Conclusion
C-533-905	US	26.01.2022	XV	Certain steel nails	
AS678 IN	European Union	17.02.2021	XV	Stainless steel cold rolled flat products	affirmative
2020/16 IN	United Kingdom	01.01.2021	XV	Stainless steel bars (certain)	affirmative
C-533-894	US	15.01.2020	XV	Forged steel fluid end blocks	affirmative
C-533-892	US	21.11.2019	XV	Forged steel fittings	affirmative
C-533-888	US	19.03.2019	XV	Carbon and alloy steel threaded rod	affirmative

Source: WTO countervailing duty investigations database

²¹⁰Reserve Bank of India (2017). Exim Bank's Government of India supported Line of Credit of \$ 318 million to the Government of Sri Lanka. Available at: <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11145&Mode=0>. (Accessed 27 April 2023).

²¹¹Reserve Bank of India (2022). Exim Bank's Government of India supported Line of Credit (LoC) of \$ 108.28 million to the Government of the Kingdom of Eswatini (Swaziland) for the purpose of financing construction of new Parliament Building in Eswatini. Available at: <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12385&Mode=0>. (Accessed 27 April 2023).

²¹² WTO Trade Remedies database. Accessed at: <https://trade-remedies.wto.org/en>.

Table 17: Countervailing duty measures currently enforced in steel products markets from India, as of January 2023

Measure in force from	Investigation number	Initiation date	Reporting member	Subject product
16.03.2022	AS678 IN	17.02.2021	European Union	Stainless steel cold rolled flat products
06.12.2021	C-533-898	16.11.2020	US	Utility scale wind towers
27.08.2021	GM 2020 IN/IN	17.12.2020	Canada	Grinding media
27.04.2021	C-533-896	07.04.2020	US	Common alloy aluminium sheet
29.01.2021	C-533-894	15.01.2020	US	Forged steel fluid end blocks
01.01.2021	2020/16 IN	01.01.2021	United Kingdom	Stainless steel bars (certain)
11.12.2020	C-533-892	21.11.2019	US	Forged steel fittings
09.04.2020	C-533-888	19.03.2019	US	Carbon and alloy steel threaded rod
01.04.2019	1701361	02.10.2017	Brazil	Grinding balls
06.03.2019	C-533-882	20.02.2018	US	Large diameter welded pipe
05.10.2018	C-533-878	11.09.2017	US	Stainless steel flanges
01.02.2018	C-533-874	16.05.2017	US	Certain cold drawn mechanical tubing of carbon and alloy steel
24.08.2017	C-533-872	28.07.2016	US	Finished carbon steel flanges
16.08.2017	ADC 370 CV 1	07.10.2016	Australia	Zinc Coated (Galvanised) Steel
17.11.2016	C-533-868	27.10.2015	US	Welded stainless pressure pipe
20.09.2016	C-533-866	24.08.2015	US	Cold rolled flat steel products
25.07.2016	C-533-864	30.06.2015	US	Corrosion resistant steel products
18.03.2016	AS618 IN	11.03.2015	European Union	Tubes and pipes of ductile cast iron
10.09.2014	C-533-858	29.07.2013	US	Oil country tubular goods
11.12.2012	CV/132/IN	14.05.2012	Canada	Certain carbon steel welded pipe
28.04.2011	AS556 IN	01.04.2010	European Union	Stainless steel bars
04.02.2004	C-533-829	27.02.2003	US	Prestressed concrete steel wire strand

Source: WTO countervailing duty measures database

6.2 The People's Republic of China

6.2.1 Government support measures for steel production

The PRC's steel industry is led by large SOEs which tend to receive more attention from the central and local governments. In fact, these SOEs are used as "vehicles to pursue the government's economic policies"²¹³ and because of this the government is more prone to subsidise them. For example, between 2008 and 2015, when the PRC's steel industry passed through a crisis, central and local governments provided financial help to steel enterprises to maintain employment.²¹⁴ Chongqing Steel, which recorded the largest deficit among the steel enterprises in 2015,²¹⁵ received the largest amount of subsidy in that period, valued at ¥3,098 million (around \$493 million based on the 2015 average exchange rate).²¹⁶

Under President Xi Jinping, the attention paid to SOEs has become even greater, encouraging the creation of larger SOEs through mergers, with the aim to create "national champions"²¹⁷ that can compete with other large foreign companies. Some of these companies received subsidies from central and local governments.

For the Chinese government, based on the Chinese Accounting Principles, subsidy means "a free-of-charge cash or asset transfer from the government."²¹⁸ In general, subsidies represent any kind of financial aid given by the central or local governments to a company, but it can encompass multiple forms of aid, like "investments, tax reductions, waived loan guarantee revenue, loans provided at lower interest rates than those offered by private financial institutions, and purchases of products from a company at a higher price than market value."²¹⁹

Subsidies are a frequent source of market distortions operated by the government in the PRC's steel industry. They were best observed during the 2008-15 period, when the steel industry in the PRC encountered a recession period. The level of subsidies offered by the Chinese government to the steel companies increased periodically. In 2001, the PRC

²¹³European Commission (2017) Commission Staff Working Document on Significant Distortions in the Economy of the PRC for the Purposes of Trade Defence Investigations, Available at: https://trade.ec.europa.eu/doclib/docs/2017/december/tradoc_156474.pdf, p.358, (Accessed 20 January 2023).

²¹⁴Mariko Watanabe (2021) Competitive Neutrality of State-owned Enterprises in PRC's Steel Industry: Causal Inference on the Impacts of Subsidies, Available at: <https://deliverypdf.ssrn.com/delivery.php?ID=761026119090109093081064070105089007060032006019028017122099069005121014024126018093026012049028000097038074103090025108125005005055092013072121106010118108116073001046008010006090000066080120020127116070024030122001019084064091090003080081103126112031&EXT=pdf&INDEX=TRUE>, p. 8, (Accessed 20 January 2023).

²¹⁵Ibid, p.8

²¹⁶Ibid, p.10

²¹⁷Jürgen Matthes (2020) PRC's Market Distortions and the Impact of the Covid-19 Crisis, Available at: <https://www.econstor.eu/bitstream/10419/226413/1/CESifo-Forum-2020-03-p42-48.pdf>, p.43, (Accessed 20 January 2023).

²¹⁸Mariko Watanabe (2021) Competitive Neutrality of State-owned Enterprises in PRC's Steel Industry: Causal Inference on the Impacts of Subsidies, Available at: <https://deliverypdf.ssrn.com/delivery.php?ID=761026119090109093081064070105089007060032006019028017122099069005121014024126018093026012049028000097038074103090025108125005005055092013072121106010118108116073001046008010006090000066080120020127116070024030122001019084064091090003080081103126112031&EXT=pdf&INDEX=TRUE>, p. 6, (Accessed 20 January 2023).

²¹⁹Shinya Matano (2021) The Impact of PRC's Industrial Subsidies on Companies and the Response of Japan, The US and the European Union, Available at: https://www.mitsui.com/mgssi/en/report/detail/_icsFiles/afieldfile/2021/02/19/2101c_matano_e.pdf, p. 2, (Accessed 20 January 2023).

offered \$1.5 million in subsidies. In 2008, the amount increased to \$100 million and reached a record in 2015 when it peaked at more than \$1 billion.²²⁰ While the amount of subsidy decreased after the crisis period, the Ministry of Economy, Trade and Industry of Japan pointed out that “the governmental subsidies were in effect a measure to make up for companies’ losses and extend the life of companies with low profitability.”²²¹

6.2.2 Government support measures for domestic steel consumption

As the steel industry has always been seen as an important pillar of the PRC’s economy, the Chinese government not only stimulated steel production, but also its domestic consumption. Using steel in its mega-railway network, in civilian and military shipbuilding or in real estate construction were all important contributions to supporting domestic consumption of steel.

In 2020, the PRC had 141,400 km of rail lines and 36,000 km of high-speed rail lines, most of the high-speed ones built in the past decade.²²² In 2023, the PRC aims to expand this network by adding 3,000 km of rail lines, out of which 2,500 are high-speed rail lines.²²³ In 2017, the PRC consumed around 1 million metric tonnes of steel rails every year in light lines, heavy lines and crane lines.²²⁴ Another sector that helped the domestic steel industry is real estate, through companies that invested in building residential houses and apartments all throughout the PRC. The real estate sector accounts for one third of the PRC’s steel consumption.²²⁵ Before the Evergrande Group’s crisis which signalled a difficult period for the real estate sector in the PRC, the Chinese government encouraged the construction of new residential complexes, sometimes even leading to so-called “ghost cities.” The government has continued to subsidise the sector to help it pass through this difficult period. The real estate industry represents 29% of the PRC’s GDP,²²⁶ and affects the adjacent industries, like the steel industry. In 2022, the price of steel used for constructions fell drastically and in July 2022 a steel purchasing managers index reached its lowest level since the 2008 crisis, illustrating the depths of the downturn.²²⁷

These measures will likely help many Chinese steel producers to remain in business despite lacking profitability or factual bankruptcy, contributing to excess capacities maintained in the Chinese economy. Significant investments in transportation infrastructure can also be extended to have a strong impact on domestic steel demand in the PRC.

²²⁰Ibid, p.2.

²²¹Ibid, p.2.

²²²Railway Technology (2020) PRC unveils plans to expand railway network to 200,000km by 2035, Available at: <https://www.railway-technology.com/news/PRC-railway-network-200000km/> (Accessed 20 January 2023).

²²³Esther Geerts (2023) PRC plans to open 3,000 km of new railway lines in 2023, Available at: <https://www.railtech.com/infrastructure/2023/01/05/PRC-plans-to-open-3000-km-of-new-railway-lines-in-2023/> (Accessed 20 January 2023).

²²⁴Railway Fasteners (2017) Chinese Steel Rails Overview, Available at: <http://www.railway-fasteners.com/news/steel-rails-overview.html> (Accessed 20 January 2023).

²²⁵S&P Global (2022) PRC's distressed property sector, rising steel output offer bleak market outlook, Available at: <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/metals/090522-PRCs-distressed-property-sector-rising-steel-output-offer-bleak-market-outlook#> (Accessed 20 January 2023).

²²⁶Kenneth Rogoff and Yuanchen Yang (2021) Has PRC's Housing Production Peaked?, Available at: <https://scholar.harvard.edu/rogoff/publications/peak-PRC-housing> (Accessed 20 January 2023).

²²⁷Patrick Tan (2022) PRC's Real Estate Crisis is Taking the Steel Industry With It, Available at: <https://www.supercryptonews.com/PRCs-real-estate-crisis-is-taking-the-steel-industry-with-it/> (Accessed 20 January 2023).

6.2.3 Types of subsidies

There are many types of subsidies in the PRC: cash grants and capital infusion, equity infusions and conversions, preferential loans and directed credit, land-use subsidies, subsidies for utilities, raw material price controls, tax policies and benefits, currency policies, benefits for purchase of domestic inputs and equipment and subsidies for employment:²²⁸

Cash grants and capital infusion is the most direct form of subsidy used by the Chinese government to aid the steel industry and refers to “an injection of government capital to provide support for steel companies’ commercial activities and specific programs that fit with the country’s wider policy agendas.”²²⁹ Each year the PRC’s steel companies receive between ¥200 million to 1 billion (\$28 million to \$140 million) in grants from the central or local governments. Equity infusions and conversions happen when the government provides financial help to a company in exchange for shares in the company.²³⁰

Land-use subsidies refers to those land-leased or land-use rights that the government offers to different companies with preferential conditions, as in the PRC the land is owned by the state. For example, in 2021 Valin Steel received ¥30 million (\$4.2 million) for land acquisition compensation,²³¹ while in the same year Fangda Special Steel received a ¥65,812 (\$9,212) refund for its land transaction fee.²³²

Subsidies for utilities help enterprises use cheap utilities, mostly electricity. An example in this case is that in 2020 HBIS Group Steel received a subsidy for energy saving and environmental protection renovation.²³³

Raw material price controls of the Chinese government help the steel enterprises to buy cheaper raw materials. In 2021, the State Administration of Market Regulation asked Chinese companies to stop speculating around the prices and set reasonable prices for the raw materials, after a sudden increase in the prices of raw materials over the course of a few months.²³⁴ The announcement, together with a variety of measures²³⁵ taken by the government over a span of four months, led to a decrease in the price of some raw

²²⁸Steel Industry Coalition (2016) Report on Market Research into the Peoples Republic of PRC Steel Industry Part 1, Available at: <https://www.steel.org/wp-content/uploads/2020/11/Steel-Industry-Coalition-Full-Final-Report-06302016.pdf> (Accessed 20 January 2023).

²²⁹ Ibid, p. 12.

²³⁰ Ibid, p. 14.

²³¹Valin Steel (2021) 华菱钢铁：2021年年度报告 (Valin Steel: 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=000932&id=8168114&fbclid=IwAR0SjXumhGyh3KI6HTFGzyD92JPK8DToh5_L0pIGyboQjp801bZl81qVHqk (Accessed 20 January 2023).

²³²Fangda Special Steel (2021) 方大特钢：方大特钢2021年年度报告 (Fangda Special Steel: Fangda Special Steel 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600507&id=7898274&fbclid=IwAR1P9kx1Rgjsv5mFqyoVCZM6EykuIEKmNixXdzXyYdJd9L454liXecHfqq (Accessed 20 January 2023).

²³³HBIS Group Steel (2020) 河钢股份有限公司 2020 年年度报告 (HBIS Co., Ltd. 2020 Annual Report), Available at: http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESZ_STOCK/2021/2021-4/2021-04-23/7101648.PDF?vt=4, p. 166, (Accessed 20 January 2023).

²³⁴The State Council of the PRC (2021) Govt to curb commodity price speculation, Available at: http://english.www.gov.cn/statecouncil/ministries/202105/25/content_WS60ac33d2c6d0df57f98da073.html (Accessed 20 January 2023).

²³⁵ Reuters (2021) China intervenes to manage commodity prices, Available at: <https://www.reuters.com/world/china/china-intervenes-manage-commodity-prices-2021-08-04/> (Accessed 3 April 2023).

materials.²³⁶ *Tax policies and benefits* are those subsidies that help the steel industry through tax exemptions, reductions, and credits.²³⁷ For example, in 2020 HBIS Group Steel received ¥4.2 million (\$0.6 million) in tax incentives²³⁸ and Maanshan Iron & Steel received ¥4.8 million (\$0.7 million) corporate income tax rebate from its income.²³⁹

Benefits for the purchase of domestic inputs and equipment refers to the “tax reductions and other benefits to encourage the purchase of domestically produced goods, machinery and equipment.”²⁴⁰ For example, in 2008, Changzhi Steel Group enjoyed the equivalent tax credit for corporate income taxes because it bought domestic equipment worth ¥34 million (\$4.8 million).^{241, 242} Despite intensive research, the authors of this report have not been able to obtain more up-to-date information on related support measures provided to SOEs.

Preferential loans and directed credit refers to loans “that are granted based on alignment with central or provincial governments’ policy directives, rather than creditworthiness or other market-based factors.”²⁴³ As an example, in 2009 Baosteel Group received a ¥750 million (around \$104 million) loan from the Bank of Communications Shanghai Branch to buy a 56.15% stake in Ningbo Steel Co Ltd.²⁴⁴ *Currency policies* refer to the practice of the PRC’s central bank, the People’s Bank of China, to control the value of the renminbi in comparison with the US dollar, keeping it at a low level in order to stimulate Chinese exports.

Subsidies for Steel Industry Employment refers to financial incentives offered to steel companies in order to maintain or increase their workforce levels. In 2016, for example, the Chinese government introduced the “Employment Stabilization Subsidy” aimed at providing employment subsidies to support the steel industry during a period of economic slowdown. This policy could have distorted labour market dynamics by artificially maintaining higher employment levels and potentially hindering workforce optimisation.

With respect to financial subsidies mentioned above, the Chongqing Iron Steel Co. Ltd. received the largest amount of subsidy so far. In 2015, it received ¥3,098 million (\$433 million) from the government. Almost the same time, in 2014, Xinxing Ductile Iron Pipes Co., Ltd. received ¥1,611 million (\$225 million), while Lingyuan Iron Steel Co., Ltd. received ¥2,574 million (around \$360 million) between 2012-15 and Hunan Valin Steel

²³⁶Reuters (2021) Chinese regulator tells businesses to set commodity prices ‘reasonably’, Available at: <https://www.reuters.com/article/china-commodities-regulator-idUSL4N2QC2NH#> (Accessed 24 October 2023).

²³⁷Steel Industry Coalition (2016) Report on Market Research into the Peoples Republic of PRC Steel Industry Part 1, Available at: <https://www.steel.org/wp-content/uploads/2020/11/Steel-Industry-Coalition-Full-Final-Report-06302016.pdf>, p.24, (Accessed 20 January 2023).

²³⁸HBIS Group Steel (2020) 河钢股份有限公司 2020 年年度报告 (HBIS Co., Ltd. 2020 Annual Report), Available at: http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESZ_STOCK/2021-4/2021-04-23/7101648.PDF?vt=4, p. 166, (Accessed 20 January 2023).

²³⁹Maanshan Iron and Steel Co., Ltd. (2021) 马钢股份：马鞍山钢铁股份有限公司2021年年度报告全文 (Maanshan Iron and Steel Co., Ltd.: The full text of the 2021 annual report of Maanshan Iron and Steel Co., Ltd.) Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600808&id=7909427&fbclid=IwAR1GLR_e77XatAlwxPZBi5XkqcJXJ6yYFI82PUYd6IYkvfxyXIX8xTncbA (Accessed 20 January 2023).

²⁴⁰Steel Industry Coalition (2016) Report on Market Research into the Peoples Republic of PRC Steel Industry Part 1, Available at: <https://www.steel.org/wp-content/uploads/2020/11/Steel-Industry-Coalition-Full-Final-Report-06302016.pdf>, p.30, (Accessed 20 January 2023).

²⁴¹Approximation at current exchange rates.

²⁴²Ibid, p.30.

²⁴³Ibid, p.18.

²⁴⁴Ibid, p.18.

received ¥1,950 million (around \$273 million) between 2011-14.²⁴⁵ In 2016, JISCO Hongxing Steel Company received ¥136 million (\$19 million) from the Gansu provincial government, and in the same year, it additionally received extra subsidies of ¥90.11 million (\$ 12.6 million).²⁴⁶ In 2020, Hebei Steel Corp. received \$121 million, while the previous year it received \$123 million.²⁴⁷

More recently, in 2020, HBIS Group Steel received ¥115 million (\$16 million), of which ¥52 million (\$7.3 million) were special subsidies for environmental protection, ¥2 million (\$0.28 million) for talent development and ¥49 million (\$6.85 million) for technology research and development.²⁴⁸ In 2019, Baosteel Group received ¥739 million (\$103 million) in grants and ¥1 billion (\$140 million) in other government grants for technical upgrades.²⁴⁹ In 2021, Angang Group received ¥543 million (\$76 million) in government subsidies, out of which ¥77 million (\$10.7 million) were granted for environmental protection and ¥327 million (\$45 million) for scientific research.²⁵⁰ In the same year, Valin Steel received grants from the government of a value of ¥833 million (\$116 million) for technical upgrades, for energy conservation and environmental protection, for land acquisition and for tax rebate.²⁵¹ Shandong Iron and Steel received in 2021 ¥649 million (\$90 million) for different projects involving both assets and corporate income.²⁵²

²⁴⁵Mariko Watanabe (2021) Competitive Neutrality of State-owned Enterprises in PRC's Steel Industry: Causal Inference on the Impacts of Subsidies, Available at: [²⁴⁶Dessie Tarko Ambaw and Shandre Mugan Thangavelu \(2021\) Industrial subsidies and impact on exports of trading partners: Case of PRC, Available at: \[²⁴⁷Global Trade Alert \\(2020\\) PRC: Government subsidy changes for listed company HEBEI STEEL CORP. in year 2020, Available at: <https://www.globaltradealert.org/intervention/91896/financial-grant/PRC-government-subsidy-changes-for-listed-company-hebei-steel-corp-in-year-2020> \\(Accessed 20 January 2023\\).\]\(https://onlinelibrary.wiley.com/doi/epdf/10.1111/rode.12878, p. 1316, \(Accessed 20 January 2023\).</p></div><div data-bbox=\)](https://deliverypdf.ssrn.com/delivery.php?ID=761026119090109093081064070105089007060032006019028017122099069005121014024126018093026012049028000097038074103090025108125005005055092013072121106010118108116073001046008010006090000066080120020127116070024030122001019084064091090003080081103126112031&EXT=pdf&INDEX=TRUE, p. 10, (Accessed 20 January 2023).</p></div><div data-bbox=)

²⁴⁸HBIS Group Steel (2020) 河钢股份有限公司 2020 年年度报告 (HBIS Co., Ltd. 2020 Annual Report), Available at: [²⁴⁹Baosteel \(2019\) Baosteel 2019 Annual Report, Available at: \[²⁵⁰Angang Steel \\(2021\\) 鞍钢股份：2021年年度报告 \\(Angang Steel: 2021 Annual Report\\), Available at:\]\(https://res.baowugroup.com/attach/2020/07/21/254eac3a7e0c448599ac598da8609fc5.pdf, p.166, \(Accessed 20 January 2023\).</p></div><div data-bbox=\)](http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESZ_STOCK/2021/2021-4/2021-04-23/7101648.PDF?vt=4, p. 166, (Accessed 20 January 2023). At page 166, section 58. Government Subsidies (政府补助) it is stated that HBIS received ¥52 million in special subsidies for environmental protection (环境保护专项补助), ¥2 million for talent development (人才培养补助资金) and ¥49 million (技术研发经费) for technology research and development.</p></div><div data-bbox=)

²⁵¹Valin Steel (2021) 华菱钢铁：2021年年度报告 (Valin Steel: 2021 Annual Report), Available at: [²⁵²Shandong Iron and Steel \(2021\) 山东钢铁：山东钢铁股份有限公司2021年年度报告 \(Shandong Iron and Steel: 2021 Annual Report of Shandong Iron and Steel Co., Ltd.\), Available at: \[https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600022&id=7904711&fbclid=IwAR1Sgxf-xerWI2-GU99ksNiUN0YXP-IxXlqIR3Ii3Y7qLlo5uPcPLkcEqQc\]\(https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600022&id=7904711&fbclid=IwAR1Sgxf-xerWI2-GU99ksNiUN0YXP-IxXlqIR3Ii3Y7qLlo5uPcPLkcEqQc \(Accessed 20 January 2023\).\) \(Accessed 20 January 2023\).](https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=000932&id=8168114&fbclid=IwAR0SjXumhGyh3KI6HTFGzyD92JPK8DToH5_L0pIGyboQjp801bZl81qVHqk (Accessed 20 January 2023). Section 3 Government Subsidy (政府补助) states that Valin received ¥299.7 million for technical upgrades, ¥256 million for energy conservation and environmental protection, ¥29.7 million for land acquisition and ¥247 million for tax rebate. But the total amount is ¥833 million, not ¥898 million.</p></div><div data-bbox=)

Further, many steel companies stipulate in their annual reports that they received R&D subsidies from the Chinese government. In 2021, the government announced an R&D “super deduction” of 100% from the taxable income for manufacturing companies (those companies whose main business is manufacturing and with more than 50% of their annual income generated by manufacturing), a measure used by the Chinese government to encourage companies to increase their R&D investments.²⁵³ Apart from this deduction, HBIS Group Steel received, for example, in 2020, ¥48 million (\$6.7 million) for technology funds and development endeavours,²⁵⁴ while Angang Steel reported in its 2021 annual report ¥327 million (\$45.7 million) in governmental grants for scientific research.²⁵⁵ The Lanshan District from Rizhao offered ¥2.4 million (\$0.335 million) to Shandong Iron and Steel in 2021,²⁵⁶ and the Nanchang City offered ¥14 million (\$1.95 million) in 2018 as R&D subsidies for Fangda Special Steel.²⁵⁷ Valin Steel received in 2021 ¥38 million (\$ 5.3 million) in governmental grants for R&D.²⁵⁸

In general, the extensive coverage and scale of the measures have very likely resulted in lower production costs of steel for individual manufacturers in the PRC compared to normal market conditions. The presence of subsidies, especially those related to capital infusion and expenditure reimbursement, leads to a substantial reduction in capital and plant operating costs, resulting in production costs of domestic steel that are below market-based levels. As a consequence, domestic steel prices in the PRC are also lower than they would be under market-driven conditions.

It should be noted that a lack of transparency often makes it difficult to identify state support measures and their impacts. Also, the fluid relationship between the state and corporations, as especially observed in the PRC, creates problems in transparency regarding the whole range of government support policies. The definition of government support itself becomes blurred when the government is heavily involved in the day-to-day

²⁵³ KPMG (2021) PRC: R&D 75% “super deduction” extended, increased to 100% for manufacturers, Available at: <https://home.kpmg/us/en/home/insights/2021/05/tnf-PRC-rd-super-deduction-extended-increased-for-manufacturers.html> (Accessed 20 January 2023).

²⁵⁴ HBIS Group Steel (2020) 河钢股份有限公司 2020 年年度报告 (HBIS Co., Ltd. 2020 Annual Report), Available at: http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESZ_STOCK/2021/2021-4/2021-04-23/7101648.PDF?vt=4, p. 166, (Accessed 20 January 2023). At page 166, section 58. Government Subsidies (政府补助) it is stated that HBIS received ¥48.8 million (技术研发经费) for technology research and development.

²⁵⁵ Angang Steel (2021) 鞍钢股份：2021年年度报告 (Angang Steel: 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=000898&id=7944434&fbclid=IwAR3bKdUhbSsq88T14Ep-WqID1qBrW9Dh0DiTEdXMjd4Jw1SQRtnDRqWC2kQ (Accessed 20 January 2023).

²⁵⁶ Shandong Iron and Steel (2021) 山东钢铁：山东钢铁股份有限公司2021年年度报告 (Shandong Iron and Steel: 2021 Annual Report of Shandong Iron and Steel Co., Ltd.), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600022&id=7904711&fbclid=IwAR1Sgxf-xerWI2-GU99ksNiUN0YXP-IxXlqIR3Ii3Y7gLo5uPcPLkcEgQc (Accessed 20 January 2023).

²⁵⁷ Fangda Special Steel (2021) 方大特钢：方大特钢2021年年度报告 (Fangda Special Steel: Fangda Special Steel 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600507&id=7898274&fbclid=IwAR1P9kx1Rgjsv5mFqyoVCZM6EykuIEKMNiXxdzXyYdjdJ9L454liXecHfgg (Accessed 20 January 2023).

²⁵⁸ Valin Steel (2021) 华菱钢铁：2021年年度报告 (Valin Steel: 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=000932&id=8168114&fbclid=IwAR0SjXumhGyh3KI6HTFGzyD92JPK8DToH5_L0pIGyboQjp801bZl81qVHqk (Accessed 20 January 2023). Section 3 Government Subsidy (政府补助) point 2) states that Valin received ¥38.6 million for R&D (研发补助).

funding and management of businesses along the steelmaking value chains, making it difficult to identify the precise policies and documents underlying the support provided.²⁵⁹

6.2.4 Trade policy interventions

In 2020, the PRC ratified its Export Control Law which regulates the exports of “controlled items,” as a result of the PRC-US trade war escalated by the Trump Administration and the then-speculated acquisition of TikTok by an American company. More precisely, exporters are required to obtain a licence before exporting specific items, such as military products, dual-use goods, sensitive materials and technology.²⁶⁰

Regarding specific steel measures, in 2021 the PRC’s Ministry of Finance announced that it will increase its export taxes on pig iron from 15% to 20% and on ferrochrome from 20% to 40%.²⁶¹ That same year, the PRC ended its 13% VAT rebates on exports of 146 steel products, among which are steel alloy powder, cold-rolled non-coil materials, iron or non-alloy steel wire, hot-rolled stainless steel coils, pipes of stainless steel, and seamless boiler tubes of iron.²⁶² Later on, the PRC added to this list another 23 steel products.²⁶³ This measure aims to limit the incentives to export steel.

6.2.5 Trade remedies investigations

The PRC's steel and raw materials industries has been subject to significant trade remedies investigations motivated by interventions in the PRC's domestic market. The investigations aim to address issues related to unfair trade practices, subsidisation, excess capacity, and the impact on global markets. They have led to the imposition of various trade measures, including tariffs and duties, to mitigate the impact of the PRC's steel and raw materials practices on other countries' industries and to promote fair trade in the global steel market.

Chinese steel companies also benefit from subsidies. It is not only direct subsidies that help them thrive, but also indirect subsidies such as special interest rates, tax exemptions, and debt relief, which allow Chinese steelmakers to undercut foreign competitors. Subsidies create imbalanced market conditions that hinder companies from other countries and lead to numerous countervailing complaints at the WTO. Since joining the WTO in 2001, the PRC has never released its complete list of subsidies provided by the central government or

²⁵⁹ As highlighted in OECD (2019). Measuring distortions in international markets: The aluminum value chain, OECD Trade Policy Papers No. 218. Accessed at https://www.oecd-ilibrary.org/trade/measuring-distortions-in-international-markets-the-aluminium-value-chain_c82911ab-en. The analysis below demonstrates that these findings also apply for the steel industry. Also see OECD (2022). 91st Session of the OECD Steel Committee - Chair's Statement. Accessed at <https://www.oecd.org/sti/ind/91-oecd-steel-chair-statement.htm>

²⁶⁰ Dominic Köstner and Marcus Nonn (2021) The 2020 Chinese export control law: a new compliance nightmare on the foreign trade law horizon?, Available at: <https://link.springer.com/article/10.1007/s12689-021-00092-4> (Accessed 20 January 2023).

²⁶¹ Paul Lim (2021) NEWSBREAK: PRC to increase export taxes on pig iron, ferro-chrome, Available at: <https://www.fastmarkets.com/insights/newsbreak-PRC-to-increase-export-taxes-on-pig-iron-ferro-chrome> (Accessed 20 January 2023).

²⁶² Ministry of Finance of the PRC (2021) 取消出口退税的钢铁产品清单 (List of steel products for which export tax rebates are cancelled), Available at: <http://szs.mof.gov.cn/zhengcefabu/202104/P020210428596388925749.xls> (Accessed 20 January 2023).

²⁶³ Ministry of Finance of the PRC (2021) 取消出口退税的钢铁产品清单 (List of steel products for which export tax rebates are cancelled), Available at: <http://szs.mof.gov.cn/zhengcefabu/202107/P020210728560819085461.pdf> (Accessed 20 January 2023).

local governments to Chinese companies.²⁶⁴ Thus, other WTO members, including the US, Japan, and the EU, believe that the PRC subsidises Chinese steel exporters and decided to address these through strict enforcement of international rules on national subsidy policies.²⁶⁵ For example, in 2017, the USA imposed countervailing duties on imports of Chinese steel wire rod after an investigation revealed that the Chinese government was providing subsidies to its steel producers, distorting the global market and negatively impacting domestic manufacturers. Table 18 below summarises a complete list.

Other countries also tend to open anti-dumping investigations against exporters in the PRC. In 2016, the USA imposed anti-dumping duties on imports of Chinese cold-rolled steel after finding that these products were being sold in the USA market at unfairly low prices, harming the domestic steel industry. In 2018, the EU imposed anti-dumping duties on imports of Chinese corrosion-resistant steel due to similar concerns over unfair pricing practices. The USA Department of Commerce announced in 2019 that it had imposed a duty of up to 141% on Chinese structural steel.²⁶⁶ In December 2022, Japan decided to impose anti-dumping duties on hot-dipped galvanised steel wire from the PRC.²⁶⁷ A complete list of recent anti-dumping cases brought at the WTO against the PRC can be found below summarised in Table 19.

Finally, the PRC's significant excess capacity in the steel industry has been a central concern for trade remedies investigations, as it contributes to global overproduction and dumping of cheap steel in international markets. Numerous countries, including the US, the EU, and others, have raised objections and initiated investigations to address the issue of excess capacity in the Chinese steel industry.

²⁶⁴US Trade Representative (2022) 2021 Report to Congress on PRC's WTO Compliance, Available at: <https://ustr.gov/sites/default/files/files/Press/Reports/2021USTR%20ReportCongressPRCWTO.pdf>, p.28, (Accessed 20 January 2023).

²⁶⁵Shinya Matano (2021) The Impact of PRC's Industrial Subsidies on Companies and the Response of Japan, The US and the European Union, Available at: https://www.mitsui.com/mgssi/en/report/detail/_icsFiles/afiedfile/2021/02/19/2101c_matano_e.pdf, p. 3, (Accessed 24 October 2023).

²⁶⁶Reuters (2019) U.S. imposes duties on structural steel from PRC, Mexico, Available: <https://www.reuters.com/article/us-usa-trade-steel-idUSKCN1VP2R7> (Accessed 20 January 2023).

²⁶⁷Ministry of Economy, Trade and Industry of Japan (2022) Decision to Impose Anti-Dumping Duties on Hot-dipped Galvanised Steel Wire Originating in the Republic of Korea and the People's Republic of PRC, Available at: https://www.meti.go.jp/english/press/2022/1202_001.html (Accessed 20 January 2023).

Table 18: List of cases regarding countervailing duties against the Chinese steel industry between 2019–22

Reporting Member	Subject Product	Date of Initiation	ID Number	Status	HS Section
Canada	Drill pipe	25/03/2022	DP 2022 IN	Concluded/ Negative	Base metals and articles of base metal
United Kingdom	Hot rolled flat products of iron, non-alloy, or other alloy steel	01/01/2021 (date when the UK transitioned the measure)	2020/15 CN	Concluded/ Affirmative	Base metals and articles of base metal
United Kingdom	Organic coated steel products (certain)	01/01/2021 (date when the UK transitioned the measure)	2020/29 CN	Concluded/ Affirmative	Base metals and articles of base metal
Australia	Aluminium zinc coated steel (<600mm)	30/06/2020	ADC 559 CV 1	Concluded/ Negative	Base metals and articles of base metal
Australia	Painted steel strapping	27/05/2020	ADC 553 CV 1	Concluded/ Affirmative	Base metals and articles of base metal
US	Certain non-refillable steel cylinders	22/04/2020	C-570-127	Concluded/ Affirmative	Base metals and articles of base metal
Australia	Precision pipe and tube steel	31/03/2020	ADC 550 CV 1	Concluded/ Affirmative	Base metals and articles of base metal
European Union	Certain hot rolled stainless steel sheets and coils (SSHR)	10/10/2019	AS660 CN	Concluded/ Withdrawn	Base metals and articles of base metal
US	Certain collated steel staples	03/07/2019	C-570-113	Concluded/ Affirmative	Base metals and articles of base metal
US	Carbon and alloy steel threaded rod	19/03/2019	C-570-105	Concluded/ Affirmative	Base metals and articles of base metal
US	Certain fabricated structural steel	04/03/2019	C-570-103	Concluded/ Negative	Base metals and articles of base metal

Source: WTO Database of Countervailing Duty Investigations

Table 19: List of anti-dumping cases against the Chinese steel industry between 2019-22

Reporting Member	Subject Product	Date of Initiation	ID Number	Status	HS Section
EU	Stainless Steel Refillable Kegs	13/05/2022	AD689 CN	Ongoing	Base metals and articles of base metal
EU	Electrolytic chromium coated steel	24/09/2021	AD683 CN	Ongoing	Base metals and articles of base metal
India	Stainless-Steel Seamless Tubes & Pipes	10/09/2021	6/13/2021-DGTR 1/1	Ongoing	Base metals and articles of base metal
Ukraine	Steel seamless cold drawn and cold rolled pipes	01/09/2021	AD-502/2021/4411-03	Ongoing	Base metals and articles of base metal
Japan	Hot-dipped galvanised steel wire	14/06/2021	14062021-1	Concluded/Affirmative	Base metals and articles of base metal
Argentina	Steel doors, weighing not less than 24 kg and not more than 100 kg	03/06/2021	EX-2021-33176845-APN-DGD#MDP/CHN	Concluded/Affirmative	Base metals and articles of base metal
Malaysia	Stranded steel wires for prestressing concrete	31/03/2021	AD01/21/CHN	Concluded/Affirmative	Base metals and articles of base metal
EU	Certain Iron or Steel Fasteners	21/12/2020	AD676 CN	Concluded/Affirmative	Base metals and articles of base metal
Ukraine	Coated rolled carbon steel products	19/12/2020	AD-471/2020/4411-03	Ongoing	Base metals and articles of base metal
Uruguay	Electric water heaters with steel tanks, of a kind used for domestic purposes, of 15-120 litres capacity	03/12/2020	UY27112020	Concluded/Affirmative	Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles
EU	Steel wind towers	21/10/2020	AD674 CN	Concluded/Affirmative	Base metals and articles of base metal
Republic of Korea	Flat-rolled products of stainless steel	25/09/2020	20-001	Concluded/Affirmative	Base metals and articles of base metal
Chile	Special steel bar products	11/09/2020	DM-2-2020	Concluded/Withdraw	Base metals and articles of base metal
Colombia	Angles, shapes and sections of alloy and non-alloy steel, in galvanised and galvalume sheets, not further worked than cold-formed or cold-finished	02/09/2020	D-215-52-113/PERFILES DE ACERO ALEADO Y SIN ALEAR	Concluded/Affirmative	Base metals and articles of base metal

Reporting Member	Subject Product	Date of Initiation	ID Number	Status	HS Section
Australia	Aluminium zinc coated steel (<600mm)	30/06/2020	ADC 559 AD 1	Concluded/Negative	Base metals and articles of base metal
Australia	Painted steel strapping	27/05/2020	ADC 553 AD 1	Concluded/Affirmative	Base metals and articles of base metal
Thailand	Tin free steel	15/05/2020	AD2020-06	Concluded/Affirmative	Base metals and articles of base metal
Colombia	Seamless or welded steel pipes (other than stainless) of the type used in oil and gas pipelines, of circular cross-section, with an external diameter greater than or equal to 60.3 mm (2 3/8") and not exceeding 219.1 mm (8 5/8")	11/05/2020	D-215-47-108/TUBOS DE ACERO SIN SOLDADURA O SOLDADOS	Concluded/Affirmative	Base metals and articles of base metal
Chile	Steel grinding balls forged for mills of less than four inches in diameter	27/04/2020	DM-1-2020	Concluded/Negative	Base metals and articles of base metal
US	Certain non-refillable steel cylinders	22/04/2020	A-570-126	Concluded/Affirmative	Base metals and articles of base metal
Egypt	Pre-stressed Concrete Steel Strands (pc strands)	16/04/2020	3/2020/CHN	Concluded/Affirmative	Base metals and articles of base metal
Australia	Precision pipe and tube steel	31/03/2020	ADC 550 AD 1	Concluded/Affirmative	Base metals and articles of base metal
Malaysia	Flat rolled product of non-alloy steel plated or coated with aluminium and zinc	17/03/2020	AD01/20/CHN	Concluded/Affirmative	Base metals and articles of base metal
Indonesia	Hot rolled coil of other alloy steel	09/03/2020	AD 01-2020/CHN	Concluded/Affirmative	Base metals and articles of base metal
Thailand	Flat hot dip galvanised of cold rolled steel in coil and not in coil	21/02/2020	AD2020-01	Concluded/Affirmative	Base metals and articles of base metal
Russian Federation	Welded tubes of stainless steel	24/12/2019	AD-30-CN	Concluded/Affirmative	Base metals and articles of base metal
Kyrgyz Republic	Welded tubes of stainless steel	24/12/2019	AD-30-CN	Concluded/Affirmative	Base metals and articles of base metal
Armenia	Welded tubes of stainless steel	24/12/2019	AD-30-CN	Concluded/Affirmative	Base metals and articles of base metal
Kazakhstan	Welded tubes of stainless steel	24/12/2019	AD-30-CN	Concluded/Affirmative	Base metals and articles of base metal
Ukraine	Steel fastenings	07/12/2019	AD-434/2019/4411-03	Concluded/Affirmative	Base metals and articles of base metal

Reporting Member	Subject Product	Date of Initiation	ID Number	Status	HS Section
Indonesia	Cold rolled stainless steel (CRS)	23/10/2019	AD 03-2019/CHN	Ongoing	Base metals and articles of base metal
Thailand	Painted hot dip plated or coated with aluminium-zinc alloys of cold-rolled steel	17/10/2019	AD2019-01	Concluded/Affirmative	Base metals and articles of base metal
Vietnam	Cold-rolled steel	03/09/2019	AD08-CHN	Concluded/Affirmative	Base metals and articles of base metal
Indonesia	Coated steel	26/08/2019	AD 02-2019/CHN	Concluded/Affirmative	Base metals and articles of base metal
EU	Certain hot rolled stainless steel sheets and coils (SSHR)	12/08/2019	AD658 CN	Concluded/Affirmative	Base metals and articles of base metal
India	Flat rolled products of stainless steel	03/07/2019	6/12/2019-1/15	Concluded/Affirmative	Base metals and articles of base metal
US	Certain collated steel staples	03/07/2019	A-570-112	Concluded/Affirmative	Base metals and articles of base metal
Australia	Hot dip galvanised steel angle	24/06/2019	ADC 516 AD 1	Concluded/Negative	Base metals and articles of base metal
Ukraine	Hot-deformed seamless steel pipes	18/05/2019	AD-415/2019/4411-03	Concluded/Affirmative	Base metals and articles of base metal
Mexico	Flat-rolled products of stainless steel	05/04/2019	02/19-CHN	Concluded/Affirmative	Base metals and articles of base metal
Malaysia	Cold rolled coils of iron or non-alloy steel, of width more than 1300mm	29/03/2019	AD01/19/CHN	Concluded/Affirmative	Base metals and articles of base metal
US	Alloy and certain carbon steel threaded rod	19/03/2019	A-570-104	Concluded/Affirmative	Base metals and articles of base metal
US	Certain fabricated structural steel	04/03/2019	A-570-102	Concluded/Affirmative	Base metals and articles of base metal
EU	Steel road wheels	15/02/2019	AD652 CN	Concluded/Affirmative	Vehicles, aircraft, vessels and associated transport equipment

Source: WTO Database of Anti-Dumping Investigations

6.3 The Russian Federation

6.3.1 Government's support measures

According to the Ministry of Industry and Trade of the Russian Federation, before 2020, there were more than 90 federal and regional regulatory and financial support measures for which enterprises from the steel industry, pipe industry, and steel structures industry enterprises were eligible.²⁶⁸ All of them are parts of various legal acts, but the most important of them are summarised in Table 20. However, there is no evidence on the actual use of this support by steel producing enterprises both at the regional and at the federal level.²⁶⁹ Despite the wide range of state support measures, officially stated numbers indicate that the government's contribution to investment accounts for less than 1% of total investments in the sector.²⁷⁰

Table 20: Main support measures to develop the steel industry in Russia

No.	Measures	Responsibility / source
1	Government support to industries which consume metallurgical products and implement infrastructural projects	Ministry of Industry and Trade
2	Measures to limit import of metal products	Ministry of Industry and Trade
3	Measures stimulating exports of products with high value added	Ministry of Industry and Trade
4	Measures aimed at protection of Russian exporters in foreign markets, including prevention of restrictive measures against domestic metal products	Ministry of Industry and Trade
5	Measures to reduce the dependence of Russian metallurgical enterprises on the import of raw materials	Ministry of Industry and Trade
6	Stimulating the export of high value-added products, considering the restrictions of the World Trade Organization	The State program "Development of industry and increase of its competitiveness"
7	Removing regulatory barriers and creating parity conditions for launching innovative products on the market	The State program "Development of industry and increase of its competitiveness"
8	Advance creation of innovative infrastructure for the development of traditional and new industries	The State program "Development of industry and increase of its competitiveness"
9	Development of Russian laboratories that tests products in accordance with the requirements of export countries, which will reduce the financial, transport and time costs of exporters, as well as ensure the competitiveness of domestic products in foreign markets	The State program "Development of industry and increase of its competitiveness"
10	Stimulation of domestic demand for metal products, including with an increase in the depth of processing	Development Strategy of the Steel Industry for 2014-2020 and for the perspective until 2030

²⁶⁸Minpromtorg. Navigator support measures (in Russian), available at: <https://gisp.gov.ru/support-measures/#s28>.

²⁶⁹European Commission (2020) EU's 2020 Report on significant distortions in the economy of the Russian Federation for the purposes of trade defence investigations. Available at: [https://ec.europa.eu/transparency/documents-register/api/files/SWD\(2020\)242_0/de00000001040304?rendition=false](https://ec.europa.eu/transparency/documents-register/api/files/SWD(2020)242_0/de00000001040304?rendition=false) . (Accessed 27 April 2023).

²⁷⁰European Commission (2020) EU's 2020 Report on significant distortions in the economy of the Russian Federation for the purposes of trade defence investigations. Available at: [https://ec.europa.eu/transparency/documents-register/api/files/SWD\(2020\)242_0/de00000001040304?rendition=false](https://ec.europa.eu/transparency/documents-register/api/files/SWD(2020)242_0/de00000001040304?rendition=false) . (Accessed 27 April 2023).

No.	Measures	Responsibility / source
11	Coordination of plans for the development of enterprises of the Russian ferrous metallurgy complex with general layouts for the location of electric power facilities, the development of pipeline transport and the railway network, as well as development strategies for other industries and regions of Russia	Development Strategy of the Steel Industry for 2014-2020 and for the perspective until 2030

Source: compiled by author on the basis of legal acts.

6.3.2 Covid-19-related (emergency) support measures

The year 2020, associated with the new sanctions wave (in addition to the 2014 sanctions) and the Covid-19 pandemic, also witnessed addition government support measures directed at the steel industry. Covid-19 crisis support measures relevant to steel production are fiscal and monetary support measures. Most of the measures were already effective during the pandemic period.

As Russian steel producers are generally considered system-forming (backbone) enterprises by the government, they were eligible to apply for subsidies for cost recovery in connection with the production (sale) of goods, work, services, deferred tax payments, advance tax payments, and state guarantees for attracted loans or bonded loans.²⁷¹ However, there is no evidence on how much pandemic-related aid the firms actually received from the federal government or regional governments.

Monetary support measures were also initiated by credit institutions, which provided further liquidity in the form of loans issued to systemically important organisations (Table 21).²⁷² Moreover, additional government-induced measures such as the reduction of the key interest rate and the stimulation of domestic investment demand have contributed to more favourable macroeconomic conditions for steel producers.

The companies have received direct and indirect fiscal benefits as listed in Table 21. As backbone enterprises, most of the steelmakers directly benefitted from tax holidays, subsidies, and loans provided as a part of the government's anti-crisis programs. Russian steel makers also directly benefitted from the extension of regulatory easing on restructured loans to all industries. By contrast, measures such as the key interest rate reduction, preferential mortgage supply, support of steel-consuming manufacturers (e.g., shipbuilding and transportation) entailed general macroeconomic effects, which were overall conducive to steel production in Russia. It should be noted that due to the short time following their implementation and due to lacking data, it is difficult to assess the measures' impacts quantitatively at the current stage of research. However, the year 2021 was unexpectedly profitable for Russian steelmakers, partly driven by beneficial external economic conditions, such as a surge in world metal prices. Between January 2021 and June 2021, Russia's top 7 metallurgical companies have demonstrated 1.5 times increase in income from \$22.4 to \$33.8 billion.²⁷³

²⁷¹The total loan amount issued to the group of companies should not exceed RUB 3 billion, and the rate should be 5% per annum. The period of subsidizing rates is 1 year from the date of conclusion of the loan agreement.

²⁷²The Government of Russia. Support for backbone companies (in Russian). Available at: http://government.ru/support_measures/measure/87/. (Accessed 27 April 2023).

²⁷³Delevoy Profil. Metallurgical industry in Russia: the largest steel producers. 22.10.202 (in Russian). Available at: <https://delprof.ru/press-center/open-analytics/metallurgicheskaya-otrasl-v-rossii-krupneyshie-proizvoditeli-stali-/>. (Accessed 27 April 2023).

Table 21: Emergency measures to mitigate the economic consequences of the pandemic crisis in 2020-21 in the Russian Federation

Measure	Description of the measure	Effect on steel producers	Comment
Monetary measures			
Extension of regulatory easing on restructured loans to all industries (introduced on 17.04.2020) ²⁷⁴	Providing banks with the opportunity to not worsen the assessment of the financial position of the borrower and not to form additional reserves, if before the start of restrictions due to Coronavirus, the borrower had high credit quality for restructured loans to companies from all sectors of the economy (previously this requirement was valid only for the 16 most affected industries).	Direct effect	Companies from steel industry got a chance to benefit from restructured loans directly.
Central Bank's recommendations on suspension of forced eviction of debtors (introduced on 17.04.2020) ²⁷⁵	Recommendations to creditors to suspend until September 30, 2020, the procedure for the forced eviction of debtors from residential premises that were previously foreclosed by creditors.	Direct/ Indirect effect	The measure could have direct effect in case steel companies were debtors and an indirect effect in case companies' contractors or customers were indebted.
Reducing the key interest rate (introduced on 24.04.2020) ²⁷⁶	Decreasing the key interest rate by 50 b.p. – from 6 to 5.5% per annum.	Indirect effect	The measure had a general macroeconomic impact for Russian economy having stimulated consumption and investment demand.
Fiscal measures			
Expanding the program of issuing interest-free loans to pay	The employment support program included medium and large enterprises along with small and micro businesses. As part of the expanded program, banks will receive an additional 3.5 billion RUB (\$42.08 million) subsidies.	Direct effect	The measure helped all types of businesses to get a loan to cover salaries expenditures.

²⁷⁴Garant Law Information Portal. Information from the Bank of Russia dated June 16, 2020 "Answers of the Bank of Russia on questions from credit institutions regarding the regulation of banks' activities during the pandemic associated with COVID-19". (in Russian), 17.04.2020. Available at: <https://www.garant.ru/products/ipo/prime/doc/74165458/> (Accessed 29 January 2024).

²⁷⁵Garant Law Information Portal. Information from the Bank of Russia dated June 16, 2020 "Answers of the Bank of Russia on questions from credit institutions regarding the regulation of banks' activities during the pandemic associated with COVID-19". (in Russian), 17.04.2020. Available at: <https://www.garant.ru/products/ipo/prime/doc/74165458/> (Accessed 29 January 2024).

²⁷⁶FBK. Bank of Russia measures to limit the consequences of the coronavirus pandemic. (in Russian), 17.04.2020. Available at: https://www.fbk.ru/upload/press-center/plan_limit_covid%20-15.05.pdf (Accessed 29 January 2024).

Measure	Description of the measure	Effect on steel producers	Comment
salaries (introduced on 24.04.2020) ²⁷⁷			
Allocation of RUB 24 billion (\$288.6 million) subsidies for issuing preferential loans to backbone enterprises (introduced on 25.04.2020) ²⁷⁸	The loans are aimed at replenishing the working capital of backbone enterprises.	Direct effect	As backbone enterprises, steel companies got an access to preferential loans from the banking institutions#.
Support for backbone companies ²⁷⁹	♦ Subsidies for reimbursement of costs in connection with the production (sale) of goods, the performance of work, the provision of services. ♦ Deferrals for the payment of taxes, and advance payments of taxes are conducted by the rules approved by Government Decree No. 409 of April 2, 2020 "On measures to ensure sustainable development of the economy." ♦ State guarantees for loans or bonded loans attracted by backbone organisations.	Direct effect	As backbone enterprises, steel companies got support in the form of subsidies, guarantees and bonded loans, as well deferrals for the payment of taxes.
Tax holidays (affected industries) ²⁸⁰	Companies operating in the affected industries may receive a deferment or instalment plan for taxes (advance payments), including insurance premiums, if they conduct certain types of economic activity, with payment deadlines in 2020.	Direct effect	As enterprises affected by Covid-19, steel companies were eligible to tax holidays.
Preferential mortgage (financial sector) (effective from 17.04.2020 to 01.11.2020)	Mortgage loans were provided to citizens for the purchase of the real estate in the primary market at a rate of 6.5% for the entire loan term.	Indirect effect	Preferential mortgage has supported retail estate sector, which has boosted demand on steel products.

²⁷⁷RBC. The Central Bank reduced the key rate to 5.5% for the first time since 2014 (in Russian), 24.04.2020. Available at: <https://www.rbc.ru/finances/24/04/2020/5ea29cdc9a794787cb8615eb> (Accessed 29 January 2024).

²⁷⁸RBC. The Central Bank reduced the key rate to 5.5% for the first time since 2014 (in Russian), 24.04.2020. Available at: <https://www.rbc.ru/finances/24/04/2020/5ea29cdc9a794787cb8615eb> (Accessed 29 January 2024).

²⁷⁹The Government of Russian Federation. Support for backbone companies (in Russian), available at: http://government.ru/support_measures/measure/87/. (Accessed 27 April 2023).

²⁸⁰The Government of Russian Federation. Tax holidays (affected industries) (in Russian), available at: http://government.ru/support_measures/measure/7/. (Accessed 27 April 2023).

Measure	Description of the measure	Effect on steel producers	Comment
Cancellation of sanctions on certain state contracts of the automotive industry ²⁸¹	When performing certain contracts by enterprises of the automotive industry, it is allowed, by agreement of the parties, to change the deadline for the execution of the relevant contracts without presenting a claim to the supplier (contractor, performer) for the payment of penalties due to delay.	Indirect effect	The support of automotive producers helped them to comply with the norms of the contracts concluded with steelmakers.
Support for Russian car manufacturers ²⁸²	- RUB 7 billion (\$84 million) were allocated for the program "Preferential car loans", which will be extended to families with one or more minor children; for citizens who are employees of medical organisations of the state healthcare system; for citizens who sold their motor vehicle over the age of six years to a car dealer on account of paying a part of the down payment (trade-in); for electric vehicles, with an increased maximum price of a car up to 1.5 million RUB (\$18,000); - RUB 6 billion (\$72 million) were directed to the program of preferential car leasing; - RUB 2.5 billion (\$30 million) were spent for the launch of the Affordable Rent program in the second half of 2020; - RUB 4.5 billion (\$54 million) were spent to ensure the advanced purchase of automotive equipment by federal executive authorities and state-owned companies; - RUB 5 billion were allocated for state purchases of ambulances.	Indirect effect	The support of automotive producers helped them to comply with the norms of the contracts concluded with steelmakers.
Subsidies to credit institutions (25.05.2022) ²⁸³	RUB 153 billion (approx. \$ 1.83 billion) were announced as subsidies to Russian credit institutions to reimburse them for their lost income on loans provided to the Russian agricultural sector.	Indirect effect	Subsidies to credit institutions could be further used for financial products for steel producers.
Support measures to the companies recognised as organisations of systemic	- Loan guarantees to such companies with a maximum amount of the guarantee being 70% of the loan; - guarantee is issued on the loans with maturity terms of 3-7 years.	Direct effect	As companies of systemic importance, steel companies received support in the form of guarantees.

²⁸¹The Government of Russian Federation. Cancellation of sanctions on certain state contracts of the automotive industry (in Russian), available at: http://government.ru/support_measures/measure/62/. (Accessed 27 April 2023).

²⁸²The Government of Russian Federation. Support for Russian car manufacturers (in Russian), available at: http://government.ru/support_measures/measure/109/.

²⁸³ The government of the Russian Federation, Decree No. 1297-r, 25 May 2022, Available at: <http://government.ru/docs/45507/>.

Measure	Description of the measure	Effect on steel producers	Comment
importance to the Russian economy (10.05.2020) ²⁸⁴			
State subsidies for the development of the Russian Arctic Zone ²⁸⁵	- the list of investment projects benefitting from state subsidies for the development of the Russian Arctic Zone has been created; - the subsidy consists of 20% of the investment amount to be used towards infrastructural expenses; 6 projects of over RUB 200 billion (\$ 2.4 billion), with the 20% subsidy having made \$ 525 million.	Indirect effect	Development of infrastructure in the Russian Arctic Zone indirectly affects steel producers due to an increase of demand on steel products.
Interest payment subsidies for companies of systemic importance for the Russian economy ²⁸⁶	- the subsidies aim at making loan interest around 2.6% per annum. To compare the basic rate set by the Bank of Russia in March 2021 is 4.5%. - the subsidy must be requested and lobbied for by the companies	Direct effect	As companies of systemic importance, steel companies got support in the form of subsidies.
Agricultural products transportation support	RUB 683 million (\$8.2 million) was allocated for the rail transportation subsidies of agricultural product.²⁸⁷	Indirect effect	
Shipbuilding, fabrics, building blocks, wood processing support (15.06.2021)	More than RUB 1.88 billion (\$22.6 million) from the IDF for shipbuilding, fabrics, building blocks, wood processing and increasing labour productivity²⁸⁸	Indirect effect	Shipbuilding and building blocks industries are among the main consumers of steel products. This potentially supports demand on steel products.

²⁸⁴Global Trade Alert. Russian Federation: Financial Grants and Loan Guarantees to the Russian "Companies of Systemic Importance" 10.05.2020. Available at: <https://www.globaltradealert.org/intervention/79575/loan-quarantee/russian-federation-financial-grants-and-loan-quarantees-to-the-russian-companies-of-systemic-importance>.

²⁸⁵Lesnych A. The budget will allocate subsidies for Arctic projects. Vedomosti. 03.02.2021 (in Russian), Available at: <https://www.vedomosti.ru/business/articles/2021/02/02/856429-byudzh-et-videlit>. (Accessed 27 April 2023).

²⁸⁶Global Trade Alert. Russian Federation: Further interest payment subsidies to companies of systemic importance. 04.05.2021. Available at: <https://www.globaltradealert.org/intervention/85591/interest-payment-subsidy/russian-federation-further-interest-payment-subsidies-to-companies-of-systemic-importance>. (Accessed 27 April 2023).

²⁸⁷The Government of Russia. The government will direct additional funding to subsidies the transportation of agricultural products by rail. Order of July 14, 2022, No. 1916-r. Available at: <http://government.ru/news/46013/>. (Accessed 27 April 2023).

²⁸⁸IDF. More than RUB 1.88 billion from IDF for the production of microchips, protective clothing, pipeline bends, basalt fibre and increasing labour productivity (in Russian). 29.07.2021. Available at: <https://frprf.ru/press-tsentr/novosti/bolee-2-4-mlrd-rublej-ot-frp-na-korablestroenie-tkani-stroitelnye-bloki-derevoprerabotku-i-povyshen/>.

Measure	Description of the measure	Effect on steel producers	Comment
Employment-related 2% state loans (Covid-19) ²⁸⁹	♦ Loans with a rate of no more than 2% will be issued in 2020 to organisations and individual entrepreneurs with employees for the resumption of activities. If certain conditions are met, the debt and interest on it can be written off by the bank that issued the loan (Decree of the Government of the Russian Federation of May 16, 2020, No. 696).	Indirect effect	The measure had a general macroeconomic effect, which could be conducive to positive effects in the steel industry.

Source: compiled by the author

²⁸⁹BUCH 1C. Preferential loan for small business in connection with coronavirus: how to reflect and consider. 06.08.2020. Available at: <https://buh.ru/articles/documents/115817/>. (Accessed 27 April 2023).

6.3.3 Recent developments

The Covid-19 crisis and economic sanctions because of the Russian invasion in Ukraine have affected the architecture of state support measures and financial priorities.

With the imposition of sanctions in 2022, analysts have provided different estimations on the development of the Russian steel market. According to the Ministry of Industry and Trade of Russia, the industry may require about eight years to recover and to adapt to the new sanctions regime. The adaptation strategy would assume the increase in internal consumption and export to new markets in Asia.²⁹⁰ However, the government of Russia is actively relying on circumvention which may help the sector to experience an earlier recovery.²⁹¹ As an example, the Russian NLMK manufactures products in the EU market through its Belgian subsidiary NLMK Belgium Holdings SA and SOGEPA.²⁹² The eight-year period could be an underestimate given further rounds of anti-Russian sanctions and the fight against the circumvention of sanctions.

As a response to EU sanctions, several state support measures for the steel sector were outlined by the Russian government during high-level meetings in May 2022²⁹³ and August 2022.²⁹⁴ They include a reduction of the fiscal burden for companies, export reorientation, and state reserve creation. There is no universal legal act stipulating and clarifying these measures. However, there are several sources which provide more detailed information about related government measures.

The Russian government considered to revise the mineral extraction tax (MET) rate for iron ore mining as well as the special excise tax on liquid steel, which was introduced in 2021 as a result of the high profits of metallurgical companies.²⁹⁵ Due to new sanctions, the burden created by these duties was considered to be excessive. Accordingly, new fiscal regulation was intended to reduce the excise tax on liquid steel, as well as lowering the MET on iron ore and coking coal. The Ministry of Industry and Trade has suggested to reduce the special excise tax on liquid steel.²⁹⁶ The Ministry of Finance has also investigated the financial performance of several industrial enterprises.²⁹⁷ However, at the time of the preparation of this report, the revision of the special excise tax on liquid steel had not been decided by the

²⁹⁰RBC. The Ministry of Industry and Trade has given eight years to restore the export of metallurgists. The share of Asia in foreign supplies already exceeds 50%, 03.08.2022 (in Russian). Available at: <https://www.rbc.ru/business/03/08/2022/62e912a79a794744d2ec40fc>. (Accessed 27 April 2023).

²⁹¹ EU External Action. Some clarifications on the circumvention of EU sanctions against Russia. 19.05.2023. Available at: https://www.eeas.europa.eu/eeas/some-clarifications-circumvention-eu-sanctions-against-russia_en. (Accessed 07 June 2023).

²⁹² Vadim Kolisnichenko. Russian steel producers continue to export to the EU in circumvention of sanctions. GMK Center. 06.09.2022. Available at: <https://gmk.center/news/rossijskie-proizvoditeli-stali-prodolzhajut-eksport-ves-v-obhod-sankcij/> (in Russian) (Accessed on 24.07.2023)

²⁹³President of Russia. List of instructions following the meeting on the development of the metallurgical complex. 18.05.2022 (in Russian). Available at: <http://kremlin.ru/acts/assignments/orders/68449>. (Accessed 27 April 2023).

²⁹⁴Choice of people. Support for Metallurgy: Time to loosen the grip on steel. 02.08.2022 (in Russian). Available at: <http://vybor-naroda.org/lentanovostey/223610-podderzhka-metallurgii-vremja-oslabit-stalnuju-hvatku.html>. (Accessed 27 April 2023).

²⁹⁵Potaeva K. Deputy Prime Minister Denis Manturov proposed new measures to support metallurgists. Vedomosti. 02.08.2022. (in Russian). Available at: <https://www.vedomosti.ru/business/articles/2022/08/02/934082-vitse-premer-manturov-metallurgov>. (Accessed 27 April 2023).

²⁹⁶ Nikolaj Nikolajev. The Ministry of Industry and Trade supported the exemption for the payment of excise duty on liquid steel for metallurgists. Vedomosti. 06.09.2023. (in Russian) Available at: <https://www.vedomosti.ru/business/articles/2022/09/07/939575-minpromtorg-podderzhal-igotu>

²⁹⁷NEDRADV. The Ministry of Industry and Trade proposed to reduce the MET on iron ore (in Russian). Available at: https://nedradv.ru/nedradv/ru/page_news?obj=2daff8ecf59464b8d45e50117308a02e. (Accessed 27 April 2023).

government.²⁹⁸ The Russian government even considered to increase the MET for coal as a result of strong financial results of the coal industry in the previous year.²⁹⁹ Taxes on sales and corporate income can generate incidence-based distortions, which affect the costs of production and prices respectively.³⁰⁰ Trade remedy investigations into Russia's steel industry and its value chain could therefore seek to account for increases in taxes, which tend to increase the prices of raw materials and final steel products and decreases in taxes, which tend to lower the prices of raw materials and final steel products respectively.

The Ministry of Industry and Trade of the Russian Federation has also suggested creating a state reserve for the iron industry to stimulate production and support demand in the industry and with the possibility to further the use of stocks for interventions in the domestic market. The reserve is supposed to be used in the future to reconstruct the war-affected territories.³⁰¹ Due to lacking data, the impacts of the creation of a state reserve are difficult to quantify. However, due to economies of scale and less volatile demand for steel in the domestic market, these measures can have a significant effect on the cost of production and the prices of steel. A state reserve will likely help many Russian steel producers to remain in business despite lacking profitability or factual bankruptcy, contributing to excess capacities maintained in the Russian economy. It is reported that in the first half of 2022, average capacity utilisation dropped from 92% to 80% in Russia, with Magnitogorsk Iron and Steel and Severstal running on 62% and 72% of steel capacity respectively. It was explicitly stated by Russia's Deputy Prime Minister and Minister of Industry and Trade Denis Manturov that parts of the state reserve shall be sold on markets once sanctions are lifted.³⁰² As Russia's largest steelmakers are vertically integrated, these effects extend to upstream mining sectors.

With respect to export reorientation, the Russian government aims to minimise the risks from a decrease in exports and to adopt incentive measures at the level of the EAEU member states for the implementation of industrial cooperation between the countries.³⁰³ Due to lacking implementation measures it is too early to assess the impacts of this political ambition.

Although the detailed data is difficult to obtain on a company-by-company basis, the broad coverage and size of industry support measures in Russia justify a cautious analysis of the prices for steel products in the domestic market. It is very likely that steel producers in Russia are exporting steel at prices below the normal price in the domestic market.

²⁹⁸ Prime. Reduction of MET rates for iron ore is not discussed, Manturov said. 11.11.2022. Available at: <https://1prime.ru/nalogy/20221111/838792772.html>. (Accessed 27 April 2023).

²⁹⁹ Interfax (2023). Russia might raise mineral extraction tax on coal in Q4 given strong industry results - Finance Ministry. Available at: <https://interfax.com/newsroom/top-stories/89422/>. (Accessed 30 January 2024).

³⁰⁰ See, e.g., OECD (2010). Tax Policy Reform and Economic Growth, OECD Tax Policy Studies No. 20. Available at: <https://www.oecd.org/ctp/tax-policy/tax-policy-reform-and-economic-growth-9789264091085-en.htm>. (Accessed 30 January 2024).

³⁰¹ Choice of people. Support for Metallurgy: Time to loosen the grip on steel. 02.08.2022 (in Russian). Available at: <http://vybor-naroda.org/lentanovostey/223610-podderzhka-metallurgii-vremja-oslabit-stalnuju-hvatku.html>. (Accessed 27 April 2023).

³⁰² Vybor Naroda (2022). Metallurgy support: time to loosen the steel grip. Available at: <http://vybor-naroda.org/lentanovostey/223610-podderzhka-metallurgii-vremja-oslabit-stalnuju-hvatku.html>. (Accessed 27 April 2023).

³⁰³ Rusmet. Association NSRO "RUSLOM.COM" analysed the text of the new Strategy for the development of the metallurgical industry of the Russian Federation for the period up to 2030. 11.10.2022 (in Russian), available at: <https://rusmet.ru/assoziacziya-nsro-ruslom-kom-proanalizirovala-tekst-novoj-strategii-razvitiya-metallurgicheskoy-promyshlennosti-rossijskoj-federaczii-na-period-do-2030-goda/>. (Accessed 27 April 2023).

6.4 Republic of Türkiye

The Turkish government provides several support measures and incentive regimes that also apply to steelmakers and companies along the steel production value chain. Support measures are generally derived from the country's overarching long-term economic development plans. As will be outlined below, measures frequently provided by the Turkish government include subsidies, tax rebates, and labour cost support. However, it should be noted though that detailed information on what and how much support is awarded to companies along the steelmaking value chain is not usually publicly available, neither in government publications nor on the side of companies. This is true for federal as well as regional support policies.

6.4.1 Government's support measures

The government of Türkiye provided several investment incentives in line with the objectives of the 11th Development Plan. Most incentives are administered under the auspices of the Ministry of Industry and Technology. These broadly include:³⁰⁴

- ◆ general investment incentives;
- ◆ regional investment incentives;
- ◆ strategic investment incentives; and
- ◆ project-based incentives.

Moreover, a general rule is that the scope and size of government support provided is based on the level of economic development of (six categories of) Turkish regions, whereby less economically developed regions are provided with additional support options and higher financial support.

The broad incentive categories and other key incentive schemes are discussed in detail below.

General Investment Incentives

As concerns general investment incentives, VAT and/or customs duty exemptions are granted for the procurement of machinery and equipment, whereby the minimum fixed investment amount is set between TRY 1.5 and 3 million (\$63,400 and \$127,000) depending on the investment location. According to information from the Ministry of Industry and Technology, the total support can amount to some 20% of the total investment amount.³⁰⁵

Regional Investment Incentives

Regional investment incentives allow for higher grants in less developed regions. Total support can amount to more than 50% of the investment amount. Investments under the regional scheme can generally benefit from:

³⁰⁴ Turkish Ministry of Industry and Technology (2023). Guide to State Incentives for Investments in Türkiye. Available at <https://www.invest.gov.tr/en/library/publications/lists/investpublications/guide-to-state-incentives-for-investments-in-turkiye.pdf>. (Accessed 27 April 2023).

³⁰⁵ Ibid.

- ♦ VAT exemption;
- ♦ customs duty exemption;
- ♦ corporate income tax reduction of 15–55% of investment expenditures depending on the investment location;
- ♦ social security premium support (employer's share) for 2–12 years depending on the investment location;
- ♦ land allocation; and
- ♦ interest rate support in the amount of TRY 1 to 1.8 million (\$76,000) depending on the investment location (support is not applicable to investments in region 1 and 2).³⁰⁶

Under the *Region 6 Investment Incentives*, regional incentives of close to 100% of the investment amount are granted for region 6 (economically least developed regions) investments.³⁰⁷

Under the *Investment Incentives for Priority Regions*, certain “priority” regional incentives of more than 60% of the investment amount are provided for several sectors that are part of the steel production value chain or key sources of domestic demand for steel products.

For the steel value chain, these sectors / economic activities include:

- ♦ mine extraction investments and mine processing investments;
- ♦ mining exploration investments to be made in licensed fields by investors with valid Exploration Licenses or Certificates issued under the Mining Law;
- ♦ manufacture of renewable energy turbine and generators and wind panel,
- ♦ investments for the manufacturing of products or components developed through R&D projects supported by the Ministry of Industry and Technology, TUBITAK³⁰⁸ and KOSGEB³⁰⁹;
- ♦ investments for test centres for products in medium and high-tech industry segment stipulated in the OECD's definition for technology intensity;
- ♦ nuclear energy plant investments;
- ♦ R&D and ecological investments;
- ♦ integrated investments for the production of aluminium flat products by direct cooling slab casting and hot rolling method;
- ♦ investments in electricity production through recycling from waste heat;
- ♦ investments in liquefied natural gas (LNG) and underground natural gas storage of minimum TRY 50 million (\$2.1 million);
- ♦ electricity production investments where the mines in group 4-b of the 2nd article of the Mining Law 3213 are used as input based on a valid mining operation permit and license issued by the Ministry of Energy and Natural Resources; and

³⁰⁶ Region 1 includes Ankara, Antalya, Bursa, Eskişehir, İstanbul, İzmir, Kocaeli, Muğla, Tekirdağ. Region 2 included Aydın, Balıkesir, Bilecik, Bolu, Çanakkale, Denizli, Edirne, Isparta, Karabük, Kayseri, Kırklareli, Konya, Manisa, Sakarya, Yalova.

³⁰⁷ Region 6 includes Adıyaman, Ağrı, Ardahan, Batman, Bingöl, Bitlis, Diyarbakır, Hakkari, Iğdır, Kars, Mardin, Muş, Siirt, Şanlıurfa, Şırnak, Van.

³⁰⁸ TUBITAK is the Scientific and Technological research Council of Türkiye. TUBITAK supports innovation, academic and industrial R&D studies but also in line with national priorities develops scientific and technological policies and manages R&D institutes, carrying on research, technology, and development studies. Teydep is a Technology and Innovation Support Program administered by TUBITAK.

³⁰⁹ KOSGEB is the Turkish Small and Medium Enterprises Development Organisation.

- ◆ investments in energy efficiency projects carried out in existing manufacturing industry facilities with annual minimum energy consumption of 500 tonnes of oil equivalent, designed to provide at least 15% energy saving.

Key eligible (downstream) sectors demanding steel products include:

- ◆ industrial plant investments containing the production of electrical or hydrogen-based transportation vehicles worth a minimum of TRY 50 million (\$2.1 million);
- ◆ investments to produce products in high-technology industrial classification according to OECD's definition of technological intensity (US-97 Code: 2423, 30, 32, 33 and 353);³¹⁰
- ◆ investments in the defence sector approved by the Presidency of Defence Industries; and
- ◆ motor parts, powertrains/parts and automotive electronics investments of minimum TRY 20 million (\$845,368); motor investments of minimum TRY 75 million (\$3.17 million) and investments in motor land vehicles key industry of at least TRY 300 million (\$12.68 million).

Strategic Investment Incentives

Strategic investment incentives are provided for "highly important and strategic products". The strategic investment incentive policy has been determined for the sectors that use imported intermediate goods and raw materials and are the source of high foreign trade deficit. Relevant sectors were initially defined by the "Input Supply Strategy (ISS)" that was prepared by the Ministry of Economy and published in the Official Gazette as of December 2012. The aim of ISS was to direct both domestic and foreign investment expenditures to these sectors, including unprocessed high raw material importing sectors such as iron-steel and mining.³¹¹

Project-based (Super) Incentives

One major government-sponsored industry support program is the so-called "Super Incentives Regime", which is available for Turkish steel manufacturers. In June 2016, the Turkish government announced a new law intended to support investments and business activity in "strategically crucial sectors", including the steel industry.

According to Economy Minister Nihat Zeybekci, the Turkish government aimed to "offer whatever it takes to create our global giants, to secure our material and energy future and to encourage several strategic investments in key areas." Referring to the iron and steel industry, Minister Zeybekci stated that "[the Turkish government] will choose five-to-six companies which can meet Türkiye's needs in this sector and ask what they want. If they want land, we will give it. If they want ports, road or railways, we will offer them as well. If they want affordable electricity, we will offer them a 20-year price plan. If they want 10- or 20-year-long tax holidays, we will [offer] it as well. We will do all of them publicly." With regard to protective trade and industrial policies, Minister Zeybekci noted that the

³¹⁰These include, e.g., aircraft and spacecraft. OECD (2011). Isic Rev. 3 Technology Intensity Definition. Available at <https://www.oecd.org/sti/ind/48350231.pdf>. (Accessed 27 April 2023).

³¹¹Haciköylü, C. and Önder, Z. K. (2019). Strategic Investment Incentives. Paper prepared for the 34th International Finance Conference in Ankara, April 24-27, 2019. Available at <https://cdn.istanbul.edu.tr/file/JTA6CLJ8T5/6019731A59B940DD8169CB0358E47CD7>. (Accessed 27 April 2023).

government is also willing to provide “protection regarding the entrance of others into Türkiye. We will provide all as long as the investment is made in Türkiye.”³¹² In August 2016, the Turkish government provided further detail on its plans to support crucial strategic investments in the domestic economy. Economy Minister Zeybekci announced that the new incentive package would take historic steps to support investments that would accelerate the country's economy, including 20 years of tax exemption, a 10-year fixed price for electricity, purchase guarantees and having loan interest paid by the state. Additional elements of the support program include transportation support, the granting of land rights, energy guarantees, exemptions from corporate taxes, labour market incentives, and easier access to finance.³¹³ As outlined below, several large companies, including steelmakers, still benefit from the super incentives regime.

Speaking to a Turkish newspaper, Minister Zeybekci “offered an illustrative example of the construction of a strategically important port. The relevant company will construct their factory, while the government will provide it with loan interest, as well as a 20-year tax exemption and a 10-year fixed price for electricity. The state will buy the products produced in the factory and continue to do so for a while. An exchange guarantee will be given for investments that meet the consumption needs of the state. Recalling that Japan and South Korea implemented similar incentive systems in the 1980s, Zeybekci said the state would also provide land for investment. Türkiye’s needs in certain sectors are to be determined. The need in the sectors of energy, nuclear power, as well as iron and steel are known, but technology, transmission and production bodies should mainly be privatized, according to Zeybekci.”³¹⁴

Following political announcements, the Law on Supporting Investments on Project Basis and Amending Certain Laws and Decree Laws (Law No. 6745) entered into force on 7 September 2016. Law 6745, which contains 82 articles, provides for new incentives for eligible investments on a project basis.

Article 80 provides for a project-based investment incentives package including financial support for innovative, technology-oriented, R&D focused, high value-added projects that help to reduce foreign dependency. The article provides a wide range of powers to the Council of Ministers for the Council to take the necessary steps about granting the determined incentives to investment projects. It is designed to encourage investments with the potential to reduce dependency on the importation of intermediate goods vital to Türkiye’s strategic sectors, to boost investment support for lesser developed regions, to promote clustering activities, and to support investments that will create the transfer of technology.³¹⁵

³¹²Hürriyet Daily News (2016). Türkiye to offer 'whatever it takes' for strategic investments, including 20 tax-free years. Article of June 8. 2016. Available at <https://www.hurriyetdailynews.com/Türkiye-to-offer-whatever-it-takes-for-strategic-investments-including-20-tax-free-years-100246>. (Accessed 27 April 2023).

³¹³Daily Sabah (2016). Tax free investments for 20 years in new package. Article of August 15, 2016. Available at <https://www.dailysabah.com/economy/2016/08/15/tax-free-investments-for-20-years-in-new-package-1471208870>. (Accessed 27 April 2023).

³¹⁴Daily Sabah (2016). Tax free investments for 20 years in new package. Article of August 15, 2016. Available at <https://www.dailysabah.com/economy/2016/08/15/tax-free-investments-for-20-years-in-new-package-1471208870>. (Accessed 27 April 2023).

³¹⁵Mondaq (2016). Türkiye: New Wave of Investment Incentives in Türkiye. Article of 26 September 2016. Available at <https://www.mondaq.com/Türkiye/government-contracts-procurement--ppp/530358/new-wave-of-investment-incentives-in-Türkiye>. (Accessed 27 April 2023).

Projects seeking support under the new law must be in conformity with the Turkish government's targets set forth in national development plans and annual programs, along with those specifically promoted by the Ministry of Economy.³¹⁶ The conditions, however, can be subject to interpretation. It is suggested that the investment projects are either subsidised by the Ministry of the Economy or are R&D-intensive or have high added value to be granted the incentives. By means of the Cabinet Decree No. 2016/9495 "Regarding the State Assistance to be Extended to Investments on the Basis of Projects", the type of investments to benefit from "super incentive system" and the procedure to be used have been clarified.³¹⁷ Key project-based support instruments and tax exemptions are as follows:

- ◆ Corporate tax exemption up to 100% and investment support up to 200%, or a corporate tax exemption exclusively for the profits derived from the investment for the first 10 years following the commencement of operations;
- ◆ Income tax withholding support;
- ◆ Customs duty exemption;
- ◆ Free land allocation for 49 years in instances where the investment is made on an immovable property belonging to the Turkish Treasury;
- ◆ Free transfer of these immovable properties for projects completed and that provided the anticipated employment for at least five years;
- ◆ Social security premium support for employer's share for up to 10 years;
- ◆ Compensation of up to 50% for energy consumption expenses related to the investment for up to 10 years;
- ◆ Abolishment of interest on loans utilised to cover fixed investments;
- ◆ Salary support for qualified employees for up to five years; eligible support is capped at twenty times the gross monthly minimum wage;
- ◆ State partnership of up to 49% provided that an Initial Public Offering or direct sale to investors will be conducted within 10 years.

Within the scope of the Project Based Incentive System carried out by the Ministry of Industry and Technology, investments with a minimum fixed investment amount of TRY 1 billion (\$42.3 million) that meet the criteria will be supported. Relevant legal bases are:

- ◆ Decision No. 2016/9495 on Granting Project-Based State Aid to Investments;³¹⁸
- ◆ Communiqué on the Implementation of the Decision on Granting Project-Based State Aid to Investments (2019/1);³¹⁹
- ◆ the relevant page of the Ministry of Industry and Technology;³²⁰

³¹⁶ Investment Office of the Presidency of the Republic of Türkiye (2016). Türkiye to grant new incentives for eligible investments on a project basis. Article of September 8, 2016. Available at <https://www.invest.gov.tr/en/news/news-from-Türkiye/pages/Türkiye-grants-new-incentives-for-eligible-investments-on-project-basis.aspx>. (Accessed 27 April 2023).

³¹⁷ Mondaq (2018). Türkiye: New Tools to Support Local Production: Project-Based Super Incentives in Türkiye. Article of 22 May 2018. Available at <https://www.mondaq.com/Türkiye/investment-strategy/703654/new-tools-to-support-local-production-project-based-super-incentives-in-Türkiye>. Also see presentation by the Turkish Ministry of Industry and Technology (T.C. SANAYİ VE TEKNOLOJİ BAKANLIĞI). Available at <https://www.sanayi.gov.tr/destek-ve-tesvikler/yatirim-tesvik-sistemleri/md0303011615>. (Accessed 27 April 2023).

³¹⁸ Turkish Ministry of Industry and Technology. Available at <https://www.sanayi.gov.tr/mevzuat/diger/mc0403018202>. (Accessed 27 April 2023).

³¹⁹ Turkish Ministry of Industry and Technology. Available at <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=34100&MevzuatTur=9&MevzuatTertip=5>. (Accessed 27 April 2023).

³²⁰ Turkish Ministry of Industry and Technology. Available at <https://www.sanayi.gov.tr/destek-ve-tesvikler/yatirim-tesvik-sistemleri>. (Accessed 27 April 2023).

- ♦ the introductory presentation of the Project Based Incentive System;³²¹ and
- ♦ Decisions of the Council of Ministers and President regarding the investments that have been decided to be supported so far.³²²

Support within the scope of Article 80 of Law 6745 will be paid through the Ministry of Economy's budget. In addition to the above support measures, investors may also benefit from public purchase guarantees. Following an approval of the Council of Ministers on the amount and time interval, goods produced by eligible investors will be subject to guarantee of purchase. Moreover, law 6745 also provides for the possibility to exempt investors from certain allocation, license, and registration processes and, subject to the approval of the Council of Ministers, all infrastructure investments will be reimbursed. Investments that are deemed appropriate to be supported on a project-based basis can be provided with government support measures outlined in Table 22 at the appropriate rate and upper limits.

More recent information about decisions of the Council of Ministers and the President regarding the investments that have been supported so far is provided by the Turkish Ministry of Industry and Technology. As of January 2023, 33 companies were supported by a wide range of measures, such as grants, energy cost coverage, VAT and corporate tax exemptions, and funds for staff. It should be noted, however, that the precise level (financial equivalent) of the measures is not provided in the government's documents. The companies supported are outlined in Table 23. Three companies are from the metallurgical industry. Two steelmakers (Asil Çelik and Tosyali Gübre) and one aluminium producer (Assan Alüminyum), received support under the regime.

³²¹Turkish Ministry of Industry and Technology. Available at <https://www.sanayi.gov.tr/destek-ve-tesvikler/yatirim-tesvik-sistemleri/md0303011615>. (Accessed 27 April 2023).

³²²Turkish Ministry of Industry and Technology. Available at <https://onedrive.live.com/?authkey=%21ADuRnqRfI%5F2sFe4&id=5BE894F4BDC738F0%2163306&cid=5BE894F4BDC738F0>. (Accessed 27 April 2023).

Table 22: Detailed overview of government support measures under the Project-based (Super) Incentives Regime

Measure/incentive	Description
VAT Exemption	VAT Exemption for Machinery – Equipment purchases, Software and Property Rights purchases and leases
Customs Duty Exemption	Customs Duty Exemption for Imported Machinery – Equipment Purchases
Tax Discount	Corporate Tax Deduction up to 2 times the investment amount or Corporate Tax Exemption for up to 10 years ♦ Corporate Tax Deduction rate: Maximum 100% (Investment Contribution Rate: Maximum 200%). ♦ Tax Reduction Support, dated 20/8/2016 and numbered 6745, in case it is proven by the Certified Public Accountant Report that at least 2% of the net sales are spent on research and development each year for 3 years following the investment completion visa, and some It is applied by adding 5 points to the Investment Contribution Rate determined in the Support Decision, provided that it does not exceed the maximum rates (200%) determined in Article 80 of the Law on Amending Laws and Decrees.
Insurance Premium Employer Share Support	Up to 10 years ♦ Following the issuance of the investment incentive certificate, in order to start the Insurance Premium Employer Share Support application for those employed with the investment to be made within the scope of the incentive certificate, during the investment period, the user must apply to the Ministry via E-TUYS and, if requested by the Ministry, the relevant documents must be uploaded to the system. The Insurance Premium Employer's Share Support application starts the month following the notification of the investor's information to the Social Security Institution, and the application is terminated after it is utilised for the period specified in the incentive certificate. ♦ Insurance Premium Employer's Share Support can be started before the investment completion visa, if requested by the investor and approved by the Ministry.
Qualified Personnel Support	Up to 20 times the monthly gross minimum wage, not exceeding 5 years ♦ Definition of Qualified Personnel: Key personnel to be recruited from the country or abroad, employed by the investor for a fee, who are employed with the investment, which is the subject of the Support Decision, who have the necessary qualifications for the investment to provide the promised results, who have special knowledge, and experience in the sector. ♦ For qualified personnel employed after the issuance of the investment incentive certificate, the investors must apply to the Ministry and request Qualified Personnel Support. Requests after one year following the date of completion of the investment incentive certificate will not be considered. In order to benefit from the Qualified Personnel Support, in the application to be made to the Ministry for the first time and for the qualified personnel accepted by the Ministry, the defined fields in the E-TUYS application must be filled in by the users for each qualified personnel and, if requested by the Ministry, the relevant documents must be uploaded to the system. ♦ Applications for qualified personnel support cannot be made for the shareholders and members of the board of directors and their first- and second-degree relatives. ♦ For the personnel who benefit from the Qualified Personnel Support, no other cash wage support provided by the public can be benefitted. Qualified personnel support is not provided for personnel who benefit from cash wage support within the scope of other public support programs.

Measure/incentive	Description
	♦ Qualified personnel support, following the notification of the qualified personnel deemed appropriate based on the investor's application to the investor. Provided that the monthly maximum support amount determined in the Support Decision is not exceeded, it is applied for the period specified in the Support Decision by paying the net salary paid to the qualified personnel. If the total maximum support amount specified in the Support Decision is reached, qualified personnel support payments are terminated. Support payments are made in the period following the company's application. ♦ The current employees of the investor who are declared to be employed only for the investment within the scope of the incentive certificate can also be considered as qualified personnel. ♦ After the last month in which the qualified personnel worked full-time for the investment within the scope of the incentive certificate, the support application for these personnel is terminated. If the qualified personnel within the scope of the support application are excluded from the scope of the application due to termination of employment or other reasons, it is necessary to apply to the Ministry as stated above so that the same personnel or other personnel can be included in the application instead of these personnel. If deemed appropriate by the Ministry, the support application can be continued for the remaining qualified personnel for the remaining period, considering the date when the first personnel excluded from the system are included in the scope of the application. ♦ Qualified Personnel Support, payment periods are February, May, August, and November.
Energy Support	♦ Energy support is applied until it reaches the maximum support amount, provided that the rate and time determined in the Support Decision is not exceeded, starting from the month following the month in which it is determined that it is partially operational, or the completion visa is made. The support application starts from the first reading date of the invoice issued in the month following the month in which it is determined that it has been partially operational, or the completion visa is issued, and the application is made for the period specified in the Support Decision. ♦ If the maximum support amount specified in the Support Decision is reached, the Energy Support payments are terminated. ♦ If it is determined on site that it has been partially put into operation, Energy Support can be used in proportion to the ratio of the realised machinery and equipment amount to the machinery and equipment amount stipulated in the investment incentive certificate. Determination of partial operation can be done once a year at the most, and the total amount of Energy Support that can be benefitted before the investment completion visa cannot exceed 50% of the maximum Energy Support amount determined in the Support Decision. ♦ In the application to be made to the Ministry following the approval of the appraisal report indicating that at least two loss adjusters appointed by the Ministry determines that the operation is partially operational in order to benefit from the energy support, the sworn financial advisor report regarding the investment expenditures is sent to the Ministry or the investment completion visa is issued, The fields must be filled in and, if requested by the Ministry, the relevant documents must be uploaded to the system. ♦ Energy Support payments are made to eligible investors in the period following the month of the request. ♦ The Energy Support payment is made on the basis of the energy consumption expenditure, which is arranged by the institutions or organizations from which the energy is supplied, excluding transportation, transmission, distribution, tax, fund and similar expenses, and the price is paid in cash in the billing period. ♦ It is necessary to use a separate meter for the investment that is foreseen to benefit from the Energy Support. However, if some of the facilities that use energy from the same meter are not related to the investment within the scope of the Support Decision and it is not possible to separate them in terms of energy consumption, the incentive certificate scope of the mentioned meter will be

Measure/incentive	Description
	applied to the relevant distribution company with the annual energy consumption amount and consumption average starting from the month before the investment start date. through attested. ♦ The determined rate of the amount corresponding to the amount of energy consumption on this consumption average, which is accepted as the current consumption, is paid as Energy Support.
Interest or Dividend support	♦ Upper limit of Interest/Dividend support: Maximum 80% of Interest/Dividend Share ratio. ♦ Upper limit of investment amount that can benefit from Interest/Dividend Support: Fixed maximum 80% of the investment amount ♦ Banks and Financial Leasing Institutions that have signed the Interest Protocol: https://www.sanayi.gov.tr/destek-ve-tesvikler/yatirim-tesvik-systems/md0803011615 ♦ Interest or dividend support can be applied for investment loans with a maturity of at least one year to be used from intermediary institutions residing abroad, or within the framework of a certified public accountant's report or the notifications of the domestic bank intermediating the loan. In order to be able to apply interest or profit share support for investment loans or investment financing used from intermediary institutions residing abroad, a certified public accountant's report containing the determination of the use of the loan or financing for investment within the scope of the incentive certificate, usage information and the amortization plan including the undue payments, or the loan or The request of the domestic bank that mediates the financing must be uploaded via the E-TUYS application and the request must be approved as a result of the evaluation to be made by the Ministry. Following the payment of the principal, interest or dividend for investment loans used from intermediary institutions residing abroad and approved by the Ministry, or for the financing of the investment, on the due date specified in the redemption plan, the relevant certified public accountant's report or the interest or dividend to be prepared by the bank intermediating the loan or financing. support request schedule must be uploaded to the system via the E-TUYS application within ten working days following the due date. Interest or dividend support payments for those deemed appropriate as a result of the evaluation to be made by the Ministry are made in the payment period following the maturity. ♦ In investments to be made with foreign loans, the payment of interest or dividend support is made by considering the CBRT's foreign exchange selling rate on the maturity date.
Public Procurement Guarantee for a certain period and amount	♦ Discretionary application.
Investment place allocation	♦ Discretionary application.
Infrastructure support when required by the project	♦ Discretionary application.
Making facilitating arrangements in permits, allocations, licenses, licenses and registrations and other legal and administrative processes brought by laws	♦ Discretionary application.

Measure/incentive	Description
Investment place allocation	♦ Discretionary application.
Grant Support	♦ In order to benefit from the grant support, the defined fields in the E-TUYS application must be filled in by the users in the application to the Ministry and the relevant documents must be uploaded to the system if requested by the Ministry. ♦ Grant support payment is at the rate specified in the Support Decision, not exceeding 25% of the realised machinery and equipment amount based on the certified public accountant's report showing the realizations of machinery and equipment investments, based on the first application and the applications to be made following the completion of the six months following the date of each application. until the maximum support amount is reached, in the period following the month in which the request is made.

Source: Turkish Ministry of Industry and Technology, 2023³²³

³²³Turkish Ministry of Industry and Technology: Project Based Incentive System, conditions and support measures. Last Update Date: 21/04/2022. Available at https://www.yatirimadestek.gov.tr/pdf/assets/upload/dosyalar/detay_proje_bazli_tesvik_sistemi.pdf. (Accessed 27 April 2023).

Table 23: Companies awarded support measures under the Ministry of Industry and Technology Project Based Incentive System, as of January 2023

Company	Date of decision	Industry
ETİ Bakir	20.03.17	Copper products & fertiliser producer
Ersan Petrol Sanayii	30.04.18	Petroleum refinery
Dovaska Advanced Compsite Materials	30.04.18	Composite producer
Sasa Polyester Sanayi	30.04.18	Polyester producer
İpek Kanepe Mobilya İmalat İthalat İhracat	30.04.18	Furniture company
Atayurt Insaat	14.05.18	Renewable energy company
BMC Otomotiv	14.05.18	Armoured car manufacturer
Eko Temiz Enerji	14.05.18	Renewable energy company
Assan Alüminyum	14.05.18	Manufacturer of aluminium products
BMC Otomotiv	14.05.18	Armoured car manufacturer
Alvimedica Tibbi Ürünler	14.05.18	Medical technologies company
Sütaş Süt Ürünleri	18.05.18	Foodstuff company
Most Makina Enerji Taahhüt	04.06.18	Chemical products company
BMC Otomotiv	02.08.18	Armoured car manufacturer
Tusas Turk Havacılık Ve Uzay	02.08.18	Aerospace
BMC Otomotiv	02.08.18	Armoured car manufacturer
Bosch	02.08.18	Automotive equipment
CFS Petrokimya Sanayi Anonim Şirketi	26.11.18	Petrochemical products
Oayk Renault Otomobil	30.04.19	Carmaker
Kalyon PV Güneş Teknolojileri Fabrikası (Ankara)	04.09.19	Solar energy
Türk Aerospace Inc.	04.09.19	Aerospace
Ceyhan Polipropilen Üretim	04.09.19	Petrochemical products
Asil Çelik	04.09.19	Steelmaker
Baykar Makina	04.09.19	Aerospace / drones
Ford Otomotiv	03.12.19	Carmaker
Türkiye'nin Otomobili Girişim Grubu	26.12.19	Carmaker
Oyak Sentetik Karbon	03.12.20	Carbon products producer
Eldor Elektronik	19.03.21	Plastic materials producer
Aspilsan Enerji	05.08.21	Battery producer
ETİ Bakir	02.09.21	Copper products and fertilisers
Assan Group Makine Savunma	28.10.21	Military equipment company
R. B. Karesi İthalat İhracat Tekstil	28.10.21	Textiles company
Tosyali Gübre	18.08.22	Producer of steel and fertilisers

Source: Decisions of the Council of Ministers and President regarding the investments that have been decided to be supported so far.³²⁴ Also see Mondaq (2018).³²⁵

A formal decision to support the steelmaker Asil Çelik was made in September 2019. Asil Çelik was seeking support for the establishment of a production facility for high-quality steels and super-alloy materials for the machinery, automotive, transportation and energy sectors to be built in the Turkish city of Bursa. The new facility was estimated to add a capacity of 60,000 tonnes of high-quality steel.³²⁶ The investment project is supported by:

- ◆ a customs duty exemption;
- ◆ VAT exemption;
- ◆ a VAT refund tax reduction rate of 100%;
- ◆ an investment contribution rate of 60%;
- ◆ income tax withholding support for 10 years;
- ◆ 10 years employer insurance premium support; and
- ◆ 50% energy consumption support for energy expenditures for up to 10 years from the date of operation of the investment (not to exceed TRY 50 million).

A formal decision to support the steelmaker and producer of fertiliser Tosyali Gübre was also made in September 2019. However, there is no public information about whether and how much funding has gone into investments related to steel production. According to publicly available information, Tosyali Gübre was seeking support for an investment in a fertilizer production facility with the following annual capacities: 581,000 tonnes of urea, 660,000 tonnes of calcium ammonium nitrate, 330,000 tonnes of diammonium phosphate, 224,000 tonnes of gall ammonium sulphate, and 60,000 tonnes of potassium nitrate. The investment project is supported by:

- ◆ a customs duty exemption;
- ◆ a VAT exemption;
- ◆ a tax reduction rate of 100%;
- ◆ an investment contribution rate of 90%;
- ◆ income tax withholding support for 10 years;
- ◆ 10 years employer insurance premium support with no maximum amount; and
- ◆ 50% energy consumption support for energy expenditures for up to 10 years from the date of operation of the investment (not to exceed TRY 50 million (~\$2.1 million)).

While not mentioned in official government documents company information reveals that Tosyalı Group announced in 2018 plans to become one of the biggest investors in the “Project-Based Incentive System”. Tosyalı Holding was preparing to build a new integrated

³²⁴Turkish Ministry of Industry and Technology: Project Based Incentive System, conditions and support measures. Last Update Date: 21/04/2022. Available at https://www.yatirimadestek.gov.tr/pdf/assets/upload/dosyalar/detay_proje_bazli_tesvik_sistemi.pdf. Decisions can be downloaded at <https://onedrive.live.com/?authkey=%21ADuRngRf%5F2sFe4&id=5BE894F4BDC738F0%2163306&cid=5BE894F4BDC738F0>. (Accessed 27 April 2023).

³²⁵Mondaq (2018). Türkiye: New Tools to Support Local Production: Project-Based Super Incentives in Türkiye. Article of 22 May 2018. Available at <https://www.mondaq.com/Türkiye/investment-strategy/703654/new-tools-to-support-local-production-project-based-super-incentives-in-Türkiye>. (Accessed 27 April 2023).

³²⁶Decision of the President (2019). Available at <https://www.resmigazete.gov.tr/eskiler/2019/09/20190905-2.pdf>. (Accessed 27 April 2023).

plant in Osmaniye within the framework of this incentive. Töşyalı Holding stated plans to become the first private sector company to manufacture steel from ore with the Integrated Mining Project, with an investment worth seven billion dollars and three-billion-dollar support. Aiming to manufacture 8 million tonnes of steel including stainless steel when the planned investments are completed, Töşyalı Holding “will have reached a manufacturing capacity of over 20 million tonnes”.³²⁷ It should be noted that there is no publicly available information about whether and to which extent this planned investment ultimately benefitted from government support.

On 9 October 2019, the US Rebar Trade Action Coalition³²⁸ submitted a subsidy program allegation to the International Trade Administration of the US Department of Commerce.³²⁹ It was argued that the Turkish government established a Super Incentive Scheme (Law No. 6745 and Council of Ministries Decree No. 2016/9495 Granting Project-Based Government Support for the Investment Decision). According to the US Rebar Trade Action Coalition, a variety of benefits are available for steelmakers under this program, including tax benefits, customs duty exemptions, rights of tenancy, coverage of insurance contributions, grants, and state partnerships. It was also argued that in 2018, Yıldız Demir Celik, a Turkish iron and steel manufacturer, received benefits under this program.³³⁰ Investigations into investment incentives were initiated under the name “Comprehensive Investment Incentives”, which also include the Super Incentive Scheme. Except investment incentive certificates, investment incentives programs were not determined to be countervailable. In December 2020, the US Department of Commerce determined subsidy rates for Celik Halat and Güney Celik based on tax incentives related to the Investment Incentive Scheme, the Large-Scale Investment Regime, the Strategic Investment Regime, and the General Investment Incentive Regime.³³¹

In February 2023, the US Department of Commerce found that producers or exporters of steel concrete rebar from the Türkiye “made sales of subject merchandise at less than normal value during the period of review July through June 2021.”³³²

³²⁷ Töşyalı Group (2023). Available at <https://www.tosyaliholding.com.tr/en/corporate/history>. (Accessed 27 April 2023).

³²⁸ Petitioner’s Letter, “Steel Concrete Reinforcing Bar from Türkiye: Request for Administrative Review,” dated November 30, 2018. Available at <https://access.trade.gov/resources/frn/summary/turkey/2020-00743-1.pdf>, footnote 6. (Accessed 24 October 2023).

³²⁹ US Department of Commerce (2020). Decision Memorandum for the Preliminary Results of Countervailing Duty Administrative Review, and the Preliminary Intent to Rescind, in Part: Steel Concrete Reinforcing Bar from the Republic of Türkiye; 2017. January 9, 2020. Available at <https://access.trade.gov/Resources/frn/summary/Türkiye/2020-00743-1.pdf>. (Accessed 27 April 2023).

³³⁰ Decision Memorandum for the Preliminary Results of Countervailing Duty Administrative Review, and the Preliminary Intent to Rescind, in Part: Steel Concrete Reinforcing Bar from the Republic of Turkey. Available at <https://access.trade.gov/resources/frn/summary/turkey/2020-00743-1.pdf>.

³³¹ US Department of Commerce. Decision Memorandum for the Final Determination of the Countervailing Duty Investigation of Prestressed Concrete Steel Wire Strand from the Republic of Turkey. 7 December 2020. Available at <https://access.trade.gov/Resources/frn/summary/turkey/2020-27310-1.pdf>.

³³² US Department of Commerce (2023). Steel Concrete Reinforcing Bar From the Republic of Turkey: Final Results of Antidumping Duty Administrative Review and Final Determination of No Shipments; 2020-2021. Accessed at <https://www.federalregister.gov/documents/2023/02/07/2023-02592/steel-concrete-reinforcing-bar-from-the-republic-of-turkey-final-results-of-antidumping-duty>. (Accessed 27 April 2023).

Large-scale Investment Incentive Scheme

Until August 2019, steel producers were also eligible to receive support under the “Large Scale Investment Incentive Scheme”, which aimed to promote technology, R&D capacity, and competitiveness of 12 key industries, including mining and metal production activities. The terms and rates of the programme provided are shown in Table 24.

Table 24: Terms and rates of supports provided within Türkiye’s Large-Scale Investment Incentives Scheme

Large-Scale Investment Incentives Scheme Instruments								
Incentive Instruments			Region					
			I	II	III	IV	V	VI
VAT Exemption			Yes	Yes	Yes	Yes	Yes	Yes
Customs Duty Exemption			Yes	Yes	Yes	Yes	Yes	Yes
Tax Reduction		Tax Reduction Rate (%)	50	55	60	70	80	90
		Reduced Tax Rate (%)	10	9	8	6	4	2
Rate of Contribution to Investment (%)		Out of OIZ*	25	30	35	40	50	60
		Within OIZ*	30	35	40	50	60	65
Social Security Premium Support (Employer’s Share)	Support Period	Out of OIZ*	2 years	3 years	5 years	6 years	7 years	10 years
		Within OIZ*	3 years	5 years	6 years	7 years	10 years	12 years
	Upper Limit for Support (%)	Out of OIZ*	3	5	8	10	11	No limit
		Within OIZ*	5	8	10	11	No limit	No limit
Land Allocation			Yes	Yes	Yes	Yes	Yes	Yes
Social Security Premium Support (Employee’s Share)			N/A	N/A	N/A	N/A	N/A	10 years
Income Tax Withholding Allowance			N/A	N/A	N/A	N/A	N/A	10 years

Source: Ministry of the Economy and Türkiye Company Register. *OIZ = Organised Industrial Zones.³³³

Technology Investment Incentives

Similar support measures, which are not linked to regions, are foreseen for medium-to-high-technology investments. These do not explicitly cover steel producers but target several industries that intensively use steel as an input to production, namely manufactures of machinery and equipment, electrical Machinery and equipment, motor land vehicles, railway and tramway locomotives and wagons, and transportation vehicles.³³⁴

³³³Turkish Ministry of the Economy (2023). Available at https://trade.gov.tr/data/5b8f803013b8761f041fe793/TürkiyeIncentiveSystem_English.pdf. Also see UNCTAD Investment Policy Hub (2019). Available at <https://investmentpolicy.unctad.org/investment-policy-monitor/measures/3440/Türkiye-introduces-new-investment-incentive-scheme>.

³³⁴ Turkish Ministry of Industry and Technology (2023). Guide to State Incentives for Investments in Türkiye. Available at <https://www.invest.gov.tr/en/library/publications/lists/investpublications/guide-to-state-incentives-for-investments-in-turkiye.pdf>. (Accessed 27 April 2023).

Technology-focused Industry Move Program

On 7 August 2019, two Presidential Decrees no. 1402 and 1403 changed the existing investment incentive regimes in Türkiye. Firstly, the large-scale investment incentive scheme was abolished. Secondly, a new "Technology Focused Industry Move Program" was introduced. This program aims at encouraging investment concerning products from the Priority Products List determined by the Ministry of Industry and Technology. Thirdly, the minimum investment requirements were set at the level of TRY 50 million for investments falling within the scope of the Technology Focused Industry Move Program, and TRY 500 million for other investment projects.³³⁵

The Official Statement of the Ministry of Industry and Technology on Making Amendments to the Priority Product List entered into force after being published in the Official Gazette on 27 February 2021. The aim of the Technology Focused Industry Move program is to increase value-added production of medium-to-high and high technology level products. Within the scope of the program are sectors with medium-to-high and high technology inputs and production methods: chemistry, pharmacy, medical and dental appliances manufacturing, computer, electronics and optics, electrical equipment, machinery, transportation vehicles or any other critically important for the development of the sectors in these seven fields. A list of 919 products and innovative fields selected from these sectors was announced in the Official Gazette.

Within the scope of the Industry Move Program, the machinery sector was determined as the first focus sector and the first applications were accepted from companies operating in the light machinery sector.³³⁶ There is no publicly available evidence that steel companies have already received any support under this scheme. However, available information indicates that the Ministry of Industry and Technology has discretion over the actual scope of the program. For example, an Evaluation Committee will evaluate applications and may decide that certain investment projects will be incentivised within the scope of "strategic investments".³³⁷ Steel manufacturers may in the future become beneficiaries of this program.

TUBITAK R&D Incentives

The Turkish government also has in place support schemes for corporate R&D. Most of them are managed by TUBITAK, the Scientific and Technological Research Council of Türkiye. The mission of TUBITAK is to support innovation, academic and industrial R&D studies, but also, in line with national priorities, to develop scientific and technological policies and manage R&D institutes.

TUBITAK's 1511 coded R&D Support Program in Priority Areas aims to support and coordinate national R&D projects which aim at increasing technological competence and knowledge, evaluating existing capabilities in different areas, developing unique technologies, and gaining acceleration in technological development. The 1511 Program

³³⁵ UNCTAD Investment Policy Hub (2019). Available at <https://investmentpolicy.unctad.org/investment-policy-monitor/measures/3440/Türkiye-introduces-new-investment-incentive-scheme>. (Accessed 27 April 2023).

³³⁶ Saha Istanbul (2020). The flagship of the National Technology Move; "SAHA Istanbul". Available at <https://www.sahaistanbul.org.tr/en/haberler/the-flagship-of-the-national-technology-move-saha-istanbul>. (Accessed 27 April 2023).

³³⁷ Baker McKenzie, *New Amendments to the Investment Incentive Legislation*. Available at <http://esinxchange.com/rv/ff004ff0abb50d3c8673f58ccb408e463f54e91d>. (Accessed 19 Jan 2024).

also aims to fund R&D projects that are submitted within Technology Focused Industry Movement Program calls.

As concerns funding criteria,

- ♦ the subject and scope of the projects to be supported under the program and the conditions for the application are specified in call announcements;
- ♦ the projects are evaluated in one step by getting direct project proposal;
- ♦ project limits are specified in the call announcement; SMEs receive 75% and large firms receive 60% of all eligible project expenditures as grants;
- ♦ 10% of expenses are also included in the budget as compensation of project based overhead expenses; and
- ♦ if requested, multiple pre-payments are made to companies.³³⁸

Public information about direct or indirect government support granted to steelmakers is generally scarce. This is also true for grants devoted to R&D activities of steel making companies.

Erdemir Group, Türkiye's largest steelmaker and publicly listed company, states in its annual reports that government grants and incentives can "be used by all companies, which meet the related legislative requirements and [that] those grants have no sectoral differences".³³⁹ Generally, grants and incentives provided by the Turkish government include the following:

- ♦ incentives under the jurisdiction of the research and development law (100% corporate tax exemption etc.);
- ♦ support in cash from TUBITAK - TEYDEP³⁴⁰, in return for research and development expenditures;
- ♦ inward processing permission certificates;
- ♦ social security institution incentives; and
- ♦ insurance premium employer share incentives.

Erdemir does not report detailed information about the scope and size of support measures provided by the government. Number provided for R&D incentives indicate that these incentives account for marginal percentage share of the support in % of total annual turnover (see Table 25). For 2020, Erdemir reports to have received merely TRY 3,879,000 (\$165,959) in government support for R&D, compared to total consolidated revenues of TRY 68 bn (\$2.87 billion).³⁴¹ It should be noted that R&D-specific grants are rather small

³³⁸TEDEPORT (2021). 1511 Research Technology Development and Innovation Projects in Priority Areas, updated on 16 June 2021. Available at <https://www.tedeport.org/en/destek/1511-tubitak-oncelikli-alanlar-arastirma-teknoloji-gelistirme-ve-yenilik-p-d-p-teknoloji-odakli-sanayi-hamlesi-programi-99.html>. (Accessed 27 April 2023).

³³⁹Annual report of Erdemir Group 2021. Page 213, note 18. Available at https://www.oyakmadenmetallurji.com.tr/Sites/1/upload/files/2021_Integrated_Annual_Report_22-5017.pdf. Accessed on January 2, 2023.

³⁴⁰ TUBITAK is the Scientific and Technological research Council of Türkiye. TUBITAK supports innovation, academic and industrial R&D studies but also in line with national priorities develops scientific and technological policies and manages R&D institutes, carrying on research, technology and development studies. Teydep is a Technology and Innovation Support Program administered by TUBITAK.

³⁴¹Conversion in GBP based on TRY/GBP exchange rate of January 2, 2023, based on Google Finance. It is further reported that "[g]overnment grants and incentives are recognised at fair value when there is assurance that these

compared to investments in rather large steel production units and machinery equipment, which may be eligible for support under Türkiye's multiple investment incentive programs.

Table 25: Government grants and incentives reported by Erdemir Group according to information stated in the company's annual report from 2016-21

Year	Description
2020/2021	Research and development incentive premiums received amounts to TRY 3.9 million (\$165,000) (31 December 2020: TRY 3 million (~\$126,000)) which are considered as a deduction subject in the calculation of corporate tax for the year ended 31 December 2021.
2019/2020	Research and development incentive premiums received amounts to TRY 3.009 thousand (\$127) (31 December 2019: TRY 2.2 million (~\$93,000)) which are considered as a deduction subject in the calculation of corporate tax for the year ended 31 December 2020.
2018/2019	Research and development incentive premiums received or certain to be received amounts to TRY 2.2 million (\$93,000) (31 December 2018: TRY 1.3 million (~\$55,000)) which are accounted under the statement of profit or loss for the year ended 31 December 2019.
2017/2018	Research and development incentive premiums taken or certain to be taken amounts to TRY 1.3 million (\$55,000) (31 December 2017: TRY 1.3 million (~\$55,000)) which are accounted under income statement for the year ended 31 December 2018.
2016/2017	Research and development incentive premiums taken or certain to be taken amounts to TRY 1.3 million (\$55,000) (31 December 2016: TRY 1 million (~\$42,268)) which are accounted under income statement for the year ended 31 December 2017.

Source: 2021 annual report of Erdemir Group.³⁴²

The government of Türkiye as well as regional governments provide direct and indirect support for investments in up- and downstream industries. Relevant potential distortions from investment incentive policies are primarily created in electricity generation, steel mills, and key markets of steel products. The broad spectrum of direct and indirect government support measures targeted at companies that operate at different stages of the steelmaking value chain in Türkiye suggest that the prices set by producers that either directly or indirectly benefit or in the past benefitted from these measures are not determined by market forces.

First, support targeted at the energy sector under the super incentive regime – for example, solar and alternative renewable energy – allows beneficiary electricity providers (see Table 23) to generate electricity and feed into the national grid below cost. As a result, some electricity prices in Türkiye can be expected to be below market prices, which would generally benefits Türkiye's electricity-intensive steel producers, resulting in lower cost of production. The precise impacts are difficult to assess. However, given that energy accounts for approximately 20% of the total costs of EAF steel production and 15% of (less relevant) BF-BOF steel production, even a small percentage reduction of electricity prices would have a relatively significant effect on the total costs of production and domestic steel prices respectively.

grants and incentives will be received, and the Group has met all conditions required. Government grants and incentives related to costs are recognised as revenue during the periods they are matched with the costs they will cover." (page 186 of Erdemir's annual report). In 2021, Erdemir reports TRY 2,614,668,000 (GBP 117 million) in other revenues, which are neither attributed to domestic sales nor to exports, accounting for about 4% of the group's total revenues in 2021.

³⁴²The annual reports of Erdemir group are available at <https://erdemirtr.com/investor-relations/annual-reports/index.html> (Accessed 19 Jan 2024).

Second, direct support granted to steelmakers significantly impacts on the costs of steel production of beneficiary producers. Except for Asil Çelik, it is largely unclear which steelmakers in Türkiye have received benefits under federal and regional investment incentives regimes and by what amount. However, the benefits granted by these regimes would likely allow beneficiaries to produce steel well below market-based production costs. For example, support granted to Asil Çelik results in considerable cost savings in fixed and variable operating costs:

- ◆ The customs duty exemption (tax revenue forgone) may allow beneficiary companies to purchase foreign machinery equipment at a discount. For example, the average MFN tariff on dutiable items in the electrical machinery and equipment category is 3.79%³⁴³. Similar considerations apply for the exemption of VAT of 18% for machinery and equipment and other investments.³⁴⁴
- ◆ Given an effective corporate tax rate of 20.8%³⁴⁵, the investment contribution rate of 60% (also a measure resulting in forgone tax revenue) results in a substantial reduction of the beneficiaries' corporate income tax burden.
- ◆ The labour income tax withholding support for 10 years allows the beneficiary to save a substantial amount of labour expenditures for a very long time. Assuming an average labour tax wedge in Türkiye of approximately 40% in 2022, the beneficiary would save a large fraction of total labour costs. Similar considerations apply for the 10-year employer insurance premium support, implying that the employer's share of the social security premium calculated for employment will be covered by the government. However, given that labour costs only account for a small fraction of total steel production costs in Türkiye (between 1–2%)³⁴⁶, the overall impact of wage support measures on domestic steel prices can be considered low.
- ◆ The 50% energy consumption support for energy expenditures for up to 10 years allows the beneficiary to ask for reimbursement of up TRY 50 million (\$2.1 million) annually. Assuming average annual energy cost of approx. 90\$/mt of crude steel in the EAF route³⁴⁷, the energy grant would allow the beneficiary to produce and equivalent of approximately 300,000 mt of crude steel without attributable energy costs.

Finally, financial support under government-induced incentive regimes is made available to key sectors in downstream markets, such as the automotive industry, the defence sector, and the transportation equipment sector (e.g., motor parts, powertrains/parts, motor land vehicles). Support provided to these sectors has a stimulating effect on domestic demand for steel products in Türkiye. Due to improved economies of scale, this (everything else being equal) improves the competitiveness of Turkish steelmakers in international markets. The precise impacts are difficult to quantify. A proper assessment requires analysis on a

³⁴³ See WITS database. Accessed at <http://tao.wto.org/report/TariffAverages.aspx>. (Accessed 27 April 2023).

³⁴⁴ Turkish Investment Office (2023). Guide to State Incentives for Investments in Türkiye. As of January 2023. Accessed at <https://www.invest.gov.tr/en/library/publications/lists/investpublications/guide-to-state-incentives-for-investments-in-turkiye.pdf>. (Accessed 27 April 2023).

³⁴⁵ See OECD (2023). Overview of effective corporate tax rates. Available at https://stats.oecd.org/index.aspx?DataSetCode=CTS_ETR. (Accessed 27 April 2023).

³⁴⁶ See Transition Zero (2022). Global Steel Production Costs - A country and plant-level cost analysis. Available at https://static1.squarespace.com/static/63d1607c35efbd5cbfee1529/t/640773e1cbf6510575740a6d/1678210020538/Global%2BSteel%2BProduction%2BCosts%2B-%2BJan2022_final.pdf. (Accessed 27 April 2023).

³⁴⁷ See Transition Zero (2022). Global Steel Production Costs - A country and plant-level cost analysis. Available at https://static1.squarespace.com/static/63d1607c35efbd5cbfee1529/t/640773e1cbf6510575740a6d/1678210020538/Global%2BSteel%2BProduction%2BCosts%2B-%2BJan2022_final.pdf. (Accessed 27 April 2023).

case-by-case basis. Additional information is needed about the development of plant sizes, domestic orders and the costs of essential inputs, which tend to have a stronger bearing on the overall costs of steel production than economies of scale.³⁴⁸

6.4.2 Trade policy interventions

In January 2016, the Turkish government increased the average MFN tariff rate of 78 6-digit HS product categories in 2016 compared to the previous year available in the WTO Tariff Download Facility, including products of iron and steel.³⁴⁹ In January 2017, the government introduced additional import duties on a wide range of pipes, profiles, engines, pumps, generators, tractors and gearboxes, via Decree 2017/9750 published in the Official Gazette number 29952.³⁵⁰

In January 2020, the government of Türkiye changed the import tariffs on certain iron and steel products. Effective from 1 January 2020, the government increased the import tariff rates on certain bars and rods of iron or non-alloy steel from 10% to 30%, and cold rolled or cold reduced flat-rolled stainless steel from 10% to 12%.³⁵¹ In May 2020, the Turkish government introduced additional customs duties on a wide range of industrial products. The decision was taken to mitigate the adverse effects of the Covid-19 pandemic on the economy and to safeguard the domestic industry from the import pressure. For this purpose, the government imposed additional duties on over 800 tariff lines which are mostly intermediate and capital goods. Tariff lines include several products of steel, for example, flat rolled products of iron or nonalloy steel, wire of other alloy steel, tubes, and others.³⁵²

In January 2022, the Turkish government decreased its duty on imports of cold-rolled stainless sheets to 8% from 12% effective 1 January 2022. Applicable tariffs do not apply to countries, such as those of the EU, with which Türkiye has a free trade agreement.³⁵³ In June 2022, the Turkish government has imposed new customs duties on some flat and long steel products from Organization of the Islamic Conference under the preferential trade arrangement framework agreement, with a presidential decree published on 25 June.³⁵⁴ Overall, import tariffs protect domestic incumbents and incentivise domestic producers.

³⁴⁸ See, Crompton and Lesourd (2008). Economies of scale in global iron-making. Resources Policy Volume 33, Issue 2, June 2008, Pages 74-82. Available at <https://www.sciencedirect.com/science/article/abs/pii/S0301420708000160>. (Accessed 27 April 2023).

³⁴⁹ GTA (2016). Türkiye: Import tariff changes in 2016. Available at <https://www.globaltradealert.org/intervention/68317/import-tariff/Türkiye-import-tariff-changes-in-2016>. (Accessed 27 April 2023).

³⁵⁰ GTA (2017). Türkiye: The government imposes additional duties on pipes, profiles, engines, pumps, generators, tractors and gearboxes. Available at <https://www.globaltradealert.org/state-act/28377/Türkiye-the-government-imposes-additional-duties-on-pipes-profiles-engines-pumps-generators-tractors-and-gearboxes>. (Accessed 27 April 2023).

³⁵¹ GTA (2020). Türkiye: The government changes the import tariffs on roasted coffee and certain iron and steel products. Available at <https://www.globaltradealert.org/intervention/78684/import-tariff/Türkiye-the-government-changes-the-import-tariffs-on-roasted-coffee-and-certain-iron-and-steel-products>. (Accessed 27 April 2023).

³⁵² GTA (2020). Turkish government introduces additional duties on a wide range of products. 20 May 2020. Available at <https://www.globaltradealert.org/intervention/79612/import-tariff/Türkiye-turkish-government-introduces-additional-duties-on-a-wide-range-of-products>. (Accessed 27 April 2023).

³⁵³ Eurometal (2022). Türkiye cuts import duty on CR stainless sheet. Available at <https://eurometal.net/Türkiye-cuts-import-duty-on-cr-stainless-sheet/>. (Accessed 27 April 2023).

³⁵⁴ Eurometal (2022). Türkiye sets new duties on steel product imports from some OIC member countries. Available at <https://eurometal.net/Türkiye-sets-new-duties-on-steel-product-imports-from-some-oic-member-countries/>. (Accessed 27 April 2023).

Increased economies of scale can reduce marginal costs of Turkish steel producers, which may be able to export certain steel products at lower than market prices.

6.4.3 Trade remedies investigations

According to the WTO database, Türkiye faced 12 anti-dumping investigations since 2019. It currently faces 26 anti-dumping measures in trade in steel products. At the same time, Türkiye was the subject of seven countervailing duty investigations since 2019. Four of these investigations were launched by the US, while one is from the European Union and one from the United Kingdom and Canada respectively (see Table 26). Twelve countervailing measures are currently imposed on exports of steel products (see Table 27).

Table 26: Countervailing duty investigations in steel exports from Türkiye, since 2019

Investigation number	Reporting member	Initiation date
2022/01 TR	United Kingdom	07.04.2022
C-489-847	US	26.01.2022
C-489-845	US	28.10.2020
AS667 TR	European Union	12.06.2020
C-489-843	US	13.05.2020
C-489-840	US	07.04.2020
COR2 2019 IN/TR	Canada	08.11.2019

Source: WTO countervailing duty investigations database.

Table 27: Countervailing duty measures currently enforced in steel products markets in Türkiye, as of January 2023

Measure in force from	Investigation number	Initiation date	Reporting member	Subject product
12.11.2021	C-489-845	28.10.2020	US	Certain aluminium foil
27.04.2021	C-489-840	07.04.2020	US	Common alloy aluminium sheet
03.02.2021	C-489-843	13.05.2020	US	Prestressed concrete steel wire strand
16.11.2020	COR2 2019 IN/TR	08.11.2019	Canada	Certain corrosion-resistant steel sheet 2
02.05.2019	C-489-834	20.02.2018	US	Large diameter welded pipe
21.05.2018	C-489-832	26.04.2017	US	Carbon and alloy steel wire rod
14.07.2017	C-489-830	18.10.2016	US	Steel concrete reinforcing bar
13.09.2016	C-489-825	17.08.2015	US	Heavy walled rectangular welded carbon steel pipes and tubes
01.12.2015	C-489-823	13.11.2014	US	Welded line pipe
06.11.2014	C-489-819	02.10.2013	US	Steel concrete reinforcing bar
10.09.2014	C-489-817	29.07.2013	US	Oil country tubular goods
10.01.1986	C-489-502	09.08.1985	US	Certain welded carbon steel pipes and tubes

Source: WTO countervailing duty measures database

6.4.4 Other interventions

On 14 September 2020, the US Department of Commerce preliminarily determined that countervailable subsidies are being provided to producers and exporters of prestressed concrete steel wire from the Republic of Türkiye.³⁵⁵ The decision was based on preliminary findings that Turkish steelmakers, in this case Celik Halat and Guney Celik and their cross-owned affiliates, have benefitted from an exemption on exchange taxes for foreign exchange transactions, and from government ownership of steel providers Eregli Demir ve Celik (as a result, the companies may have purchased steel wire rod for less than adequate remuneration). In addition, the Department of Commerce considered a broad spectrum of additional market distorting measures on which its decision is based. For Guney Celik and Celik Halat these are:

- ◆ deductions for taxable income for export revenue;
- ◆ regional investment incentive scheme;
- ◆ R&D incentives;
- ◆ TUBITAK grants; and
- ◆ foreign fair support³⁵⁶.

On 11 December 2020, the US Department of Commerce published its Final Determination in the CVD investigation of prestressed concrete strand from Türkiye.³⁵⁷ It was determined to impose countervailable subsidies to Turkish producers and exporters of prestressed concrete steel wire strand. The final determination was subsequently appealed because the US Department of Commerce's final determination was not in harmony with the injury determination of the US Court of International Trade, leading to a redetermination on 26 May 2022.³⁵⁸

³⁵⁵US Department of Commerce (2020). Decision Memorandum for the Preliminary Determination of the Countervailing Duty Investigation of Prestressed Concrete Steel Wire from the Republic of Türkiye. September 14, 2020. Available at <https://access.trade.gov/Resources/frn/summary/Türkiye/2020-20692-1.pdf>. (Accessed 27 April 2023).

³⁵⁶ Under the Foreign Fair Support program, the Ministry of Trade reimburses companies for certain expenditures related to participation in trade fairs abroad.

³⁵⁷ Prestressed Concrete Steel Wire Strand from the Republic of Türkiye: Final Affirmative Countervailing Duty Determination and Final Negative Critical Circumstances Determination, 85 FR 80005 (11 December 2020)

³⁵⁸ See US Department of Commerce. Prestressed Concrete Steel Wire Strand From the Republic of Turkey: Notice of Court Decision Not in Harmony With the Final Determination of Countervailing Duty Investigation; Notice of Amended Final Determination. May 26, 2022. Accessed at https://www.usitc.gov/trade_remedy/731_ad_701_cvd/investigations/2021/Steel%20Nails%20from%20India,%20Oman,%20Sri%20Lanka,%20Thailand,%20and%20Turkey/Preliminary/fr-notice-prelim_determination-thailand-cvd.pdf (Accessed 27 April 2023).

7. Government policies in key steelmaking intermediate inputs

7.1 Republic of India

A variety of inputs are crucial for steel production in India. In 2021, 45% of India's steel production was produced via the blast furnace-basic oxygen furnace (BF-BOF) route, 27% was produced via the electric arc furnace (EAF) route, and 28% was produced using the induction furnace route (IF).³⁵⁹

In addition to key raw materials and energy, the cost and production of steel is also dictated by transportation costs and costs of other inputs such as land rights and financial services available for the steel industry. To get a comprehensive idea of potential market distortions in the steel sector, it is also important to look at the related sectors that impact steel prices and supply.

7.1.1 Raw materials

India has significant resources of iron ores and non-coking coal. However, the Indian steel sector is disadvantaged due to limited availability of some of the other essential raw materials such as high-grade lumpy manganese ore and chromite, coking coal, steel grade limestone, refractory raw materials, and nickel and ferrous scrap. Pig iron producers and BF operators are significantly dependent on imports of coking coal, due to its domestic shortage, both in terms of quantity and quality.³⁶⁰

Ensuring the domestic availability of iron ore, coking coal, and natural gas is part of the National Steel Policy 2017 mission, in addition to facilitating investments in overseas asset acquisitions of raw materials. A core objective of the policy is increasing domestic availability of washed coking coal to reduce import dependence on coking coal from 85% to 65% by 2030–31.³⁶¹ The government has instituted several measures to support the availability of raw materials relevant for steel production. The impacts of these policies on the available quantities and prices of ore, coke and coal are difficult to project. Where relevant, trade remedy investigations could pay attention to government policies and measures related to the Mines and Minerals (Development and Regulation) Amendment Act and measures recommended by the Indian Ministry of Mines.

The government implemented the Mines and Minerals (Development and Regulation) Amendment Act, 2015,³⁶² which gives emphasis to "time-bound" mine development and on mineral exploration and sustainable mining operations. The Act also details mine allocation processes (through auctions) and procedures for mining lease renewals and provides for reservation of any particular mine for a particular end use and puts conditions permitting

³⁵⁹Ministry of Steel. Annual Report 2021-22. Available at: https://steel.gov.in/sites/default/files/Download_0.pdf. (Accessed 27 April 2023).

³⁶⁰Ministry of Steel (2017). National Steel Policy 2017. Available at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf. (Accessed 27 April 2023).

³⁶¹Ministry of Steel (2017). National Steel Policy 2017. Available at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf. (Accessed 27 April 2023).

³⁶²Ministry of Mines (2015). The Mines and Minerals (Development and Regulation) Amendment Act, 2015. Available at: <https://ibm.gov.in/writereaddata/files/07052018100905mmdr%20pdf.pdf>. (Accessed 30 January 2024).

auction among such eligible end users. Government-steered allocation of mining rights as well as lease contracts and terms and conditions could result in preferential treatment of certain commodity and integrated steel companies, which could rely on stable and below market-cost supply of raw materials. Due to lacking data, the impacts the production cost and prices of Indian steel are difficult to assess quantitatively and qualitatively.

The Ministry of Mines also set up an interdepartmental committee to recommend steps to make use of the low and lean grade iron ore resources in the country. Based on the committee recommendations, the ministry has proposed that 80% of the total minerals produced in a year by the holder of a mining lease that is below 58% Fe grade could be upgraded through beneficiation to produce beneficiated ore of 62% Fe grade and above.³⁶³ In case of failure, the government would impose steep fines on the lessee, which could also include termination of the lease. The recommendations are currently under consultation, but if implemented, could produce more iron ore resources for domestic consumption, since low grade iron ores are generally exported.³⁶⁴ As a stand-alone measure, these obligations would not significantly impact the supply of resources for Indian steel production. However, several vertically integrated steelmakers benefit from investment support under the PLI scheme. The grants received may directly or indirectly (cross-)subsidise companies' investment in beneficiation.³⁶⁵

A significant amount of the coking coal needs of the steel industry are met through imports. To increase availability of coking coal, the government has given impetus to overseas acquisitions of coking coal resources. Coal Videsh & International Cooperation Division (CV&IC) of (SOE) Coal India Ltd. has renewed its efforts to acquire foreign coking coal assets given the unpopularity of the fuel in many countries, subsequently leading to lower prices for coking coal.³⁶⁶ Russia, Canada, Australia, and the US are all target countries for these acquisitions.³⁶⁷ In addition to this, nine new coking coal washeries with capacities of 30 million tonnes are being set up by Coal India in India.³⁶⁸ The Ministry of Coal has also initiated working on a strategy for having domestic coal be used in blast furnaces and washeries and increasing domestic coal blending to 25–35%.³⁶⁹

The impact of these policies is difficult to assess. However, as Coal India is an SOE steered by the Ministry of Coal the acquisition of coal assets in third countries is likely backed by

³⁶³Ministry of Mines (2022). Notice for Industry Consultation. Available at: <https://mines.gov.in/admin/storage/app/uploads/6434dc1d492391681185821.pdf>. (Accessed 30 January 2024).

³⁶⁴The Hindu Business Line (2022). Mines Ministry recommends policy for beneficiation of low-grade iron ore. Available at: <https://www.thehindubusinessline.com/markets/commodities/mines-ministry-recommends-policy-for-beneficiation-of-low-grade-iron-ore/article65790756.ece>. (Accessed 27 April 2023).

³⁶⁵ Ministry of Steel (2020). 67 applications from 30 companies have been selected under the Production Linked Incentive (PLI) Scheme for Specialty Steel. Available at: <https://plimos.meconlimited.co.in/ords/f?p=138:1:4780432232413>. Also see list accessed at https://plimos.meconlimited.co.in/ords/plimos/r/138/files/static/v222/Approved_Applicants.pdf. (Accessed 27 April 2023).

³⁶⁶ The Economic Times (2019). Coal India targets stakes in overseas coal mines. Available at: <https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/coal-india-targets-stakes-in-overseas-coke-mines/articleshow/69920787.cms?from=mdr>. (Accessed 27 April 2023).

³⁶⁷Coal India. Coal Videsh. Accessed at: <https://www.coalindia.in/departments/coal-videsh/>. (Accessed 30 January 2024).

³⁶⁸Press Information Bureau, Government of India (2022). Coal India to set up Nine Coking Coal Washeries of 30 million Ton Capacity. Available at: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1852917>. (Accessed 27 April 2023).

³⁶⁹Press Information Bureau, Government of India (2022). Coal India to set up Nine Coking Coal Washeries of 30 million Ton Capacity. Available at: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1852917>. (Accessed 27 April 2023).

direct and indirect government support, such as investment subsidies or guarantees. It should be noted that SOEs carry out most coal mining (and power production) in India. Estimates suggest that India's coal exploration sector is benefitting from several billion US\$ annually.³⁷⁰ Under such circumstances, geographical diversification of coal supply does likely not take place under market conditions and results in lower than market prices for imported as well as domestically sourced coking coal, resulting in lower prices coking coal inputs to steel production in India. In addition, government support directed to the coal sectors also results in lower prices of electricity. Coal is generally the largest single fuel in India's energy mix. Electricity generated from coal accounts for about three quarters of total electricity output in India.³⁷¹ In 2019, coal accounted for 88% of final energy consumption in the iron and steel sector, reflecting the sector's high degree of reliance on coal-based direct reduced iron (DRI) production and the low penetration of natural gas DRI production.³⁷²

The picture for import duties on iron and coal is rather mixed. Compared to subsidies granted to steelmakers and input sectors, their impact is considered to be of minor importance for domestic steel prices. Currently, there is an import duty of 2.5% on anthracite/PCI coal, coking coal, and ferro-nickel while a 5% duty is applicable on coke and semi-coke of coal/lignite/peat.³⁷³ These duties were re-imposed after having been removed in May 2022,³⁷⁴ once steel prices were seen to stabilise. There have been recent shortages of steelmaking raw materials in India, to fulfil which, most recently, the Ministry of Steel wrote to the Ministry of Finance for a waiver of import tax on coking coal, limestone, manganese ore, steel scrap, graphite electrodes, chrome ore, and ferro nickel.³⁷⁵ Moreover, an export duty was imposed on iron ore lumps & iron ore fines with iron content below 58%, iron ore pellets and the specified steel products including pig iron, however these were removed in November 2022, with no duties on exports of iron ore lumps and fines below 58% iron and 30% on iron ore lumps and fines more than 58% iron.³⁷⁶ Concessions are also made to support the MSME steel sector. Given that most of them are secondary steel producers, the government in the Union Budget 2022–2023 extended the customs duty exemption on steel scrap by one year.³⁷⁷

7.1.2 Energy

It is estimated that generally energy accounts for 20–40% of costs of steel production with primary steel production (which uses BOF method and pig iron) being more energy-

³⁷⁰ Overseas Development Institute (2019). G20 coal subsidies, India. Available at <https://cdn.odi.org/media/documents/12740.pdf>. (Accessed 27 April 2023).

³⁷¹ Reuters (2023). India's power output grows at fastest pace in 33 years, fuelled by coal. Available at <https://www.reuters.com/business/energy/indias-power-output-grows-fastest-pace-33-years-fuelled-by-coal-2023-04-05/>

³⁷² IEA (2021). India Energy Outlook 2021. Accessed at https://iea.blob.core.windows.net/assets/1de6d91e-e23f-4e02-b1fb-51fdd6283b22/India_Energy_Outlook_2021.pdf

³⁷³ Central Board of Indirect Taxes & Customs (2022). Notification No. 59/2022. Accessed at: <https://taxinformation.cbic.gov.in/view-pdf/1009554/ENG/Notifications>

³⁷⁴ Ministry of Finance (2022). Notification No. 26/2022. Accessed at: <https://files.caclub.in/wp-content/uploads/cbic-central-tax-notification-26-2022.pdf> (Accessed 22 January 2024).

³⁷⁵ The Economic Times (2022). India's steel ministry seeks import tax waiver for coking coal. Accessed at: <https://energy.economictimes.indiatimes.com/news/coal/indias-steel-ministry-seeks-import-tax-waiver-for-coking-coal-sources/96028003>

³⁷⁶ Press Information Bureau, Government of India (2022). Government withdraws export duty on steel. Accessed at: <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1877232>

³⁷⁷ The Economic Times (2022). Budget 2022: Government extends duty exemption on steel scrap. Accessed at: <https://realty.economictimes.indiatimes.com/news/allied-industries/budget-2022-government-extends-duty-exemption-on-steel-scrap/89289628>

intensive than secondary production (which uses the EAF method and iron scraps).³⁷⁸ In the BF-BOF production method, about 89% of energy input comes from coal, 7% from electricity and 3% from natural gas. In the EAF production method, coal accounts for 11%, electricity for 50% and natural gas for 38%. Energy is also consumed indirectly for the mining, preparation, and transportation of raw materials. In the blast furnace-basic oxygen furnace (BF-BOF) route, this accounts for about 9% of the total energy required to produce the steel, including raw material extraction and steel production processes. In the electric arc furnace (EAF) route, this accounts for about 6% of total energy requirements. In India, the power required by the steel industry is estimated to increase to 27,717 MW by 2030-31.³⁷⁹

There are no overarching electricity subsidies provided to the steel industry in India. However, there are initiatives by regional governments to subsidise electricity for the production of steel and give impetus to the development of the local steel industry.³⁸⁰ For instance, in Maharashtra, 100% electrical duty is exempted for export-oriented units, while MSME's get concessional power tariff of Rs. 1 (\$0.012) or 0.5 per unit consumed for three years in specific areas. In Tamil Nadu, speciality steel producers are exempt from paying for power purchased from Tamil Nadu Generation and Distribution Corporation (TANGEDCO) or generated from captive sources during investment period. In Gujarat, new industries get exemption for five years and in Andhra Pradesh, there is fixed power cost reimbursement of Rs. 1 (\$0.012) per unit for five years from date of commencement of commercial production. Finally, in Odisha, there is 100% exemption for a contract demand of 5 MVA for five years. The State Government in Chhattisgarh has also decided to give a special 24% rebate in energy charges between the period of 1 July 2022 to 31 March 2023. The order was issued by the Ministry of Energy of Government of Chhattisgarh. Rolling mills receive a 24% rebate in energy charges payable on the amount of electricity consumed during the period from July 2022 to March 2023.³⁸¹

While the precise plant-based impacts of electricity support are difficult to assess without company-specific data, the subsidies available for the coal sector as well as targeted discounts for steel mills likely result in steel production costs that are below market prices. For example, assuming electricity-based energy costs of 18% in EAF production in India, a discount of 100% of total electricity costs (as provided in Maharashtra, Tamil Nadu and Gujarat), would result in bringing down the cost of EAF steel production to approximately 82%. India's auctioning system which dictates prices of coal, is not transparent. The auctioning system is a two-stage online bidding process, which involves technical screening and submission of a competitive initial price offer in the first stage, and a second and final stage where better price offers are intended to be received.³⁸² In 2020, the sector opened up for commercial coal mining by private players. Reports indicate that under India's Scheme for Harnessing and Allocating Koyala Transparently in India (SHAKTI), no

³⁷⁸World Steel Association (2021). Fact sheet: Energy use in the steel industry. Accessed at: <https://worldsteel.org/wp-content/uploads/Fact-sheet-energy-in-the-steel-industry-2021-1.pdf>

³⁷⁹Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf

³⁸⁰Ministry of Steel and Invest India. Inside India's Production Linked Incentive Schemes: Specialty Steel. Accessed at: https://steel.gov.in/sites/default/files/PLI%20Steel%20Report_Final.pdf

³⁸¹The Times of India (2022). 24% rebate in energy charges for steel rolling mills in CG. Accessed at: <https://timesofindia.indiatimes.com/city/raipur/24-rebate-in-energy-charges-for-steel-rolling-mills-in-cg/articleshow/93335644.cms>. Also see Drishtias (2022). 24% Rebate in Energy charges to Rolling Mills. Accessed at: <https://www.drishtias.com/state-pcs-current-affairs/24-rebate-in-energy-charges-to-rolling-mills>

³⁸² Ministry of Coal. Auction Portal. Accessed at: <https://coal.nic.in/en/nominated-authority/auction-portal>.

information is available for source, recipient, quantity, and cost for coal supply agreements. In addition, SHAKTI is reported to provide preferential treatment to SOEs that get supplies based on Ministry of Power (MoP) recommendations at Coal India Limited (CIL) notified prices.³⁸³

As concerns natural gas, the National Steel Policy 2017 highlights natural gas as a greener alternative which will be essential for the steel industry if India's Paris Agreement emissions targets are to be met. The Policy makes it an imperative to boost confidence and investment in natural gas through upgradation of coal based DRI capacities in the MSME sector to the gas-based route, realising the need for captive gas-based power plants for the sector and the alternative of injecting natural gas in blast furnace to reduce dependence on imported metallurgical coal (both coking and PCI), and ensuring firm supply of natural gas.³⁸⁴ In order to increase the use of natural gas in the economy, the government is focusing on developing the required infrastructure for its supply. Close to 33,500 km of Natural Gas Pipeline network has been authorised across the country under the 'One Nation, One Gas Grid' project. Out of this, 21,715 km Natural Gas Pipelines are operational, and a total of 13,605 km length of pipelines is under various stages of construction.³⁸⁵ The government is also directly funding the construction of the North East Gas Grid which would connect major cities in the North East with a natural gas pipeline and create connections to sustainable and viable gas sources in the North East. In 2020, the Cabinet Committee on Economic Affairs had approved a Rs. 55,590 million viability gap funding for the project.³⁸⁶ Generally, increased infrastructure connectivity to gas supplies and between major cities would make energy cheaper because it would substitute imported coal.

Environment management and energy efficiency constitute an important benchmark for the evaluation of the Iron & Steel Industry, according to the Annual Report 2021–2022 of the Ministry of Steel.³⁸⁷ Therefore, in addition to natural gas, biomass is considered another important resource. To make use of the large biomass resources available in India, the Ministry of New and Renewable Energy (MNRE) launched the National Bioenergy Programme 2022³⁸⁸ which will work on setting up of large Biogas, BioCNG and Power plants, setting up of pellets and briquettes for use in power generation and non-bagasse-based power generation projects, and support setting up of family and medium size Biogas in rural areas. The Phase-I of the program has been approved with a budget outlay of Rs. 8,580 million. Given the significant importance of coking coal and (coal-generated) electricity as prime energy inputs to steel production in India, the impact of government support measures targeted at gas supply on the domestic steel industry is considered marginal.

³⁸³ Business Line (2019). Coal auctions still far from transparent. Accessed at <https://www.thehindubusinessline.com/opinion/coal-auctions-still-far-from-transparent/article29281446.ece> . Also see IISD et al. (2020). Mapping India's Energy Subsidies 2020. Accessed at <https://www.iisd.org/system/files/publications/india-energy-transition-2020.pdf>

³⁸⁴ Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf

³⁸⁵ Press Information Bureau, Government of India (2022). One Nation One Gas Grid Project. Accessed at: <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1843445>

³⁸⁶ Press Information Bureau, Government of India (2020). Cabinet approves Capital Grant as Viability Gap Funding to Indradhanush Gas Grid Limited for setting up the North East Natural Gas Pipeline Grid. Accessed at: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1598709>

³⁸⁷ Ministry of Steel. Annual Report 2021–22. Accessed at: https://steel.gov.in/sites/default/files/Download_0.pdf

³⁸⁸ Press Information Bureau, Government of India (2022). MNRE notifies National Bio Energy Programme. Accessed at: <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1874209>

7.1.3 Transportation

India handles 4.6 billion tonnes of freight shipments each year, amounting to a total annual cost of Rs. 9.5 trillion. These goods represent a variety of domestic industries and products: 39% are mining products and 39% are manufacturing-related commodities. Trucks and other vehicles handle most of the movement of these goods. Railways, coastal and inland waterways, pipelines, and airways account for the rest. There are a few dedicated heavy-haul rail corridors for commodities such as coal, iron ore, cement, steel, and other heavy-bulk freight.³⁸⁹ Iron ore is the second most important stream of traffic for Indian Railways and along with steel accounted for nearly 17% (53.81 million tonnes of Steel & 153.35 million tonnes of Iron ore) of total 1.2 billion tonnes of freight loading in 2019-20.³⁹⁰ India faces high logistic costs for the supply of raw materials and steel. In 2020, these costs were estimated as follows: for every 250 kms, transportation cost of iron ore was between Rs. 800 and Rs. 1,000 per tonne through rail, between Rs. 2,000 and Rs. 2,500 per tonne through road; while via waterways, it costs between around Rs. 450 and 550 per tonne and Rs. 80 and 100 per tonne through slurry pipelines.³⁹¹

The government has already started working on some mega projects around logistics like Sagarmala³⁹² (development of ports for domestic and EXIM cargo), Bharatmala³⁹³ (development of roads and national highways) and Dedicated Freight Corridor³⁹⁴ (development of Indian Railways). These projects will not only reduce logistical bottlenecks for the transport of steel and related goods, but also increase the demand for steel for the purpose of infrastructure development. Moreover, under the aegis of the Sagarmala program, the Government of India is contemplating port-led development of steel clusters, to encourage export opportunities and competitiveness of the steel industry. For the same, the Ministry of Steel has also planned to undertake the establishment of coast-based steel plants in conjunction with Ministry of Shipping.³⁹⁵ So far, 14 Coastal Economic Zones (CEZs) covering all the Maritime States and Union Territories have been identified by the government out of which two include steel as a potential industry.³⁹⁶

In addition to this, the Ministry of Railways has announced the Iron Ore Policy 2021,³⁹⁷ which is aimed at providing logistical support to the steel industry to meet competitive challenges. The policy sets down clear guidelines for the Indian railways on how to fully meet the requirement of iron ore customers by leveraging infrastructure facilities available at loading and unloading ends. Higher priority is given to movement of iron ore traffic for domestic manufacturing activity and within domestic movement of iron ore traffic, priority

³⁸⁹Niti Aayog (2021). Fast Tracking Freight in India. Accessed at: <https://www.niti.gov.in/sites/default/files/2021-06/FreightReportNationalLevel.pdf>

³⁹⁰Press Information Bureau, Government of India (2021). Ministry of Railways rolls out a new iron ore policy governing allocation of rakes and transportation of iron ore. Available at: <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1689035>. (Accessed 27 April 2023).

³⁹¹Federation of Indian Chambers of Commerce and Industry (2020). Govt assures measures to reduce logistics cost for steel players. Available at: <https://ficci.in/ficci-in-news-page.asp?nid=23390>. (Accessed 27 April 2023).

³⁹²More information available at: <https://sagarmala.gov.in/about-sagarmala/vision>. (Accessed 27 April 2023).

³⁹³More information available at: <https://morth.nic.in/bharatmalaphase>. (Accessed 27 April 2023).

³⁹⁴More information available at: <https://dfccil.com/Home/DynemicPages?MenuId=3>. (Accessed 27 April 2023).

³⁹⁵Ministry of Steel (2017). National Steel Policy 2017. Available at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf. (Accessed 27 April 2023).

³⁹⁶Press Information Bureau, Government of India (2018). 14 Coastal Economic Zones being developed under Sagarmala. Available at: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1519885>. (Accessed 27 April 2023).

³⁹⁷Indian Railways (2021). Iron Ore Policy 2021. Available at: https://indianrailways.gov.in/railwayboard/uploads/directorate/traffic_tran/downloads/2021/Policy-Iron-Ore-Traffic-220121.pdf. (Accessed 27 April 2023).

preference is given to steel/pig, iron/sponge, iron/pellet/sinter plant owning customers³⁹⁸. Fees are not regulated for steel under this policy, which is why it is difficult to identify impacts on transport prices and derive impacts on the costs of steel production and steel prices in India respectively.

7.1.4 Financial services

The National Steel Policy 2017 highlights the enormous financial resources required to support the steel industry in achieving the Policy's vision. Mobilising adequate capital is seen as a challenge for the industry for which the Policy aims to encourage the steel industry to reduce capital costs and remain innovative in developing appropriate structure of the capital to minimise debt and service equity. In addition to this, the Ministry of Steel also promised to identify bad debts in the steel sector and encourage debt restructuring for these companies.³⁹⁹

In 2021, the Union Cabinet approved a Central Government guarantee of Rs. 306 billion to back Security Receipts (SRs) issued by National Asset Reconstruction Company Limited (NARCL) for acquiring stressed loan assets.⁴⁰⁰ Among the 17 company accounts chosen for stressed asset acquisition, two companies were from the steel industry (Visa Steel and Mittal Corp) and one from the energy sector (Meenakshi Energy).⁴⁰¹

Moreover, in response to the Covid-19 pandemic, the Ministry of Finance, under the Emergency Line Credit Guarantee Scheme (ECLGS) extended coverage to the iron and steel manufacturing sector among others based on recommendations by an Expert Committee on Resolution Framework for Covid 19-related Stress.⁴⁰² The ECLGS was extended until 31 March 2023.⁴⁰³ It should be noted that there is no publicly available evidence of its use by steel producers in the last 12–24 months, which is why it is difficult to assess the policy's impact on steel prices.

7.1.5 Other input sectors

Land acquisitions and environmental clearances have caused major roadblocks for the steel industry in the past.^{404, 405, 406} Moreover, the goal to reach a capacity of 300 million mt by

³⁹⁸Press Information Bureau, Government of India (2021). Ministry of Railways rolls out a new iron ore policy governing allocation of rakes and transportation of iron ore. Available at: <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1689035>. (Accessed 27 April 2023).

³⁹⁹Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf

⁴⁰⁰Press Information Bureau, Government of India (2021). Frequently Asked Questions regarding Central Government guarantee to back Security Receipts issued by National Asset Reconstruction Company Limited for acquiring of stressed loan assets. Accessed at: <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1755466>

⁴⁰¹The Economic Times (2022). Loans of Jaypee Infra, VOVL and GTL among 15 that may be sold to bad bank. Accessed at: <https://economictimes.indiatimes.com/markets/stocks/news/loans-of-jaypee-infra-vovl-and-gtl-among-15-that-may-be-sold-to-bad-bank/articleshow/89259600.cms?from=mdr>

⁴⁰²Reserve Bank of India (2020). Report of the Expert Committee on Resolution Framework for Covid-19 related Stress. Accessed at: <https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1157#CP3>

⁴⁰³Press Information Bureau, Government of India (2022). Scope of Emergency Credit Line Guarantee Scheme (ECLGS) enhanced, and validity extended till 31.3.2023. Accessed at: <https://pib.gov.in/PressReleasePage.aspx?PRID=1811580>

⁴⁰⁴ Wall Street Journal (2009). Indian Steel Projects Delayed on Land Acquisition. Accessed at: <https://www.wsj.com/articles/SB123657661020868741>

⁴⁰⁵Reuters (2013). ArcelorMittal abandons dormant Indian project. Accessed at: <https://www.reuters.com/article/uk-arecelormittal-india-idUKBRE96G0WT20130717>

⁴⁰⁶The Economic Times (2015). Land acquisition, environmental nods hurting steel industry: JSW Steel. Accessed at: <https://economictimes.indiatimes.com/industry/indl-goods/svs/steel/land-acquisition-environmental-nods-hurting-steel-industry-jsw-steel/articleshow/48249613.cms?from=mdr>

2030, would require close to 91,000 acres of additional land.⁴⁰⁷ To meet these demands, the government proposed the formation of steel clusters (especially for MSME steel units), service centres, and steel processing centres.⁴⁰⁸ In 2019, building on this proposal, the Ministry of Steel created a draft policy, which has not been enacted by the time of the conclusion of this report, for the creation of two types of steel clusters in the North-East region of India.⁴⁰⁹ These would be ancillary and downstream clusters, and value-added steel clusters. In addition to the development of logistical and power connectivity infrastructure, encumbrance-free developed land would be made available with a single-window for application for clearances and approvals of the same within specified timeframe.

Moreover, the government in its draft policy for promotion of greenfield investments in the steel sector, recognises the lack of encumbrance-free, possession ready land as a major roadblock. To tackle this, the Policy outlines specific requirements for the type of land required and recommends pre-identifying land parcels that meet majority of the criteria.⁴¹⁰

State governments also provide certain rebates and subsidies on land use for the purpose of steel production.⁴¹¹ For instance, in Tamil Nadu, land procurement rebates are provided to ultra-mega and super-mega industrial units of 10% and 5% respectively. In Gujarat, government land is offered on long term lease for up to 50 years to industrial enterprises at 6% of the market rate. Accordingly, depending on the size of land and costs of a land lease or acquisition these support measures reduce investor' operating costs or cost of capital to varying extents.

7.2 The People's Republic of China

7.2.1 Raw materials

In 2022, the MIIT, the Ministry of Science and Technology and the Ministry of Natural Resources issued the "14th Five-Year Raw Material Industry Development Plan," the first such plan dedicated only to raw materials that is linked to the FYP. According to the Plan, "the raw material industry is the foundation of the real economy, a basic industry supporting the development of the national economy and a key field for gaining international competitive advantages."⁴¹² The Plan sets goals for two time periods: until 2025 and until 2035. Until 2025, the PRC aims to improve its high-end supply production, to reduce the production capacity of steel and cement, to improve green development by reducing the amount of energy used in steel and cement, to digitise the manufacturing

⁴⁰⁷Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf

⁴⁰⁸Ministry of Steel (2017). National Steel Policy 2017. Accessed at: https://steel.gov.in/sites/default/files/NATIONAL_STEEL_POLICY_2017_0.pdf

⁴⁰⁹Ministry of Steel (2019). Draft Policy for Steel Cluster. Accessed at: https://steel.gov.in/sites/default/files/Draft%20Policy%20for%20Steel%20Cluster_vf15.pdf

⁴¹⁰Ministry of Steel (2019). Draft Policy for the promotion of greenfield investment in the steel sector. Accessed at: <https://steel.gov.in/sites/default/files/Draft%20Policy%20on%20Promotion%20of%20Greenfield%20investments%20in%20the%20steel%20sector.pdf>

⁴¹¹Ministry of Steel and Invest India. Inside India's Production Linked Incentive Schemes: Specialty Steel. Accessed at: https://steel.gov.in/sites/default/files/PLI%20Steel%20Report_Final.pdf

⁴¹²Government of the PRC (2021) "十四五"原材料工业发展规划 ("14th Five-Year" raw material industry development plan), Available at: <http://www.gov.cn/zhengce/zhengceku/2021-12/29/5665166/files/90c1c79a00b44c67b59c29392476c862.pdf>, p.1, (Accessed 20 January 2023).

industry, to increase security especially for the management of hazardous chemicals.⁴¹³ By 2035, the PRC aims to become a leading global centre for raw material R&D and for raw material production and application, to enhance the competitiveness of the new materials industry and to reach a world leading level of green and low-carbon development.⁴¹⁴

Also in 2022, the PRC established the PRC Mineral Resources Group,⁴¹⁵ a SOE whose aim is pool the demand for raw materials from Chinese companies and to negotiate on their behalf with producers, in order to obtain better prices and then redistribute the materials to Chinese enterprises. By centralising the purchasing of raw materials, especially iron ore, the PRC wants to negotiate lower prices for these raw materials. Because of the fragmentation in the steel industry, Chinese steelmakers have very little negotiating power when buying iron ore on their own, especially as the production side is dominated by a handful of key global players, such as Rio Tinto, Vale, BHP and Fortescue Metals Group.⁴¹⁶ Centralising demand means more negotiation power and a better deal for Chinese steelmakers, to which the SOE will resell the raw materials. The new company has its headquarters in Xiong'an and a registered capital of 20 billion yuan (\$2.8 billion).⁴¹⁷ For the BF-BOF production route on which the PRC still heavily relies, a breakdown of cost data from 2021 indicates that raw materials account for the largest share of 71% of steel production costs in the PRC, followed by energy costs, other costs such as fluxes and other consumables as well as overhead and interest costs and labour costs.⁴¹⁸ Given this large share of raw materials in Chinese steel production costs, the overall impact of this support on the cost of steel production steel production would likely be significant.⁴¹⁹

⁴¹³Government of the PRC (2021) 《“十四五”原材料工业发展规划》解读 (Interpretation of the "14th Five-Year Plan" Raw Material Industry Development Plan), Available at: http://www.gov.cn/zhengce/2021-12/29/content_5665165.htm (Accessed 20 January 2023).

⁴¹⁴Ibid.

⁴¹⁵Alfred Cang (2022) How and Why PRC Is Centralizing Its Billion-Ton Iron Ore Trade, Available at: https://www.washingtonpost.com/business/energy/how-and-why-PRC-is-centralizing-its-billion-ton-iron-ore-trade/2022/07/24/7d9fdbee-0bb4-11ed-88e8-c58dc3dbaee2_story.html (Accessed 20 January 2023).

⁴¹⁶Mining Intelligence (2022) Mining Intelligence: World's top iron ore producers, Available at: <https://www.mining.com/joint-venture/jv-article-ranked-worlds-top-10-iron-ore-producers-2022/?fbclid=IwAR3mj2UuImEJg1OC1ZOwT0Jp4RErBRx3DRp0Z42ykBKz4IgRaevh4JcA3Sw> (Accessed 20 January 2023).

⁴¹⁷Alfred Cang (2022) How and Why PRC Is Centralizing Its Billion-Ton Iron Ore Trade, Available at: https://www.washingtonpost.com/business/energy/how-and-why-PRC-is-centralizing-its-billion-ton-iron-ore-trade/2022/07/24/7d9fdbee-0bb4-11ed-88e8-c58dc3dbaee2_story.html (Accessed 20 January 2023).

⁴¹⁸ See Transition Zero (2022). Global Steel Production Costs - A country and plant-level cost analysis. Accessed at https://static1.squarespace.com/static/63d1607c35efbd5cbfee1529/t/640773e1cbf6510575740a6d/1678210020538/Global%2BSteel%2BProduction%2BCosts%2B-%2BJan2022_final.pdf. Note: cost categories taken into consideration include: raw materials cost (all major raw materials used for any of the two main processing routes considered, including iron ore, scrap, pig iron and direct reduced iron; some supplementary raw materials are not considered), energy cost (split between electricity and fuel, whereas the fuel component includes energy and heat created from charcoal, coal, fuel oil, liquefied petroleum gases (LPGs) and natural gas), labour cost (the cost of labour for the steel industry in each country is considered in this study), other costs (purchased oxygen and inert gases (argon), electrodes, refractories, limestone, other fluxes, oils and acids used in rolling and finishing, and overhead costs). Overhead costs have been modelled separately and include accounting fees, advertising, insurance, interest, legal fees, labour burden, rent, repairs, supplies, taxes and utilities. No information is available for the share of interest costs.

⁴¹⁹ Because the company was established only in 2022, it is too early to quantify its impact on the cost of raw materials.

Regarding export and import policies, in 2021, the PRC decided to lift an import ban on steel scrap imports.⁴²⁰ That year, the PRC also decided to adjust tariffs on 20 steel products.⁴²¹ For example, pig iron, crude steel, recycled steel raw materials, ferrochrome will have a provisional import tax rate of zero.⁴²² At the same time, in 2021 the PRC's Ministry of Finance announced that it will increase its export taxes on pig iron from 15% to 20% and on ferrochrome from 20% to 40%.⁴²³

In 2021, the PRC also announced that it added some types of recycled metal items on the list of goods subject to compulsory inspection upon import and cast iron, steel or stainless steel on the list of goods subject to compulsory inspection upon export.⁴²⁴

Also in 2021, as the prices of raw materials experienced a surge, the State Administration of Market Regulation asked Chinese companies to stop speculating around the prices and set reasonable prices.⁴²⁵ A precise assessment of the effects on production costs requires an analysis of the cost structure of the companies concerned. However, given that more than 70% of steel production costs in the PRC are comprised of raw materials, the overall impact of such government intervention to the steel sector on the cost of domestic steel production is very likely to be significant.

7.2.2 Energy

In 2020, the PRC was the largest energy producer and consumer in the world.⁴²⁶ Its electricity consumption was around 7,826 TWh in 2021 and 57% was consumed by industry, followed by services (19%) and the residential sector (16%).⁴²⁷ The energy mix was divided in 2021 as follows: 55% was supplied by coal, 19% by petroleum and other liquids, 9% by natural gas, 8% by hydroelectric sources, 2% by nuclear power and 7% by non-hydro renewables.⁴²⁸

⁴²⁰Ministry of Ecology and Environment of the PRC (2020) 关于规范再生钢铁原料进口管理有关事项的公告 (Announcement on Matters Concerning Regulating the Import Management of Recycled Iron and Steel Raw Materials), Available at: https://www.mee.gov.cn/xxgk/xxgk/xxgk01/202012/t20201231_815744.html (Accessed 20 January 2023).

⁴²¹Ministry of Finance of the PRC (2021) 国务院关税税则委员会关于调整部分钢铁产品关税的公告 (Announcement of the Customs Tariff Commission of the State Council on Adjusting Tariffs on Certain Steel Products) Available at: http://gss.mof.gov.cn/gzdt/zhengcefabu/202104/t20210428_3694144.htm (Accessed 20 January 2023).

⁴²²Ministry of Finance of the PRC (2021) 钢铁产品进口关税调整表 (Steel Products Import Tariff Adjustment Table) Available at: <http://gss.mof.gov.cn/gzdt/zhengcefabu/202104/P020210428519425422327.pdf> (Accessed 20 January 2023).

⁴²³Paul Lim (2021) NEWSBREAK: PRC to increase export taxes on pig iron, ferro-chrome, Available at: <https://www.fastmarkets.com/insights/newsbreak-PRC-to-increase-export-taxes-on-pig-iron-ferro-chrome> (Accessed 20 January 2023).

⁴²⁴Global Trader Alert (2021) PRC: 2021 adjustments to the list of goods subject to compulsory import and export inspections, Available at: <https://www.globaltradealert.org/state-act/48894/PRC-2021-adjustments-to-the-list-of-goods-subject-to-compulsory-import-and-export-inspections> (Accessed 20 January 2023).

⁴²⁵Reuters (2021) Chinese regulator tells businesses to set commodity prices 'reasonably', Available at: <https://www.reuters.com/article/PRC-commodities-regulator-idUSL4N2QC2NH> (Accessed 20 January 2023).

⁴²⁶US Energy Information Administration (2022) Country Analysis Executive Summary: PRC, Available at: https://www.eia.gov/international/content/analysis/countries_long/PRC/PRC.pdf, p.1, (Accessed 20 January 2023).

⁴²⁷EnerData (n.d.) PRC Energy Information, Available at: <https://www.enerdata.net/estore/energy-market/PRC/> (Accessed 20 January 2023).

⁴²⁸US Energy Information Administration (2022) Country Analysis Executive Summary: PRC, Available at: https://www.eia.gov/international/content/analysis/countries_long/PRC/PRC.pdf, p.2, (Accessed 20 January 2023).

The Chinese energy market is not liberalised, as the Chinese government sets ceiling prices for energy. Coal-fired generation trading prices for electricity (mid-to-long-term contract prices) are allowed to fluctuate between +20% and -20% from the benchmark rate set by the Chinese regulator.⁴²⁹ The PRC's steel manufacturers relying on coal and electricity may benefit from rates at a cost advantage over commercial rates that may be higher under normal market conditions. The resulting cost savings for energy can result in lower prices for inputs used in the steel sector. It should be noted, however, that it is possible that electricity prices are different in different regions or for different companies as electricity cost for high energy consumption entities is not subject to a 20% cap. In 2021, the Beijing Electric Power Industry Association and 11 coal-power companies asked the government to raise the electricity ceiling prices in order to avoid closing down companies, as coal prices surged.⁴³⁰ As stated in one source, in Liaoning and Guangxi province, the cost for electricity has increased almost 50% in 2022.⁴³¹

The PRC used to intensely subsidise its coal industry. For example, in 2014 the subsidies for coal were ¥252 billion (\$35.3 billion) and in 2015 the amount allocated to coal subsidies was ¥120 billion (\$16.8 billion).⁴³² Given that coal is the most important energy input to steel in the BOF route, the impacts on domestic costs and derived price reductions of steel products are likely significant.

But lately, the PRC has put more emphasis on green energy and environmental protection in its quest to become a carbon-neutral country by 2060. In 2022, the Chinese government announced it will allocate ¥3.87 billion (\$541 million) in subsidies for the renewable energy sector.⁴³³ These subsidies have, over the past decade, allowed for a great expansion of the renewable energy sector, especially solar and wind power.

The green trend is similar in the steel industry. In the past few years, the Chinese government has not been subsidising the use of coal in its steel production as much as before, but it offers incentives to those companies that took steps toward energy saving and other green efficiencies. For example, in 2020, HBIS Group Steel received ¥2 million (\$0.27 million) in subsidies for energy saving and environmental protection renovation,⁴³⁴ while in its 2021 Annual Report, Maanshan Iron & Steel specified that it received ¥1.2

⁴²⁹ Energy Iceberg (2021). China's Electricity Pricing Policy Changes: Post 2021 Supply-Crisis. Accessed at: <https://energyiceberg.com/china-electricity-pricing-changes-impacts/>.

⁴³⁰ Yuying Qian (2022) PRC Raises Cap on Electricity Price: What has Changed and Possible Impact for Business, Available at: <https://www.integralnewenergy.com/?p=32919> (Accessed 20 January 2023).

⁴³¹ Integral (2022). China Raises Cap on Electricity Price: What has Changed and Possible Impact for Business. Available at <https://www.integralnewenergy.com/?p=32919>.

⁴³² Richard Bridle, Ivetta Gerasimchuk, Benjamin Denjean, Ting Su, Clement Attwood and Hongxia Duan (2016) Subsidies to Coal Power Generation in PRC, Available at: <https://www.iisd.org/system/files/publications/subsidies-coal-power-generation-PRC.pdf>, iii, (Accessed 20 January 2023).

⁴³³ Reuters (2021) PRC sets 2022 renewable power subsidy at \$607 million, Available at: <https://www.reuters.com/business/energy/PRC-sets-2022-renewable-power-subsidy-607-mln-2021-11-16/> (Accessed 20 January 2023).

⁴³⁴ HBIS Group Steel (2020) 河钢股份有限公司 2020 年年度报告 (HBIS Co., Ltd. 2020 Annual Report), Available at: http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESZ_STOCK/2021/2021-4/2021-04-23/7101648.PDF?vt=4, p. 166, (Accessed 20 January 2023). At page 166, section 58. Government Subsidies (政府补助) it is stated that HBIS received ¥2 million special subsidies for energy saving and environmental protection renovation (节能环保改造补助).

million (0.16 million) for energy-saving technological transformation.⁴³⁵ In 2021, Valin Steel reported ¥240 million (\$33.5 million) in grants for projects in energy conservation and environmental protection,⁴³⁶ while Fangda Special Steel reported receiving a government grant for energy saving of around ¥60,000 (\$8,398) in 2021.⁴³⁷

The PRC's focus on greener steel production means that instead of coal, Chinese steel mills will begin using hydrogen and natural gas in producing direct reduced iron (DRI). Between 2021 and 2025, the Chinese government aims to have 8 mmt of steel produced yearly through low- or zero-carbon DRI capacity.⁴³⁸ HBIS Group Steel's branch, HBIS Xuansteel, started the construction of a hydrogen energy application pilot project by using wind and solar power, Baowu Steel is also working on a project for a hydrogen-enriched carbon recycling blast furnace, while Ansteel Group will also work on creating a low-carbon alternative to the traditional one.⁴³⁹

Despite these low-carbon targets, the PRC continues to invest in new coal-based capacity, being "responsible for 85% of new projects globally".⁴⁴⁰ Being very dependent on the coal-based blast furnace – basic oxygen furnace (BF-BOF) route, "steel production accounts for about 20% of the country's total annual carbon emissions, making it the largest industrial emitter. When emissions from electricity used by the sector are included, the share goes up to 24%."⁴⁴¹

According to a report, 77% of the PRC's steel capacity is BF-BOF steelmaking⁴⁴² and big Chinese steel companies continue to build BF-BOF projects. In fact, BF-BOF represents 93% of the under-construction steel plants, while the remaining 7% is dedicated to the electric furnace.⁴⁴³

⁴³⁵Maanshan Iron and Steel (2021) 马钢股份：马鞍山钢铁股份有限公司2021年年度报告全文 (Maanshan Iron and Steel Co., Ltd.: The full text of the 2021 annual report of Maanshan Iron and Steel Co., Ltd.), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600808&id=7909427&fbclid=IwAR1GLR_e77XatAlwxPZBi5XkqcJXJ6yYFI82PUYd6IYkvfxtyxXI8xTncbA (Accessed 20 January 2023).

⁴³⁶Valin Steel (2021) 华菱钢铁：2021年年度报告 (Valin Steel: 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=000932&id=8168114&fbclid=IwAR0SjXumhGyh3KI6HTFGzyD92JPk8DTh5_L0pIGyboQjp801bZl81qVHqk (Accessed 20 January 2023).

⁴³⁷Fangda Special Steel (2021) 方大特钢：方大特钢2021年年度报告 (Fangda Special Steel: Fangda Special Steel 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600507&id=7898274&fbclid=IwAR1P9kx1Rgjsv5mFqyoVCZM6EykuIEKmNixXdzXyYdjd9L454liXecHfqq (Accessed 20 January 2023). At Section 84 Government Subsidies (政府补助) it is stated that Fangda received 10,000 energy saving rewards (收节能奖励) and 50,000 industrial energy saving incentives (工业节能奖励).

⁴³⁸Jing Zhang (2022) For steel sector, PRC's decarbonization is a costly quest, Available at: <https://www.spglobal.com/commodityinsights/en/market-insights/blogs/metals/051922-green-steel-PRC-decarbonization-dri> (Accessed 20 January 2023).

⁴³⁹Paul Lim and Zihuan Pan (2022) How green energy could fundamentally alter Chinese steelmaking, Available at: <https://www.fastmarkets.com/insights/how-green-energy-could-fundamentally-alter-chinese-steelmaking> (Accessed 20 January 2023).

⁴⁴⁰Center for Research on Energy and Clean Air (2022) Most coal power plants since 2016 entered construction in PRC in 2021, investment in coal-based steelmaking accelerated, Available at: https://energyandcleanair.org/wp/wp-content/uploads/2022/02/EN-PRC-coal-and-steel-briefing-Feb_2022.pdf, p.10, (Accessed 20 January 2023).

⁴⁴¹Ibid, p.10.

⁴⁴²Caitlin Swalec and Christine Shearer (2021) Pedal to the Metal, Available at: <https://globalenergymonitor.org/wp-content/uploads/2021/06/Pedal-to-the-Metal.pdf>, p. 25, (Accessed 20 January 2023).

⁴⁴³Ibid, p.26.

7.2.3 Transportation

The PRC has become a strong player in global transportation thanks to numerous factors such as “government regulations, a fantastic infrastructure of road, rail, and transportation, a wide network of warehousing and storage facilities, and a strong IT infrastructure.”⁴⁴⁴ The Chinese government has provided financial support towards developing its transport infrastructure, but also in building infrastructure abroad. In this aspect, an important role is played by the Belt and Road Initiative (BRI). The Eurasian Land Bridge is the most famous branch of the BRI in Europe. It links the PRC with Europe through dozens of railways which help companies export their products from the PRC and which are intensely subsidised by the Chinese government in order to compete with maritime shipping.

The PRC Railway Express is the company that operates the railway routes between the PRC and Europe and its target was to end rail transport subsidies in 2022–23. But, due to the Covid-19 pandemic, the Chinese government decided to continue the rail subsidies for the routes linking the PRC to Europe.⁴⁴⁵ Despite the fact that the subsidies will still be provided in 2023, they have been dramatically reduced from 50% in 2018, to 40% in 2019 and to 30% in 2020.⁴⁴⁶ For example, the best-known railway route, Chongqing-Duisburg, received \$6,400 in subsidies for each Forty-Foot-Equivalent-Unit (FEU) container, while the cost of the FEU container shipping was \$10,200.⁴⁴⁷

Subsidies granted to railways operators reduce the cost of transportation services in the PRC and abroad, which also benefits the PRC’s mining and steelmaking industries. Accordingly, the prices for raw material inputs and steel products could be higher under normal market conditions in the Chinese economy. The regulation of transport directly contributes to costs reductions in extraction industries, which lead to lower prices than market prices for inputs. Due to the high number of measures implemented by the Chinese government and lacking transparency with respect to the financial amounts spent and the nature of beneficiaries it is difficult to estimate the precise impacts on input prices and final prices of steel products. While the railway sector is intensely subsidised to compete with maritime shipping, this latter sector is also subsidised. According to report from the Center for Strategic and International Studies’ report, “combined state support to Chinese firms in the shipping and shipbuilding industry totalled roughly \$132 billion between 2010 and 2018. This includes financing from state banks (\$127 billion) and direct subsidies (\$5 billion).”⁴⁴⁸

⁴⁴⁴The Cooperative Logistic Network (2022) How PRC is coming up as a global leader in the logistics industry, Available at: <https://www.thecooperativelogisticsnetwork.com/blog/2022/07/07/how-PRC-is-coming-up-as-a-global-leader-in-the-logistics-industry/> (Accessed 20 January 2023).

⁴⁴⁵Majorie van Leijen (2021) PRC continues subsidies on New Silk Road next year, Available at: <https://www.railfreight.com/beltandroad/2021/12/10/PRC-continues-subsidies-on-new-silk-road-next-year/> (Accessed 20 January 2023).

⁴⁴⁶Steven Don (2021) Is the elimination of Chinese subsidies a good idea?, Available at: <https://www.railfreight.com/railfreight/2021/01/11/is-the-elimination-of-chinese-subsidies-a-good-idea/> (Accessed 20 January 2023).

⁴⁴⁷Ibid.

⁴⁴⁸Jude Blanchette, Jonathan E. Hillman, Mingda Qiu and Maesea McCalpin (2020) Hidden Harbors: PRC’s State-backed Shipping Industry, Available at: <https://www.csis.org/analysis/hidden-harbors-PRCs-state-backed-shipping-industry> (Accessed 20 January 2023).

7.2.4 Financial services

The Chinese banking sector is dominated by large state-owned banks, including policy banks, while the role of foreign banks is quite limited. State-owned banks are frequently used to implement government plans and achieve government goals.

Many Chinese SOEs receive loans at preferential interest rates from Chinese banks. According to an S&P Global report, many of the Chinese SOEs that they researched are “caught in a debt trap,”⁴⁴⁹ accounting for 45% of the PRC’s nonfinancial corporate debt.⁴⁵⁰ The same report asserts that the industry sector has the biggest amount of debt, \$7.3 trillion, while the materials sector owes \$1.3 trillion in debt.⁴⁵¹ Due to lacking information, it is difficult to assess to which extent SOEs in the steel industry or associated industries benefitted from preferential access to capital. However, data indicate that in the past preferential financing conditions helped Chinese steelmakers to continue operation despite solvency problems. For example, a 2016 report indicates that SOEs accounted for 16% of value-added but received 50% of total bank credit in the PRC. It is highlighted that about 40% of new debt went to paying interest on existing loans rather than productive investments.⁴⁵² Similarly, a 2016 report by the IMF indicates that approx. 15.5% of current debt consists of loans “potentially-at-risk,” or loans to firms with insufficient earnings to cover interest payments.⁴⁵³ A 2022 report by S&P Global indicates that many Chinese SOEs faced debt severe problems during the Covid-19 pandemic, with many needing external financial support.⁴⁵⁴ Indeed, in 2020, the Chinese Central Bank provided more than \$120 billion of funding to support the banking system after a series of debt shocks involving SOEs.⁴⁵⁵

SOEs also receive financial support from banks through rollovers or debt forgiveness. For example, in 2022, the People’s Bank of China announced that it will give ¥100 billion (\$14 billion) for the coal industry as part of the “relending” action, a strategy to support certain sectors, used by the Chinese government to also support its strategies and policies.⁴⁵⁶

In general, SOEs receive far greater financial support than private companies, whose access to loans is more difficult. Even though SOEs accounted for only around 40% of the Chinese GDP (2015),⁴⁵⁷ between 2011 and 2016, the percentage of renminbi loans received

⁴⁴⁹Terence Chan, Eunice Tan and Christine Ip (2022) PRC’s SOEs Are Stuck In A Debt Trap, Available at: <https://www.spglobal.com/assets/documents/ratings/research/global-debt-leverage-1.pdf>, p.2, (Accessed 20 January 2023).

⁴⁵⁰ Ibid, p.2.

⁴⁵¹ Ibid, p.4.

⁴⁵² Wiley Rein (2016). Follow the Money: The State Financial Sector & the Aluminium & Steel Overcapacity Crisis. Accessed at: https://www.oecd.org/industry/ind/Item_6_2_Alan-Price.pdf.

⁴⁵³ IMF (2016). IMF Working Paper on Resolving China’s Corporate Debt Problem. Accessed at: <https://www.imf.org/external/pubs/ft/wp/2016/wp16203.pdf>

⁴⁵⁴ S&P Global (2022). China’s state-owned companies encumbered by world’s biggest corporate debt pile. Accessed at: <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/china-s-state-owned-companies-encumbered-by-world-s-biggest-corporate-debt-pile-72199736>

⁴⁵⁵ Reuters (2020). China c.bank tries to soothe market nerves after SOE debt shocks. Accessed at: <https://www.reuters.com/article/china-debt-soe-idUSL8N2I206S>.

⁴⁵⁶Global Trade Alert (2022) PRC: Chinese government pledges a further \$ 15.1 billion to support 'clean and efficient utilisation of coal', Available at: [https://www.globaltradealert.org/intervention/103638/state-loan/PRC-chinese-government-pledges-a-further-\\$-15-1-billion-to-support-clean-and-efficient-utilisation-of-coal](https://www.globaltradealert.org/intervention/103638/state-loan/PRC-chinese-government-pledges-a-further-$-15-1-billion-to-support-clean-and-efficient-utilisation-of-coal) (Accessed 20 January 2023).

⁴⁵⁷Chunlin Zhang (2019) How Much Do State-Owned Enterprises Contribute to PRC’s GDP and Employment?, Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/32306/How-Much-Do-State-Owned-Enterprises-Contribute-to-PRC-s-GDP-and-Employment.pdf?sequence=1&isAllowed=y>, p.1, (Accessed 20 January 2023).

by SOEs jumped from 28% to 83%.⁴⁵⁸ By comparison, the private sector has found it difficult to access loans, even without preferential interest rates.

Nonetheless, in their recent annual reports, publicly listed Chinese steelmakers did not mention receiving loans with preferential interest rates or benefitting from debt forgiveness. Detailed information on what and how much support is awarded to companies along the steelmaking value chain is not usually publicly available.

Government regulation of financial markets and instruments as well as support measures by the Chinese government distort market prices for loans and other debt and equity instruments. Although transparency is low, it can be assumed that both the financial regulations and the subsidies have contributed to maintaining high production capacities and thus lower prices on the domestic market than under market conditions.

Although detailed data is difficult to obtain on a company-by-company basis, the industry support measures justify a cautious analysis of the prices for steel products in the domestic market.

While detailed information about company-specific benefits and associated government support is not publicly available, trade remedy investigations could examine whether and to what extent individual steel producers and upstream input providers in the PRC benefitted from this support.

7.2.5 Other input sectors

In the PRC, the land is owned either by the state or by collectives. Thus, a steel mill only owns the land use rights, which themselves come with a cost. But many SOEs receive subsidies and compensation from the government in order to benefit from real estate. For example, in 2020, Maanshan Iron & Steel received a land use tax rebate of ¥1.3 million (\$0.181 million).⁴⁵⁹ In its 2021 annual report, Valin Steel stipulated that it received ¥30 million (\$4.2 million) as land acquisition compensation,⁴⁶⁰ while Fangda Special Steel received a refund of land transaction fee of ¥65,812 (\$9,179).⁴⁶¹ It is unclear whether these measures are systemic in the steel sector and related up- and downstream industries, but the information suggests that such measures are common in the PRC. Trade remedy investigations into the PRC's steel industry and its value chain could therefore also

⁴⁵⁸Nicholas R. Lardy and Zixuan Huang (2018) State-owned Chinese Firms Borrowing Far More Than Private Firms Despite Lagging Profits, Available at: <https://www.piie.com/research/piie-charts/state-owned-chinese-firms-borrowing-far-more-private-firms-despite-lagging?fbclid=IwAR09RrmuJtVY1MCigqOy0fPbC2vjgk-sQuckK6rJxdbN5IYLTmvDQIBmpxY> (Accessed 20 January 2023).

⁴⁵⁹Maanshan Iron and Steel (2021) 马钢股份：马鞍山钢铁股份有限公司2021年年度报告全文 (Maanshan Iron and Steel Co., Ltd.: The full text of the 2021 annual report of Maanshan Iron and Steel Co., Ltd.), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600808&id=7909427&fbclid=IwAR1GLR_e77XatAlwxPZBi5XkgcJXJ6yYFI82PUYd6IYkvftxyX18xTncbA (Accessed 20 January 2023). At Section 与日常经营活动相关的政府补助如下 it is stated that Maanshan received 1,326,610 in land use tax rebate (土地使用税返还).

⁴⁶⁰Valin Steel (2021) 华菱钢铁：2021年年度报告 (Valin Steel: 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=000932&id=8168114&fbclid=IwAR0SjXumhGyh3KI6HTFGzyD92JPK8DToH5_L0pIGyboQjp801bZl81qVHgk (Accessed 20 January 2023).

⁴⁶¹Fangda Special Steel (2021) 方大特钢：方大特钢2021年年度报告 (Fangda Special Steel: Fangda Special Steel 2021 Annual Report), Available at: https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=600507&id=7898274&fbclid=IwAR1P9kx1Rgjsv5mFqyoVCZM6EykuIEKMNlXxdzXyYdjdj9L454liXecHfqq (Accessed 20 January 2023).

consider such subsidies and decreases in taxes, which tend to lower the prices of raw materials and final steel products respectively.

From a different angle, the steel industry in the PRC enjoys a distinct cost advantage over global competitors, primarily due to labour costs that are significantly below international market levels. This competitive edge, however, is not without its controversies and is underpinned by several key factors that raise ethical and economic concerns.

Firstly, the weak enforcement of formal labour standards by the PRC government in certain areas of the steel industry leads to a proliferation of informal labour practices. In turn, informal practices often result in labour exploitation and unreasonable wage disparities. Such a landscape distorts the labour market, as it gives companies engaging in these practices an unfair advantage over those adhering to strict labour regulations. The distortion created in the labour market can thus facilitate a race to the bottom, where companies are incentivised to undercut labour standards in order to remain competitive.

Secondly, the diminished bargaining power of workers exacerbates the situation. In the absence of free trade unions and the legal right to strike, workers in the PRC find it challenging to negotiate for better wages and working conditions. A significant one third of workforce is composed of migrant workers, who often find themselves on the fringes of labour rights, frequently enduring low wages and limited social benefits.⁴⁶²

The hukou system further complicates labour dynamics within the PRC. This household registration system ties individuals' access to social services and job opportunities, to their place of birth or registered residence. Implemented in the 1950s to control internal migration and uphold social order, the system categorises citizens into rural or urban hukous. This categorisation restricts the movement of individuals from less affluent regions to those with more prosperous economic opportunities, particularly impeding rural citizens' ability to relocate to urban areas. As a result, the steel industry, often located in less developed regions, finds its labour force constrained, with fewer opportunities for workers to transition to other sectors or regions. This limitation not only affects the individual workers' economic mobility but also the regional economic development and the industry's ability to attract and retain talent.

Lastly, the broader implications of these practices on the global stage cannot be overlooked. While they may benefit Chinese steel companies by reducing costs, they also disrupt the global balance of supply and demand in steelmaking and related industries. Companies and jurisdictions that adhere to international labour standards may find themselves at a competitive disadvantage, raising questions about the long-term sustainability of such practices.

Despite the PRC's progress in improving labour conditions and its steps toward ratifying international labour conventions, significant issues remain. These ongoing challenges in the labour market, particularly in steelmaking-related industries, have far-reaching effects both domestically and internationally, disproportionately disadvantaging sectors that are already vulnerable.

⁴⁶² European Commission (2017), On Significant Distortions in the Economy of the People's Republic of China for the Purposes of Trade Defence Investigations, SWD (2017) 483 final/2, Brussels

7.3 The Russian Federation

Subsidies for electricity, natural gas, and rail transport pricing policies, as well as export restriction eliminations could contribute to comparatively lower costs of steel production as well as to easier domestic and international delivery of Russian steel products. The steel industry in Russia has always been substantially supported by indirect measures, undertaken in favour of steel input sectors. This chapter will dwell on such issues, including raw materials, energy, financial services, transportation, and other sectors which impact steel production in Russia. According to the US Department of Commerce, there are several important factors characterising the Russia's economic model as non-market economy. Generally, control over the labour market and wage bargaining, as well as government ownership and government control over resources are interventions with influence steel production in Russia.⁴⁶³

7.3.1 Raw materials

Most steelmakers in Russia are vertically integrated companies, which are involved across the value chains of steel production process. Raw materials such as coking coal, gas and iron ore are the main materials in steel production in the Russian economy. Coal and natural gas are both used in electric arc furnace steelmaking, while coking coal is mainly used in blast furnace steelmaking.

Russia ranks first in the world in terms of iron ore reserves, accounting for more than 26% of the world's reserves. The reserves are concentrated within the Kursk Magnetic Anomaly (KMA), Urals, Siberia, and the Far East. All-Russian deposits of coke amount to about 272.7 billion tonnes. The main reserves are concentrated in Western and Eastern Siberia, and the Far East.⁴⁶⁴

Currently more than 170 competitive enterprises operate in coke extraction industries. However, almost all mining and production of iron ores in the country is provided by only six large companies. The largest holding company Metalloinvest (JSC Metalloinvest Holding Company) owns approximately 40% of the iron ore reserves of Russia. It is one of the world's leading iron ore producers, ranking fourth behind Vale (Brazil), BHP Billiton (Australia) and Rio Tinto (Australia). Metalloinvest produces almost 40% of the total production of raw iron ores in the country.⁴⁶⁵

The Russian government implements several supportive policies in both sectors. Most Russian steelmakers are vertically integrated and, in many cases, have subsidiaries producing both coke and iron ore. That is why tax incentives, preferential social policies, and other support measures in regions where steelmakers are concentrated (such as the Far East and Baikal regions) can have a significant impact on the industry and final prices of steel products respectively.

⁴⁶³ US Department of Commerce (2022). Reconsideration of Russia's Status as a Market Economy. Country. POI: 10/01/2020 – 09/30/2021.

⁴⁶⁴ Dprom.online. Iron ore mining in the world and in Russia. 08.04.2020 (in Russian), available at: <https://dprom.online/metallurgy/dobycha-zheleznoj-rudy-v-mire-i-v-rossii/>. (Accessed 27 April 2023).

⁴⁶⁵ Metalloinvest. About the company (in Russian), available at: https://www.metalloinvest.com/en/about/?utm_source=google.com&utm_medium=organic&utm_campaign=google.com&utm_referrer=google.com. (Accessed 27 April 2023).

Relevant measures are reflected in the Strategy of Socio-Economic Development of the Far East and the Baikal region for the period up to 2025.⁴⁶⁶ With respect to iron ore, the strategy mentions several measures, including assistance in creating the necessary infrastructure (primarily transport and energy), assistance in the development of hard-to-reach raw material deposits, assistance in solving social issues in the regions (like Novokuznetsk, Lipetsk, Magnitogorsk, Nizhny Tagil, Cherepovets) where metallurgical enterprises are city-forming, regulation of transport and energy tariffs, stimulation of domestic demand from consumer industries, as well as the creation of transport and energy infrastructure in areas of raw materials extraction, the development of scientific infrastructure in the field of materials science, new technologies for the production of metals, technologies for the use of metals in various sectors of the economy and transport infrastructure to ensure the export of metals.⁴⁶⁷

Government-steered priority tasks for the coke mining industry are the construction of modern processing plants, which allow to produce a product with a higher value, as well as the renewal of fixed production assets of mining companies whose depreciation exceeds 80%.⁴⁶⁸ The intention is to reduce the cost of production and increase the extraction of minerals from developed deposits by 2025.⁴⁶⁹

On aggregate, these support measures could, to varying extents, help steel producers to reduce the negative impacts of consumption reduction due to increasing economic uncertainty, decreased production in consumer industries, unstable exchange rates, and high interest rates on loans. For example, significant investments in extraction, energy and transportation infrastructure can be extended to have a huge impact on domestic steel demand in Russia. The regulation of transport and energy directly contributes to costs reductions in extraction industries, which lead to lower prices than market prices for coke and iron inputs. Due to the high number of measures implemented by the Russian government and lacking transparency with respect to the financial amounts spent and the nature of beneficiaries it is difficult to estimate the precise impacts on input prices and final prices of steel products.

7.3.2 Energy

Energy (including natural gas and coal) is a key factor in producing steel in Russia. The World Steel Association estimates that energy accounts for 20-40% of the costs of steel

⁴⁶⁶ The Government of Russia. The Strategy of Socio-economic Development of the Far East and the Baikal region. R-2094. 28.12.2009 (in Russian), available at: <https://base.garant.ru/6732462/>. Note that this is a Strategy from 2009 (a legal act) which is in force until 2025.

⁴⁶⁷ *Ibid.*

⁴⁶⁸ This is an indicator, which helps to make a decision on modernising the plants whose assets are depreciated more than 80%. The period of depreciation depends on assets and type of production. The indicator is valid until 2025 when the strategy expires.

⁴⁶⁹ Decree of the Government of the Russian Federation of December 28, 2009 N 2094-r "On approval of the Strategy for the socio-economic development of the Far East and the Baikal region for the period up to 2025 (in Russian), Available at: http://www.consultant.ru/document/cons_doc_LAW_96571/08caf9c60af6c9b3ff17d7897bcd8787da02c410/. (Accessed 27 April 2023).

production.^{470, 471} In particular, coal, electricity, and natural gas constitute about 89%, 7%, and 3% of steel-sector energy input, respectively.

The Russian government has a wide range of policies influencing the energy markets, which have an indirect effect on the steel market. During the Covid-19 pandemic, the gas and electricity sectors received substantial assistance from the Russian government. In 2021, fossil fuel subsidies increased by 400%, and almost 600% for gas compared to 2020.⁴⁷² According to the IEA in 2021, the total volume of fuel subsidies accounted for 3.6% of the Russian GDP.⁴⁷³

For coal exploration, fiscal support includes various regional-specific tax incentives, lower railroad rates, cross-subsidisation of higher railroad rates for other industrial products, and federally funded infrastructure projects to increase coal transportation capacity across Asia-Pacific markets.⁴⁷⁴ Given that coal is the most important energy input to Russian steel, the impacts on the prices of final steel is likely significant.

For electric energy, the government regulates the prices for electric energy and natural gas following the Law on Electric Power Industry⁴⁷⁵ and the Decree on State Regulation of Gas Prices.⁴⁷⁶

Direct subsidies to the electricity sector in 2019 were estimated at \$3.7 billion (RUB 307.4 billion) or 0.2% of Russia's GDP, implemented through subsidies provided for natural gas (see below).⁴⁷⁷ Retail industrial electricity prices in Russia are about 25% lower for mining and processing industries than for agriculture or other economic activities. Lower electricity prices, resulting from government interventions, are the main reason for the competitive advantage of most Russian steel producers. The lower electricity prices substantially reduce the costs of the steelmakers, especially those relying on electric arc furnace steelmaking. As outlined by a recent steel production cost benchmarking analysis, the cost of energy in

⁴⁷⁰ World Steel Association. Energy use in the steel industry. Available at: <https://worldsteel.org/wp-content/uploads/Fact-sheet-Energy-use-in-the-steel-industry.pdf>. (Accessed 06 June 2023).

⁴⁷¹ World Steel Association (WSA) (2014). *Energy Use in the Steel Industry 2014*. (Accessed 24 July 2023).

⁴⁷² IEA. Fossil Fuel Subsidies Database. October, 2022, available at: <https://www.iea.org/data-and-statistics/data-product/fossil-fuel-subsidies-database#>. (Accessed 27 April 2023).

⁴⁷³ International Energy Agency (2022) Fossil Fuel Subsidies Database. October, 2022. Available at: <https://www.iea.org/data-and-statistics/data-product/fossil-fuel-subsidies-database#>. (Accessed 27 April 2023). Note that all subsidies are taken into account for 2021. Fuel subsidies are calculated by IEA according to its own methodology.

⁴⁷⁴ Russian coal sector in low carbon World: Prospects for abandoning coal. Policy report, September 2021. (in Russian), available at: https://climatestrategies.org/wp-content/uploads/2021/10/CS_Final-Report-Russian-Coal-Russian_DEF.pdf

⁴⁷⁵ Federal Law N.o 35-FZ of 26 March 2003 "on Electric Power Industry", as amended (in Russian). Available at: <http://ivo.garant.ru/#/document/185656/paragraph/17:0>. (Accessed 27 April 2023).

⁴⁷⁶ Consultant. Government Resolution No. 333 of 28 May 2007 on Improvement of State Regulation of Gas Prices (in Russian), available at: <http://www.consultant.ru/cons/cgi/online.cgi?rnd=3560736456A6366311938AF7E7736F9A&req=doc&base=LAW&n=110862&dst=100010&fld=134&REFFIELD=134&REFDST=100005&REFDOC=179107&REFBASE=LAW&stat=refcode%3D10881%3Bdstident%3D100010%3Bindex%3D14#1ljuzkg136q>. (Accessed 27 April 2023).

⁴⁷⁷ World Bank. Energy Subsidies in Russia: Size Impact and Potential for Reform. 2021. (in Russian). Available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099125011302110190/p1750280ca1db807e08cea076ac354e401b>. (Accessed 27 April 2023).

electricity intensive EAF production accounts for only 9% of total production costs in Russia, which is the lowest level globally both in relative and in absolute terms.⁴⁷⁸

While electricity generation is heavily subsidised, price regulation is the source of additional potential distortions. Russian steel producers are located in territories that are grouped into different price zones, where wholesale prices can be determined freely between market participants located in the same zone. There are two main electrical energy price zones in Russia. The first zone covers the European part of Russia and Ural area. The second zone covers Siberia.⁴⁷⁹ The retail price for private and commercial buyers of electricity is a mix of (largely) freely determined wholesale prices and price regulation in the retail market. The retail market is governed by Government Resolution No. 442983 of 4 May 2012. Retail prices for electricity are subject to price caps, suggesting that Russian steelmakers, in addition to subsidised electricity generation, benefit from electricity prices that are lower than market prices.

It should be noted that some of the companies, such as Severstal, MMK, and NLMK, generate about 60% of their energy for their needs internally.^{480, 481} Due to extensive government support granted to the mining and transportation of coal and heavily subsidised gas, energy production by these conglomerates can be expected to take place at costs that are substantially lower compared to market based price determination. As noted by the World Bank, compared to other countries, investment subsidies in the electricity sector in Russia are characterised by a general lack of transparency surrounding the actual cost (reductions) they bring within the power generation value chain.⁴⁸²

As an electricity-intensive mode of production, EAF steel production in Russia significantly benefits from subsidies for natural gas and internal gas price regulation. In 2019, direct subsidies for natural gas were estimated at \$11.3 billion, an equivalent of 0.7 percent of GDP. It is guessed that 37% of gas production is used for heating and electric energy generation, while 6% is used by the metallurgical industry. The electricity generation sector benefitted \$3.7 billion through natural gas subsidies in 2019.⁴⁸³

⁴⁷⁸ Transition Zero (2022). Global steel production costs Report - A country and plant-level cost analysis. Accessed at <https://www.transitionzero.org/insights/global-steel-production-costs>

⁴⁷⁹ The Government of Russia. Decree of the Government of the Russian Federation of December 27, 2010 N 1172 (as amended on October 29, 2022) "On Approval of the Rules for the Wholesale Electricity and Capacity Market and on Amendments to Certain Acts of the Government of the Russian Federation. Available at: http://www.consultant.ru/document/cons_doc_LAW_112537/0031aaf5154fadf854e9d6d931259f7e6e89cc44/.

⁴⁸⁰ Rushailo P. The Benefits and the Risks. Kommersant. 10.12.2019 (in Russian) available at: <https://webcache.googleusercontent.com/search?q=cache:VZksxlKH3MQJ:https://www.kommersant.ru/doc/4187756&cd=1&hl=ru&ct=clnk&gl=de>. (Accessed 27 April 2023).

⁴⁸¹ Severstal claims to be substantially self-sufficient in electricity production from natural gas. Severstal. Annual Report 2018, available at: https://www.severstal.com/files/23787/Annual_report_2018.pdf. (Accessed 27 April 2023).

⁴⁸² World Bank. Energy Subsidies in Russia: Size Impact and Potential for Reform. 2021. (in Russian), available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099125011302110190/p1750280ca1db807e08cea076ac354e401b>. (Accessed 27 April 2023).

⁴⁸³ World Bank. Energy Subsidies in Russia: Size Impact and Potential for Reform. 2021. (in Russian). Available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099125011302110190/p1750280ca1db807e08cea076ac354e401b>. (Accessed 27 April 2023).

Generally, there is no free-market mechanism underlying the development of market prices for gas in Russia.⁴⁸⁴ There is no gas market and market-determined gas price in Russia. In Russia, the FAS determines the wholesale price range, that is, its maximum and minimum values. SOEs, mainly Gazprom, dominate the gas extraction sector in Russia. FAS regulates the price of gas sold by Gazprom to residential consumers and all other consumers, broadly categorised as industrial customers. Domestic gas prices in Russia are substantially lower than export prices.⁴⁸⁵ The difference in the level of domestic and export prices was especially significant in 2022 due to the surge in export prices. The average export price of Gazprom's gas to non-CIS countries for six months of 2022 increased by more than 3.5 times compared to the same period in 2021.⁴⁸⁶

Traditionally, the Russian government also supports new fields of gas sources. For example, the government of Russia has initiated a set of fiscal incentives and subsidised loans to oil and gas production in Russia's Arctic zone.⁴⁸⁷ Assuming that policies for energy markets will not change in the medium-term future, the commercial development of new resource deposits will contribute to prices of gas and electricity that are below market prices in Russia.

7.3.3 Transportation

The production of steel is associated with complex value chain processes and most of the companies are vertically integrated. Transportation is a critical part of this value chain and therefore also affects the costs of steel products. The transportation costs of iron ore account on average for around 3.5% of the total cost of steel.⁴⁸⁸ In case of the Russian company Evraz, these costs even exceed 7% in steel production.⁴⁸⁹

Tariffs for railway cargo including iron ore and coal are regulated by the Ministry of Transport and the FAS, which sets maximum tariff rates. Cargo revenues account for more than 80% of the revenues of Russian railways monopoly company Russian Railways (RZD). In 2021, the monopoly received RUB 1.5 trillion (\$18 billion) from industrial customers, most of them coal, oil and metal producers.⁴⁹⁰ The government has enacted several reforms of the tariff schedule and applicable formulas over the past decade, mainly to allow for better conditions for railway operators to maintain tracks and attract investments.⁴⁹¹ In 2022, intended to support RZD's investment program, the government increased indexation

⁴⁸⁴ The level of the wholesale price depends on the region - the farther it is from the places of gas production, the higher the price. Thus, the minimum level of the wholesale price for Yamalo-Nenets Autonomous Okrug, the main gas-producing region of the Russian Federation, was RUB 2,489 per thousand cubic meters in 2021. The minimum level for, for example, Adygea was RUB 4,634. The maximum price level is about RUB 400 higher than the minimum.

⁴⁸⁵ Gazprom. Marketing (in Russian), available at: <https://www.gazprom.ru/about/marketing/russia/>.

⁴⁸⁶ Katkov M., Nikolaev N. Export prices of Gazprom increased by 3.5 times. Vedomosti. 27.09.2022. (in Russian). Available at: <https://www.vedomosti.ru/business/articles/2022/09/27/942808-eksportnie-tseni-gazproma-virosli>. (Accessed 27 April 2023).

⁴⁸⁷ Kutuzova M. Produce and monetize arctic gas. GoArctic, 24.03.2021 (in Russian), available at: <https://goarctic.ru/work/dobyt-i-monetizirovat-arkticheskiy-gaz/>. (Accessed 27 April 2023).

⁴⁸⁸ Steel Industry Portal. Basic Oxygen Furnace Route Steelmaking Costs 2019: Conversion costs for BOF steelmaking, available at: <https://www.steelonthenet.com/cost-bof.html>. (Accessed 27 April 2023).

⁴⁸⁹ EVRAZ. Annual Report 2021 available at: https://www.evraz.com/upload/iblock/a21/EVRAZ_Annual_Report_2021.pdf.

⁴⁹⁰ ZAWYA (2022). Russian Railways propose to raise cargo tariffs by 6.4% in 2022, document shows. Accessed at <https://www.zawya.com/en/business/russian-railways-propose-to-raise-cargo-tariffs-by-64-in-2022-document-shows-xyjm1br5>. (Accessed 27 April 2023).

⁴⁹¹ RZD (2016). Tariff Policy. Accessed at <https://ar2016.rzd.ru/en/company-overview/market-review/tariff-policy>. Also see The Coal Hub (2021). RZD intends to lift railway tariffs for coal and iron ore. Accessed at <https://thecoalhub.com/rzd-intends-to-lift-railway-tariffs-for-coal-and-iron-ore.html>. (Accessed 27 April 2023).

of freight rail tariffs by 11%, impacting primarily on coal mining companies.⁴⁹² The regulation of transport prices of cargo and recent increases in tariffs demonstrate that freight transport prices are set at levels too low to cover the costs of railway maintenance and the cost of investment in network infrastructure.

Governmental support policies in the transportation sector have caused indirect effects on the steel industry of Russia.⁴⁹³ The government has initiated a set of measures to support the transportation sector during the last three years due to the Covid-19 crisis and new sanctions against Russia. They include interest payment subsidies, subsidies to state-owned transportation companies, financial grants.

The sector was receiving government support even before the Covid-19 crisis. In December 2019, the Russian Ministry of Communications provided a subsidy to a SOE State Transport Leasing Company.^{494, 495} The subsidy amounted to RUB 3 billion (approximately \$36 million) and was intended to support development projects in end-to-end digital technologies and platform solutions on the domestic leasing transaction market.

On 28 April 2022, the government of the Russian Federation allocated RUB 16.7 billion (approximately \$200.8 million) in interest payment subsidies to companies of systemic importance in the transportation industry. The companies have become eligible to get loans from Russian credit institutions at a preferential rate (not exceeding 11% per annum). The Russian government promised to compensate the credit institutions for their lost income on loans.⁴⁹⁶

In October 2022, the Russian government announced RUB 1.64 billion (\$19.7 million) in financial grants for road freight transport companies.⁴⁹⁷ The grants were intended to support Russian truckers whose vehicles were confiscated in Ukraine.

Regulated maximum tariffs and subsidies granted to railways operators reduce the cost of transportation services in Russia, which also benefits Russia's mining and steelmaking industries. Accordingly, the prices for raw material inputs and steel products would be higher if they were not subsidised.

⁴⁹² The Coal Hub (2022). RZD raises rail tariffs by 11%. Accessed at <https://thecoalhub.com/rzd-raises-rail-tariffs-by-11.html>. (Accessed 27 April 2023).

⁴⁹³ Accounting Chamber of Russia. Digest. Impact of the COVID-19 pandemic on industry and the environment. 2020. (in Russian), available at: <https://ach.gov.ru/upload/pdf/Covid-19-prom.pdf>. (Accessed 27 April 2023).

⁴⁹⁴ Government Spending. "Subsidy 07119P4Z000". 26.12.2019. (in Russian). Available at: https://spending.gov.ru/subsidies/subsidies_list/07119P4Z000/. (Accessed 27 April 2023).

⁴⁹⁵ GTA. Russian Federation: RUB 3 billion subsidy to State Transport Leasing Company. 14.10.2022. Available at: <https://www.globaltradealert.org/state-act/62362/russian-federation-rub-3-billion-subsidy-to-state-transport-leasing-company>. (Accessed 27 April 2023).

⁴⁹⁶ GTA. Russian Federation: RUB 16.7 billion in interest payment subsidies for companies in the transportation industry. Decree No. 1048-r. 28.04.2022. Available at <https://www.globaltradealert.org/intervention/103561/interest-payment-subsidy/russian-federation-rub-16-7-billion-in-interest-payment-subsidies-for-companies-in-the-transportation-industry>. (Accessed 27 April 2023).

⁴⁹⁷ The Government of the Russian Federation. Decree No. 2955-r. 08.10.2022. Available at: <http://government.ru/news/46782/>. (Accessed 27 April 2023).

7.3.4 Financial services

A bulk of measures were undertaken by the government to support Russia's financial sector, including banking services. Many financial support measures are (at least officially) sector-specific, such as targeting agriculture and retail estate.

Preferential mortgage credits have become a major financial instrument having affected the steel market. Before 2020, the sector had been indirectly supported via financial injections into the mortgage banking sector, agriculture, and other sectors. On 30 March 2015, the Russian government approved the rules for the provision of subsidies from the federal budget to Russian credit institutions and the open joint-stock company Agency for Housing Mortgage Lending to compensate for lost income on mortgage loans.⁴⁹⁸ This had a positive impact on mortgage demand and as a result stimulated construction activity and domestic demand for steel. Mortgage loans were also provided generously to citizens for the purchase of real estate in the primary market at a rate of 6.5% for the entire loan term in 2020.⁴⁹⁹

Moreover, generous indirect assistance has been regularly provided via support of the Russian banking institutions, including bailouts. One systemically important Russian financial institution, the State Bank Vnesheconombank, received a RUB 150 billion (then approximately \$ 1.8 billion) bailout in 2016.^{500, 501} The bank, as the country's core development institute, is responsible for providing liquidity to support large-scale infrastructure projects and capacity building activities.

Indirect support for steel demand in Russia has also been provided through international initiatives launched by the Russian government in cooperation with foreign states. On 10 October 2016, the Russian Federation and Türkiye created a \$1 billion joint investment fund directed to support agricultural and infrastructure projects in both countries.⁵⁰² In 2015, Russia allocated funding amounting to \$500 million to create the Russian-Kyrgyz Development Fund in support of infrastructure-related projects.⁵⁰³ During the period of 2015-21, the Fund supported more than 2,270 projects in steel-consuming industries.⁵⁰⁴

Financial grants, interest payment subsidies, state loans, loan guarantees, and capital injections are measures frequently used in Russia. Most of the measures are sector-related and were discussed above. However, some measures have systemic significance for the Russian economy.

⁴⁹⁸The Government of Russia. On approval of the Rules for the provision of subsidies from the federal budget to Russian credit institutions and the open joint-stock company "Agency for Housing Mortgage Lending" to compensate for lost income on issued (acquired) housing (mortgage) credits (loans) (in Russian), Available at: <http://static.government.ru/media/files/VxWTqU13x70.pdf>. (Accessed 27 April 2023).

⁴⁹⁹CBR (2022). "Preferential mortgage programs from the developer" Report for public consultations. (in Russian), available at: https://www.cbr.ru/Content/Document/File/140482/Consultation_Paper_12102022.pdf. (Accessed 27 April 2023).

⁵⁰⁰Smirnov S. VEB will not ask for more than 150 billion RUB in 2016. Vedomosti. (in Russian), Available at: <https://www.vedomosti.ru/economics/articles/2016/04/05/636499-veb-150>. (Accessed 27 April 2023).

⁵⁰¹Korsunskaya D. UPDATE 1-Russia agrees \$2.2 billion VEB recapitalisation. Reuters. Available at: <https://www.reuters.com/article/russia-veb-idUSL5N1713OK>. (Accessed 27 April 2023).

⁵⁰²Evstigneeva A. Russia creates \$1 billion investment fund with Türkiye (in Russian), 13.09.2016. Available at: <https://iz.ru/news/632043>. (Accessed 27 April 2023).

⁵⁰³Russian-Kyrgyz Development Fund. Information about the Fund (in Russian). Available at: <https://www.rkdf.org/o-fonde/>. (Accessed 27 April 2023).

⁵⁰⁴Russian-Kyrgyz Development Fund. Annual Reports (in Russian). Available at: <https://www.rkdf.org/godovye-otchety/>.

The recapitalisation of the state-owned banks can have a significant indirect impact in demand for Russian steel in the domestic economy. In 2016, Vnesheconombank provided a guarantee of an amount that is equivalent to \$3 billion for bond of OJSC NOVATEK. The financial support was related to a project of strategic importance for the Russian economy concerning the construction of an integrated LNG complex in the Yamal peninsula.⁵⁰⁵ More than RUB 1.88 billion (\$21.65 million) was allocated from Industry Development Fund (IDF) for the production of microchips, protective clothing, pipeline bends, and basalt fibre.⁵⁰⁶ The Russian pipemaker OkhtaPromDetal has become one of the main recipients of the state loan.

Government regulation of financial markets and instruments as well as support measures by the Russian government distort market prices (interest rates and risk premia) for loans and other debt and equity instruments. Although transparency is low, it can be assumed that both the financial regulations and the subsidies have contributed to maintaining high production capacities and thus lower prices on the domestic market than under market conditions.

7.3.5 Other input sectors

Russia's automotive industry is a key source of demand for steel products in Russia. The support of the automotive industry has been associated with the change of deadline for the execution of the relevant contracts,⁵⁰⁷ and state guarantees for loans, tax deferrals, state guarantees for loans as measures in line with support for backbone companies.⁵⁰⁸ Moreover, Russian car manufacturers have received indirect support. About RUB 25 billion (\$300.6 million) has been injected into the real economy sector to support the demand for car makers' production during the Covid-19 crisis.⁵⁰⁹ All the measures mentioned above have supported the production in the industry and, as a consequence, have supported steel demand. The production in automotive industry increased by 10% in 2021 in comparison to 2020.⁵¹⁰

The regulation of labour and their impacts of the costs of employment should also be considered when assessing steel sector market distortions in Russia. In 2022, Russia's government implemented Federal Law No. 273-FZ on Introducing Amendments into the Labour Code of the Russian Federation. The amendment allows the government to set the terms and conditions of workers and results in increased government control over the labour market and wage bargaining in Russia. It allows the government to determine labour relations in individual organisations, their structural subdivisions and at individual production facilities, including, for example, the procedure and conditions for engaging in

⁵⁰⁵Reuters. VEB gave guarantees to Novatek for \$3 billion to secure the obligations of the Yamal LNG project. 24.06.2016. Available at: <https://www.reuters.com/article/russia-yamal-idRUL8N19G6DL>. (Accessed 27 April 2023).

⁵⁰⁶IDF. More than RUB 1.88 billion from IDF for the production of microchips, protective clothing, pipeline bends, basalt fibre and increasing labour productivity (in Russian). 29.07.2021. Available at: <https://frprf.ru/press-tsentr/novosti/bolee-2-4-mlrd-rubley-ot-frp-na-korablestroenie-tkani-stroitelnye-bloki-derevopererabotku-i-povyshen/>. (Accessed 27 April 2023).

⁵⁰⁷The Government of Russia. Cancellation of sanctions on certain state contracts of the automotive industry (in Russian), available at: http://government.ru/support_measures/measure/62/.

⁵⁰⁸The Government of Russia. Support for backbone companies (in Russian), available at: http://government.ru/support_measures/measure/87/.

⁵⁰⁹The Government of Russia. Support for Russian car manufacturers (in Russian), available at: http://government.ru/support_measures/measure/109/.

⁵¹⁰Chuprov A. (2022). The Russian car industry grew by 10% in 2021. AVTOSTAT. 13.01.2022 (in Russian), available at: <https://www.autostat.ru/news/50392/>.

work outside the established working hours. This could substantially affect the ability of workers (market participants) to set the labour conditions and costs, especially in sectors controlled by the government, including SOEs.⁵¹¹ Accounting for only about 2% of the costs of steel production in Russia, the overall impacts on domestic steel prices are considered moderate compared to other interventions such as direct production and investment subsidies and the regulation of energy inputs. At the same time, however, improved bargaining power on the side of employees could result in considerable increases in wages and salaries, which would result in a higher share of labour costs in the total cost of production of steel in Russia.

To conclude, the main input factors for steel producers helping them to reduce their costs are associated with ongoing federal support programs, as well as new measures to overcome negative impacts of Covid-19 and sanctions.

7.4 Republic of Türkiye

Turkish steel production relies on several different inputs, depending on different production routes used in the country. Türkiye has 26 electric arc furnace mill plants (EAF), 11 induction furnace plants and its 3 BOF plants, illustrating a heavy focus on the electric arc furnace production route.⁵¹² Accordingly, key raw materials and energy are two important factors for the cost of steel products. However, other factors such as transportation costs, costs related to land rights and financial services available for the steel industry have an impact too.

7.4.1 Raw materials

In terms of existing reserves of iron ore, as of 2021 Türkiye has 130 million metric tonnes of crude ore and 38 million metric tonnes of ore. This is not a significant share when compared to leading countries such as Australia (respective figures of 25,000 and 51,000 million metric tonnes), Brazil (15,000 and 34,000 million metric tonnes) and Russia (14,000 and 25,000 million metric tonnes).⁵¹³ Accordingly, Türkiye relies on imports for its supply of iron ore. In addition, a significant amount of the coking coal needs of the steel industry are met through imports. Türkiye is also the world's largest importer of scrap metal. 72% of steel production is from steel scrap.⁵¹⁴

On 14 October 2020, the Turkish government announced introducing new legislation aimed at increasing the local production and technological capacity in the country. The "Industrialization Executive Committee" was established. It is responsible for taking measures that will increase the localisation of critical components of supply chains. Previously, there was no such centralised body within the government to encourage localisation efforts. The committee can take measures to prevent any changes in the equity structure of companies. The underlying legislation does not provide details of companies that are critical to the country, neither decision-making processes nor procedures.

⁵¹¹ US Department of Commerce (2022). Reconsideration of Russia's Status as a Market Economy. Country. POI: 10/01/2020 – 09/30/2021.

⁵¹² Turkish Steel Exporters Association (2023). Overview of Türkiye's steel industry. Available at <https://www.cib.org.tr/en/statistics.html>. (Accessed 27 April 2023).

⁵¹³ Statista (2021). World Reserves of Iron Ore as of 2021, by country – Türkiye. Available at <https://www.statista.com/statistics/267381/world-reserves-of-iron-ore-by-country/>. (Accessed 27 April 2023).

⁵¹⁴ Foundry Planet (2022). Steel manufacturing in Türkiye. Available at: <https://www.foundry-planet.com/d/steel-manufacturing-in-Turkiye/>. (Accessed 27 April 2023).

However, decisions can be of importance for the iron ore, coke, and metal scrap industries.⁵¹⁵ For example, domestic steel producers may be receiving preferential treatment in public procurements, which could improve domestic plants' economies of scale and production costs respectively.⁵¹⁶ In addition, measures directed to finance, customs, environmental, infrastructure, logistics, and energy markets are considered by relevant Turkish ministries.⁵¹⁷ These measures, individually or collectively, could result in lower than normal prices for steel products in Türkiye.

In October 2019, two new employment-oriented loan programs were introduced which are relevant for the steel industry as well as relevant intermediary industries including coke and metal scrap: a working capital loan for the manufacturing sector and a working capital loan for the construction sector.

Regarding the first, companies with ten employees or more are eligible to receive support. If they commit to employ at least five new employees, a loan of TRY 200 thousand (\$35 thousand in 2019 terms) will be granted per new employee in manufacturing sectors except textile (where the sum differs). Producers of inputs for the steel sector are generally eligible for receiving this loan support. Loans at fixed rates can provide a cost advantage to these companies over commercial rates that may be higher. The resulting cost savings may also result in lower prices for inputs used in the steel sector and therefore lower domestic prices for steel. When it comes to working capital, the loan program targets ongoing projects of construction companies. Under the loan program, the amount to be extended to each company is the amount required for the completion of the projects.⁵¹⁸ Loan-induced increases in demand could result in higher productions volumes, which, due to cost advantages, could result in lower prices for steel products in Türkiye.

The 11th Development Plan (2019-2023)⁵¹⁹ sets a variety of objectives for the basic metal industry by the end of 2023:

- ◆ improve the production structure in the basic metal industry to produce qualified products;
- ◆ raise the variety of high value-added products and increase the share of the ore-based production method without causing idle capacity;

⁵¹⁵Global Trade Alert; Official Gazette of Türkiye, "Sanayileşme İcra Komitesi Hakkında Cumhurbaşkanlığı Kararnamesi – No.68", [Presidential Decree on Industrialization Executive Committee – No.68]. Available at: <https://www.resmigazete.gov.tr/eskiler/2020/10/20201014-6.pdf>. (Accessed 27 April 2023).

⁵¹⁶ See, e.g., Anadolu Agency (2020). Viral year 2020: Turkey makes major technological strides. Available at <https://www.aa.com.tr/en/science-technology/viral-year-2020-turkey-makes-major-technological-strides/2081062>. (Accessed 27 April 2023).

⁵¹⁷ See, e.g., Daily Sabah (2020). Turkey to expand industrial capacity with key structural reform, minister says. Available at <https://www.dailysabah.com/business/economy/turkey-to-expand-industrial-capacity-with-key-structural-reform-minister-says>. (Accessed 27 April 2023).

⁵¹⁸Note that for the new employment-oriented loan programs, the "maturity of the loan will be up to 5 years, with a 1-year non-refundable grace period. Regarding the interest rates, the banks offer two options, one is inflation-indexed CPI (consumer price index) +2 %; the second one is fixed 12%." In the case of the working capital loan for the construction sector, the "maturity of the loan will be up to 5 years, with a 2-year non-refundable grace period. Regarding the interest rates, the banks offer two options, one is inflation-indexed CPI (consumer price index) +3.5 %; the second one is fixed 14%." See: Global Trade Alert (2019). Türkiye: Three state-owned banks announce employment-oriented loan programs. Available at: <https://www.globaltradealert.org/state-act/38738/Türkiye-three-state-owned-banks-announces-employment-oriented-loan-programs>. (Accessed 27 April 2023).

⁵¹⁹Decision of the Grand Assembly of Türkiye (2019). Decision on the approval of the Eleventh Development Plan (2019-2023). 18 July 2019. Available at https://www.sbb.gov.tr/wp-content/uploads/2022/07/Eleventh_Development_Plan_2019-2023.pdf.

- ◆ expanding exports and export markets;
- ◆ preventing the imports of non-standard low-quality products;
- ◆ improving the domestic supply chain on the basis of quality and size of the steel types used in strategic areas such as defence industry, railways, mega projects and nuclear power plants and guaranteeing input supply.

The plan also includes a variety of specific policies and measures planned in the area of mining.⁵²⁰ Potentially distortive policies and measures targeting the mining industry include the following:

- ◆ R&D activities will be increased for high potential domestic resources such as geothermal and shale gas, especially lignite.
- ◆ Exploration of lignite reserves will be completed, and plants will be ready for tender.
- ◆ Extensive exploration activities about shale gas and methane gas will be conducted.
- ◆ Efficiency of the bureaucratic structure will be ensured in the permit processes and investment guarantee will be improved.
- ◆ Permission processes to ensure investment guarantee will be simplified and investment licence procedures will be accelerated and administrative burdens on the investor will be eased.
- ◆ The expansion of the firm and enterprise scales will be encouraged.
- ◆ Measures will be taken strengthen the technical and financial structures of mining firms.
- ◆ With the object of increasing value added in mining sector, priority will be given to the domestic processing of minerals and development of end products and the domestic production of machinery and equipment used in mining will be supported.
- ◆ The application of generation conditions including advanced stages in the tender of the mining license areas will be expanded.
- ◆ Production infrastructure of mines with high economic potential and other critical raw materials will be set up.
- ◆ Domestic production of energy and mining machines and equipment will be improved.
- ◆ Projects will be developed for the exploration and research of critical raw materials and rare earth elements identified by countries and country groups.
- ◆ A mechanism will be established to reduce mining exploration risks financially.
- ◆ A Mining Investment Partnership model will be established so that the mining operation and exploration could be carried out in international standards.
- ◆ Regulations regarding the strategic reserve, stocks and export restrictions for these metals will come into force.

It is unclear whether and to which extent the government of Türkiye will provide financial support to companies along the steel manufacturing value chain. Trade remedy investigations could pay attention to designated measures, which could include targeted subsidies and other measures such as interest rate support (e.g., to reduce exploration risks, to maintain strategic reserves, or to finance investments in capital-intensive production or extraction infrastructure).

⁵²⁰Decision of the Grand Assembly of Türkiye (2019). Decision on the approval of the Eleventh Development Plan (2019-2023). 18 July 2019. Available at https://www.sbb.gov.tr/wp-content/uploads/2022/07/Eleventh_Development_Plan_2019-2023.pdf. (Accessed 27 April 2023).

7.4.2 Energy

In April 2017, the Turkish Ministry of Energy and Natural Resources (MENR) announced the National Energy and Mining Policy (Milli Enerji ve Maden Politikası). In late 2017, the minister outlined that "[b]y expanding the purchase guarantee, feed-in-tariff, we will start using the long-term incentive and support mechanism for local coal".⁵²¹ The policy focuses on less reliance on imports and aims at improving energy supply security, localisation, and predictability in Türkiye's energy markets.

Furthermore, to reduce the import dependence and the current account deficit, domestic energy generation, exploration, and R&D activities shall be increased for high potential domestic resources such as geothermal and shale gas, especially lignite. Regarding energy commodities, extensive exploration activities about shale gas and methane gas shall be conducted. The Turkish government also aims at increasing the efficiency of permission and licensing processes.

The MENR's Strategic Plan for 2019-23 also promotes the security of energy supply by increasing indigenous energy production and diversifying energy sources. Natural gas production is a priority as in Türkiye it has long been less than 2% of demand. Procurement of spot LNG is another priority. In addition, the National Energy Efficiency Action Plan (NEEAP) for 2017-23 seeks to reduce Türkiye's primary energy consumption by 14% by in this period. It includes 55 actions defined in six categories: buildings and services, energy, transport, industry and technology, agriculture, and cross-cutting areas.⁵²²

The electricity and coal-gas tax (Elektrik ve Hava Gazı Tüketim Vergisi) applies to electricity consumption at an ad valorem rate of 1% for the manufacturing sector which is relevant for steel producers in manufacturing. For renewable power generators, there are a range of licence exemptions and fee reductions available.

The 11th Development Plan (2019-23) sets out targets to achieve 219.5 Terrawatt hours (TWh) of electricity production from domestic resources in 2023, based on total electricity demand of 375.8 TWh. As part of this effort, the country plans to commission 7,500 Megawatts (MW) of domestic coal power capacity (subject to change based on ongoing studies on the country's domestic coal resource base). The Turkish government also plans to commission 10,000 MW each of solar and wind power capacity over the period 2017-27. Accordingly, the government expects that 84% of new electricity generation capacity will come from domestic sources by 2023 (of which 76% will be renewables) and 82% of new capacity up to 2027 will come from domestic sources (of which 61% will be renewables). As part of its Vision 2023 policy, the Turkish government targets a reduction in the share of natural gas in electricity generation to 20.7% by 2023, compared to 29.8% in 2018 per the 11th Development Plan. As the cost of renewable energy has been declining in Turkey in recent years, the increase of the share of renewable energy in Turkey's energy mix is also

⁵²¹See: https://www.gem.wiki/Türkiye_and_coal.

⁵²²Republic of Türkiye, Ministry of Natural Resources (2017) National Energy Efficiency national Plan. Available at: <https://policy.asiapacificenergy.org/sites/default/files/National%20Energy%20Efficiency%20Action%20Plan%20%28NEEAP%29%202017-2023%20%28EN%29.pdf>. (Accessed 27 April 2023).

likely to decrease prices paid for electricity, including in the sectors of inputs for the steel industry.⁵²³

The 11th Development plan also sets out plans of access to gas in Organised Industrial Zones (OIZs): natural gas infrastructure will be delivered to the OIZs, focusing on priority sectors. Transmission investments will be made for the secure supply of energy, access to energy will be eased through various support mechanisms. In addition, access to the natural gas will be provided to the OIZs which technically and economically satisfy the legal requirements.⁵²⁴

Türkiye's approach to coal mining and coal-fired electricity generation is rooted in a government strategy to reduce dependence on imported natural gas for economic and energy security purposes. The two state-owned coal mining companies, Turkish Coal Enterprises (TKİ) and Turkish Hard Coal Enterprises (TTK), explore for and produce lignite and hard coal. TTK has a virtual monopoly in hard coal production, processing, and distribution. TKİ and TTK have set low domestic prices for hard coal and lignite.⁵²⁵ Information about the precise amount of subsidies granted to coal miners is hard to obtain. One source from 2015 provides estimates of subsidies of fossil fuels in the range of \$300 million to \$1.6 trillion. Subsidies result from a mix of policies including tax breaks, direct grants, and support from Turkish public finance institutions and state-owned banks. The estimates provided in the report are considered a conservative figure given the number of subsidies in Türkiye.⁵²⁶ Turkish steel manufacturers relying on hard coal and electricity may benefit from rates at a cost advantage over commercial rates that may be higher under normal market conditions. The resulting cost savings for energy likely result in lower prices for inputs used in the steel sector. Given that about 70% of Turkish steel production is highly reliant on electricity (EAF route) and a 34% coal share in the power mix by generation in Türkiye⁵²⁷, the prices set by Turkish SOEs TKİ and TTK for lignite and hard coal are very likely to result in lower than market prices for electricity and lower cost of production of steel respectively. Trade remedy investigations could pay specific attention to prices for coal set by TKİ and TTK, particularly considering subsidies received from the government (see below).

As part of its strategy to reduce dependence on imported energy sources, Türkiye wants to add new lignite power generation capacity of 7.5 GW by 2027, though this target may

⁵²³ New wind and solar power gets cheaper than coal in Turkey (2021). Available at: <https://reglobal.co/turkey-new-wind-and-solar-power-now-cheaper-than-running-existing-coal-plants-relying-on-imports/>. (Accessed 27 April 2023).

⁵²⁴ Decision of the Grand Assembly of Türkiye (2019). Decision on the approval of the Eleventh Development Plan (2019-2023). 18 July 2019. Available at https://www.sbb.gov.tr/wp-content/uploads/2022/07/Eleventh_Development_Plan_2019-2023.pdf. (Accessed 27 April 2023).

⁵²⁵ See Overseas Development Institute (2019). Available at <https://cdn.odi.org/media/documents/12752.pdf>. Note that recent data about market shares is difficult to obtain based on publicly available sources. According to Eurocoal, coal is extracted by three SOEs in Türkiye: TÜRKİYE KÖMÜR İŞLETMELERİ (TKİ), ELEKTRİK ÜRETİM (EÜAŞ) and TÜRKİYE TAŞKÖMÜRÜ KURUMU (TTK), and a growing number of private companies, some under contract to the state-owned companies. TTK operates five deep mines in the Zonguldak coal basin and produced 686 thousand tonnes of saleable coal in 2018. Hard coal production from private mines totalled 415 thousand tonnes. See Eurocoal (2018). Available at <https://euracoal.eu/info/country-profiles/turkey/>.

⁵²⁶ Overseas Development Institute et al. (2015). G20 subsidies to oil, gas and coal production – Turkey. Accessed at <https://cdn.odi.org/media/documents/9972.pdf>. (Accessed 27 April 2023).

⁵²⁷ Overseas Development Institute (2020). Turkey continues to provide significant subsidies to coal mining and coal-fired power through state-owned enterprises. Accessed at <https://cdn.odi.org/media/documents/12752.pdf>. (Accessed 27 April 2023).

change based on reserve reports that will be prepared by internationally authorised institutions.

The Turkish government is also keen to prevent the closure of existing power generators operated by the private sector, primarily for energy security reasons. To that end, in January 2018, a so-called electricity market capacity mechanism was introduced with the Regulation on Electricity Market Capacity Mechanism. It is meant to ensure sufficient installed and reserve generation capacity.⁵²⁸ In addition to the capacity mechanism, Elektrik Üretim (Elektrik Üretim Anonim Şirketi) (EÜAŞ, the Electricity Generation Joint Stock Company) purchased electrical energy from privately owned coal power plants that generate electricity using domestic coal with a guaranteed price between 5 to 5.5 US cents/kWh (\$50-55/MWh, revised quarterly) until the end of 2027. A (domestically sourced) coal plant can claim both a capacity mechanism and this support.

Also, capital injections by the Turkish government play an important role in the Turkish energy market. In October 2020, TKI was transferred TRY 1.16 billion (\$ 49 million) to support the operations of the company in 2019.⁵²⁹ Similarly, in November 2021, the Turkish Ministry of Finance (MOF) further announced that the government transferred TRY 1.22 billion (\$51 million) to the Turkish Coal Corporation (TCC) in the 2020 financial year to support the operations of the company. Previously, in 2019, the amount transferred by the Government was TRY 1.16 billion (\$49 million).⁵³⁰

Moreover, TTK was transferred TRY 1.18 billion (\$49.9 million) to support the finances of the company in 2019. In 2019, the TTK incurred a TRY 1.1 billion (\$46.5 million) loss, and the government transferred TRY 1.18 billion (\$49.9 million) to support the company. The capital injection to TTK was made in the course of 2019.⁵³¹

In addition, as indicated above, two renewable energy companies, Atayurt Insaat and Eko Temiz Enerji, have been awarded support measures under the Ministry of Industry and Technology Project Based Incentive System in 2018.

⁵²⁸According to the IEA, "TEİAŞ, the system operator, is the responsible entity for managing the capacity mechanism. Under this framework, power plants that meet the eligibility criteria receive monthly capacity payments. In order to be able to receive capacity payments, participants are required to prove that certain thresholds have been satisfied; these are calculated by taking into account the weighted average capacity utilisation rates in the last four quarters. For the power plants utilising domestic resources, the threshold is 10%, for others it is 15%. The payment amounts are calculated according to a formula set out under the regulation by taking into account the unit-based generation costs, the costs necessary for the generators to stay within the system, and the hourly power sale and purchase rates. Payments are prioritised for generating facilities utilising domestic coal resources. In 2018, TRY 1.4 billion (\$ 298 million) was paid out in capacity payments, while the budgeted amount in 2019 was TRY 2 billion (\$ 352 million) and TRY 2.2 billion for 2020 (\$ 333 million)." See: International Energy Agency (2021). Türkiye 2021 – Energy Policy Review. Accessed at https://iea.blob.core.windows.net/assets/cc499a7b-b72a-466c-88de-d792a9daff44/Türkiye_2021_Energy_Policy_Review.pdf. (Accessed 27 April 2023).

⁵²⁹The Ministry of Treasury and Finance, DG State Owned Enterprises, Report on Public Enterprises, p.38 (30.10.2020). Available at: https://ms.hmb.gov.tr/uploads/2020/10/kamu_rapor_web.pdf. (Accessed 27 April 2023).

⁵³⁰The Ministry of Treasury and Finance, DG State-Owned Enterprises, Report on Public Enterprises, p.62 (05.11.2020). Available at: https://ms.hmb.gov.tr/uploads/2021/11/KIR_2020_03.11.2021.pdf. (Accessed 27 April 2023).

⁵³¹ The Ministry of Treasury and Finance, DG State Owned Enterprises, Report on Public Enterprises, p.41 (30.10.2020). Available at: https://ms.hmb.gov.tr/uploads/2020/10/kamu_rapor_web.pdf. (Accessed 27 April 2023).

7.4.3 Transportation

Türkiye's unique geographical location, which includes a lengthy Mediterranean coastline, allows it to supply European steel markets efficiently.⁵³²

The 11th Development Plan of Türkiye foresees substantial investments in the country's logistics networks. Policies and measures include:

- ◆ extending inter-modal transportation;
- ◆ increasing the competitiveness of railway branch lines and logistics centres, which will serve petrochemical plants, manufacturing facilities for the automotive industries, ports, OIZs, and mining sites;
- ◆ increasing the share of railways in freight transport (the share of railways in modes of national territorial transport systems shall be increased from 5.15% to 10%);
- ◆ constructing a total of 294 km of branch lines for 38 OIZs, private industrial zones, ports, and free zones in addition to 36 manufacturing facilities;
- ◆ improving logistics centres along key railway corridors for freight transport;
- ◆ upgrading single-track railway lines to double-track lines;
- ◆ constructing several new railway lines and highways;
- ◆ facilitating large-scale port investment in support of the PRC's Belt and Road Initiative; and
- ◆ increasing the effectiveness and attractiveness of Central Corridor (intensified cooperation with the corridor countries under the leadership of Türkiye).⁵³³

The Turkish government also expects a growing demand in gas and plans to make Türkiye an international gas trading hub. Accordingly, Türkiye is planning to use a growing number of financial resources for further expanding and developing its gas import infrastructure with investments reaching at least TRY 27 billion (\$1.14 billion). Investments in LNG are also priorities in energy security). In recent years, additional floating storage and regasification terminals have been commissioned and existing capacity increased. In addition, entry points are connected to the gas network and Türkiye has focused on increasing procurement of spot LNG for diversification.⁵³⁴

7.4.4 Financial services

As outlined above, in September 2016 the Law on Project-Based Investment Incentive Program aimed at increasing the amount of investment projects contributing to technological transformation of industry, reduce import dependency and support projects that are R&D intensive and are related to high value-added. The law allows the President of

⁵³²Business Wire (2022) Türkiye Steel Market Report 2022: Rising Investments by Leading Authorities for Infrastructural Development Driving Growth. Accessed at: <https://www.businesswire.com/news/home/20221014005141/en/Türkiye-Steel-Market-Report-2022-Rising-Investments-by-Leading-Authorities-for-Infrastructural-Development-Driving-Growth---ResearchAndMarkets.com>. (Accessed 27 April 2023).

⁵³³Decision of the Grand Assembly of Türkiye (2019). Decision on the approval of the Eleventh Development Plan (2019-2023). 18 July 2019. Available at https://www.sbb.gov.tr/wp-content/uploads/2022/07/Eleventh_Development_Plan_2019-2023.pdf. (Accessed 27 April 2023).

⁵³⁴King and Spalding (2018) An Overview of LNG Import Terminals in Europe. Accessed at: https://www.kslaw.com/attachments/000/006/010/original/LNG_in_Europe_2018_-_An_Overview_of_LNG_Import_Terminals_in_Europe.pdf?1530031152. (Accessed 27 April 2023).

Türkiye to grant a variety of different measures, including interest rate support, paid for by the budget of the Ministry of Trade.

In 2021, Türkiye passed a new act to promote exporters' financing. Under the Ministry of Trade, the Turkish Exporters Assembly (TİM) and Export Credit Bank of Türkiye (Türk Exim bank) established the Export Development Joint Stock Company (IGE) authorised to help exporters obtain financing. IGE obtained the right for exempting VAT, corporate tax, income tax, and stamp duty. In addition, for a period of up to 30 years, income from activities related to new free zones would be exempt from income tax and corporate tax.⁵³⁵ Free zones are special sites within Türkiye deemed outside of the customs territory and which have special regulatory treatment for the operating users to promote exports of goods and services.⁵³⁶

7.4.5 Other input sectors

The Law on Project-Based Investment Incentive Program mentioned above also grants the President of Türkiye to allocate public land for up to 49 years free of charge. Additionally, it grants the President to transfer public land with all the rights free of charge and infrastructure investments can be made by the President if required by the project.

⁵³⁵Yieh Corp. (2021). Türkiye passes new act to promote exporters' financing. Accessed at: <https://www.yieh.com/en/NewsItem/130052>. For a specific overview of IGE activities, see: <https://ihracatigelistirme.com.tr/>. (Accessed 27 April 2023).

⁵³⁶For a comprehensive overview of Turkish Free Zones, see: <https://www.trade.gov.tr/free-zones/general-outlook>

8. Conclusions

This report identified potential government-induced market distortions in four major steel exporting countries. The report provides evidence for their existence and potential impacts.

It provides a first step towards building an improved understanding of some of the relevant issues at a high level. It does not, however, constitute a comprehensive or exhaustive source of information on all relevant market distortions that can be directly applied in trade remedy investigations. Although some of the potential market distortions identified in this research could be considered in trade remedies investigations on a case-by-case basis, the outputs of this research would likely need to be supplemented with further evidence at a more granular level to enable assessments of Particular Market Situations in specific markets for narrowly defined products.

For India, the PRC, Russia and Türkiye, the analysis clearly reveals that governments apply a broad range of regulation and support programs which, through several mechanisms, could contribute to market distortions in their national steelmaking industries. These market interventions, to various extents, could impact the prices of steel in domestic markets and export prices of steel products.

Government-induced interventions identified for all countries include various measures implemented at national and regional level, for example:

- ◆ direct state aid (e.g., public grants provided for capacity expansion and modernisation);
- ◆ tax incentives (e.g., tax rebates, corporate tax exemptions, VAT, and customs duty exemptions);
- ◆ free land allocation;
- ◆ beneficial labour market-related policies (e.g., social security insurance support, salary support); and
- ◆ various forms of state aid measures targeted at intermediary input sectors important to the steelmaking industry, such as energy and raw material providers.

While the overall economic impacts of market-distorting practices are difficult to estimate, the high number of government interventions in each country together with the fact that transparency about them is generally low suggests that more detailed analysis would be required to assess the effects on individual businesses and groups of businesses in these countries.

For India, trade remedy investigations could, under appropriate circumstances, consider to what extent Indian steel exporters have benefitted from tariffs and non-tariff barriers. They could assess to what extent Indian steelmakers have been able to expand production of products and enjoy tariff protection or implicit protection through preferential procurement and licensing requirements, and whether Indian steelmakers were able to expand exports at low prices in these product categories. Investigations could also assess the extent to which Indian specialty steel producers benefitted from federal and regional subsidies granted for capacity expansion, for example, under the PLI regime. Specific attention could be paid to Coal India and the level of support granted for the company's investment in deposits in India and third countries.

The PRC provides direct and indirect support on several levels in up- and downstream industries. Potential distortions from support policies are primarily created in energy generation, transport, financial services, labour and key markets of steel products. The broad spectrum of direct and indirect government support measures targeted at companies operating within the PRC steelmaking value chain suggest that the prices set by producers which are directly or indirectly benefitting or have benefitted from these measures in the past are not determined by market forces.

Concerning Russia, trade remedy investigations could consider, where appropriate, to what extent Russian steel exporters have benefitted from gas price regulation in Russian regions, and energy subsidies in general. They could also assess to what extent Russian steelmakers have benefitted from government measures to create excess demand for steel in the Russian economy, and whether these measures have helped avoiding bankruptcies in the industry.

Finally, as concerns the Turkish steel industry, trade remedy investigations could identify, where appropriate, the extent by which Turkish steel exporters benefitted from the broad spectrum of investment incentives programmes offered by the Turkish government and regional governments. They could particularly assess incentive regimes directed at large-scale investments, but also investigate (smaller) investment incentives provided for industrial R&D and machinery equipment.

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