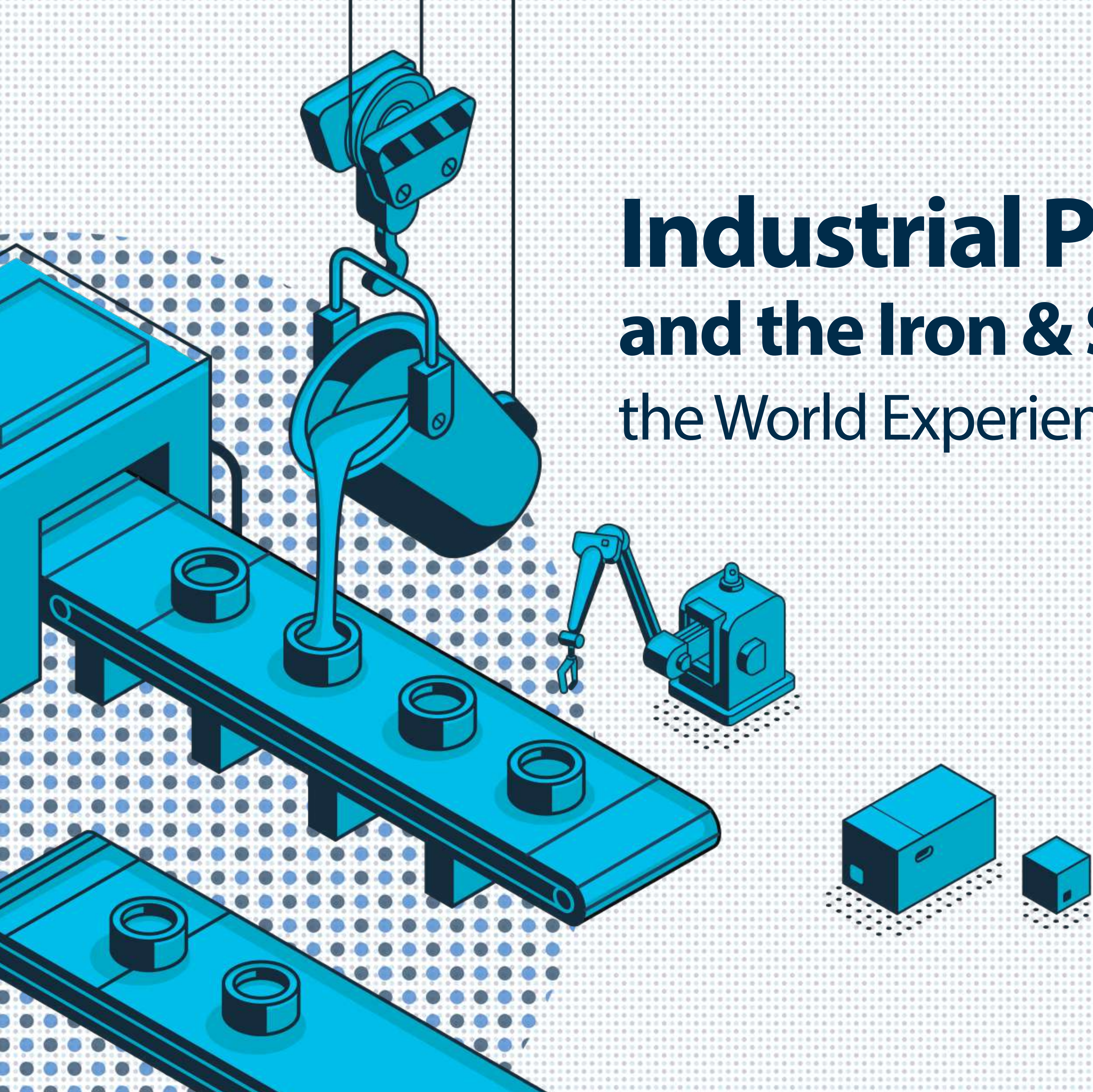

Industrial Policy
and the Iron & Steel Sector:
the World Experience for Ukraine

GMK CENTER

Industry is the ground of Ukraine's economy

You are reading an unusual document — this is an industrial policy handbook based on the example of the iron & steel sector. According to the UN, 84 countries worldwide (all developed economies) that generate 90% of the global GDP are actively implementing the formalized industrial strategies. The industrial sector creates jobs and profits. Consumer expenditures enable the development of other sectors of economy.

Industry is the foundation that holds the entire economy. Ukraine is seeking its place in the new world. Our advantages are not only agriculture and IT, but first of all industry: iron & steel sector, mechanical engineering, energetics, chemical industry.

GMK Center specializes in providing analytics to Ukrainian and international companies and institutions working in the industrial sector. In the course of preparing a series of analytical reports, we asked ourselves the following questions: Why certain countries invest so much in the development of steel sector? How did a number of countries manage to become world leaders in steel sector? Why is this industry so important for the economy? What is steel sector contribution to Ukraine's economy? What are the modern trends in the world industrial policies? What is the recipe of success and what successful stories do we know?

You will find the answers to these and many other questions as you read this document which is at the same time a manual and guidelines for the public authorities.

The study and analysis of the effects and instruments of industrial policies were conducted on the basis of the example of the iron & steel sector. We studied the experience of 11 largest steelmaking countries. For that purpose, we analyzed instruments, legislative acts, guidelines that initiated and implemented the industrial policy. We described the key incentives and their complex results.

We are confident that Ukraine needs an industrial policy that can ensure sustainable development of the economy in the following 5 to 10 years, guarantee stable currency inflows from exports, high-paying jobs and rapid regional development.

Stanislav Zinchenko
GMK Center Director

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Stable operation of steel industry as a key condition for sustainable development in Ukraine

₴347,000,000,000

contribution of steel industry to Ukraine's GDP in 2017

12%

share of steel and related industries in the Ukrainian GDP

5.0%

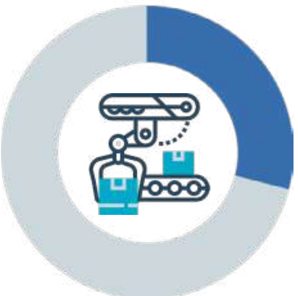
direct effect: steel industry companies

5.7%

indirect effect: supplires of steel industry companies

1.3%

induced effect: consumer spendings of steel industry and its supplires employees



29%

share of steel industry in total exports in 2018

$47.3 billion

total exports in 2018

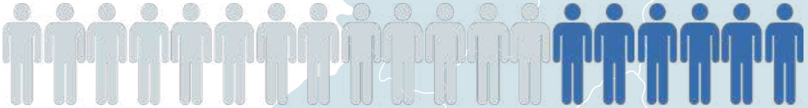
14%

of all investments in the industrial sector

UAH 25.5 billion

capital investment in the steel industry in 2018

Steel industry as the fundamental sector of economy



679 thousand persons

employed in steel and related industries

190 thousand persons

employed by steelmaking companies

4.8 UAH

added value in related industries generated by UAH 1 in the steel industry

41 %

this is how much higher a steel worker` salary is compared to the average in Ukraine in 2018

12,496 UAH

average salary of a worker at a steelmaking company

26,943 UAH

average salary of a steelmaker

24,600 UAH

average salary of an electric locomotive operator

23,940 UAH

average salary of a heavy dump truck driver

2.6 jobs

created by one steel worker in related industries

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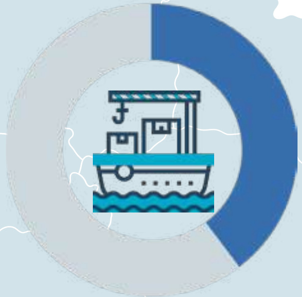
Steel industry as the fundamental sector of economy

34%

of all cargoes transported by railway

108 million tonnes

of cargoes of steel industry (coal, coke, ore, metal, scrap) in 2018



40%

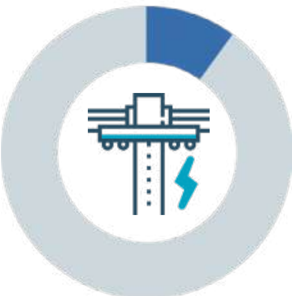
of all cargoes handled in Ukrainian seaports and 29% — in river ports originate from steel industry

52.7 million tonnes

of cargoes of steel companies (coal, coke, ore, metal) handled in seaports

1.06 million tonnes

of cargoes steel companies transported by river in 2018

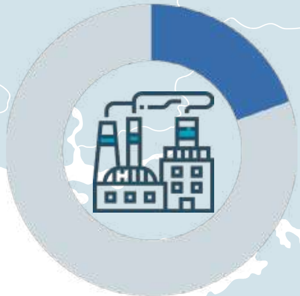


10.5%

of all electricity in Ukraine and 25% of electricity within the industrial sector are consumed by steel industry

13 billion kWh

electricity consumed by iron & steel companies in 2018(e): steel plants — 4.6 billion kWh, mining & processing plants — 8.4 billion kWh



18%

of all orders for mechanical engineering products in Ukraine are fulfilled by steel industry

UAH **17.3** billion

this is the amount of the orders for mechanical engineering companies fulfilled by steel industry in 2017

UAH **97.5** billion

total output of mechanical engineering products in Ukraine in 2017

INDUSTRIAL POLICY IN STEEL SECTOR: CONTRIBUTION TO THE ECONOMY

Steel industry as a responsible taxpayer

₴26,000,000,000

taxes paid by steel companies in 2018

3.5%

of all tax revenues in Ukraine come from steel industry

16 iron & steel companies

are among the TOP 100 largest taxpayers in Ukraine

11.6%

of the total corporate income tax received were paid by steel industry companies

2017

UAH 7.4 billion

corporate income tax paid by steel industry companies

UAH 64 billion

total collected corporate income tax in Ukraine

Steel industry as a systemically important industry for entire regions

40%

share of steel industry in GDP of four regions: Donetsk, Dnipropetrovsk, Zaporizhzhia and Poltava

2017

17.5%

direct contribution

18.5%

indirect contribution

5.1%

induced contribution

30%

share of steel industry in the total wages in four regions: Donetsk, Dnipropetrovsk, Zaporizhzhia and Poltava

2017

Steel industry as a socially responsible employer

11.5%

share of steel companies in the total wages in Ukraine

UAH 135 billion

were paid by steel companies in the form of wages, incl. taxes

One in every **7** hryvnias

collected by the Pension Fund of Ukraine in the form of single social tax was paid by steel companies

UAH 24.3 billion

in the form of single social tax were paid by steel companies

One in every **10** hryvnias

of pensions paid in Ukraine originated from steel industry

UAH 22 billion

were paid by steel sector companies to the Pension Fund of Ukraine

UAH 226 billion

total amount of paid pensions

One in every **12** hired workers

in Ukraine is engaged in the steel industry in some way

679 thousand persons

employed in steel and related industries

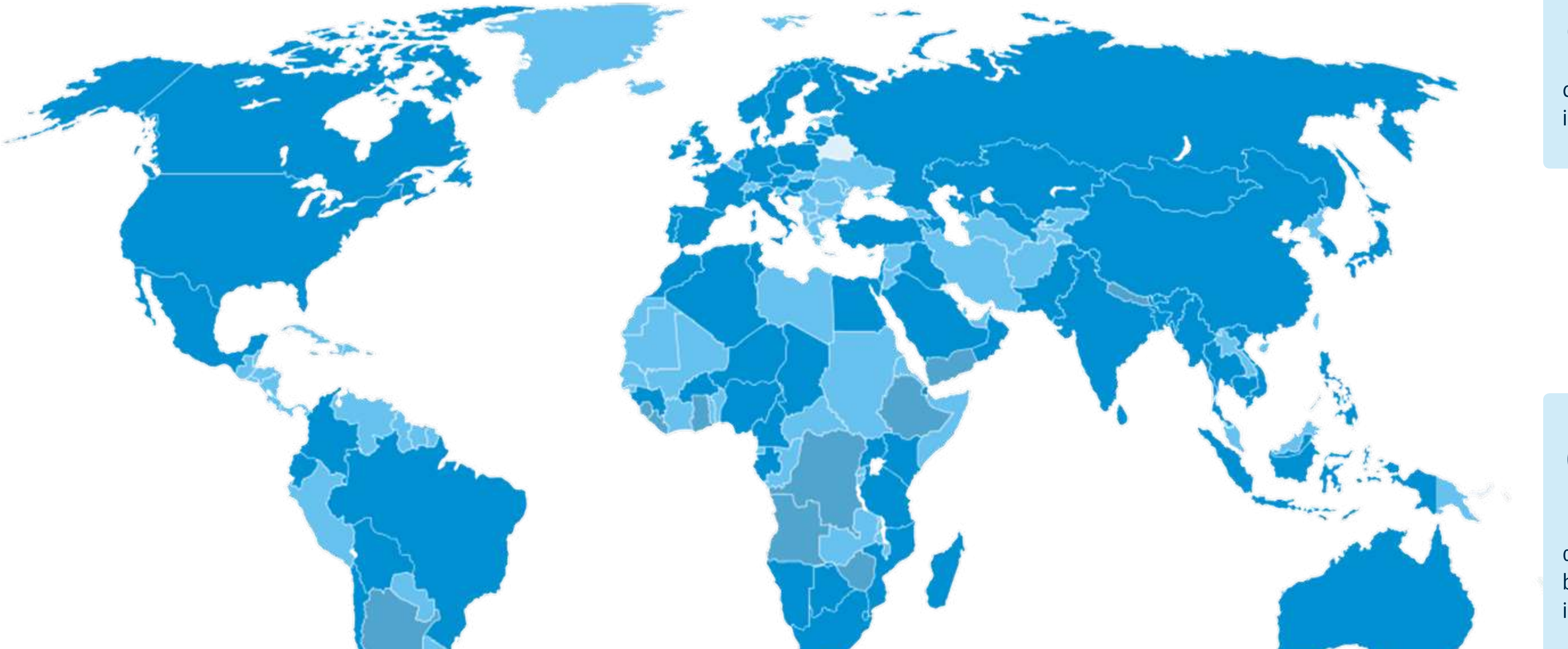
Industrial policies over the last 10 years

84

countries have formalized industrial strategies

90%

of the world GDP is generated by the countries that have industrial strategies



Industrial policies are becoming more and more important due to the following reasons:

• Pressure on the employment as a result of globalization and de-industrialization.

• Response to the export expansion of South and East Asia countries.

• Adapting to changes in the global value chain.

• Pursuance of sustainable development goals requires an efficient industrial sector.

Which countries use this instrument?

• Both developed and developing countries.

Why do developing countries need an industrial policy?

• To develop industries.

• To enter new markets.

• To use of competitive advantages, such as access to raw materials, modern technologies, cheap labor force.

Why do developed countries need an industrial policy?

• To restore the industrial potential lost during the globalization period in the 1990s and 2000s. Measures aimed at restoring the production capability (incentives, subsidies, public investment in advanced production facilities to expand domestic production capacities) and strategic measures aimed at positioning in the area of advanced technologies are becoming more and more frequent.

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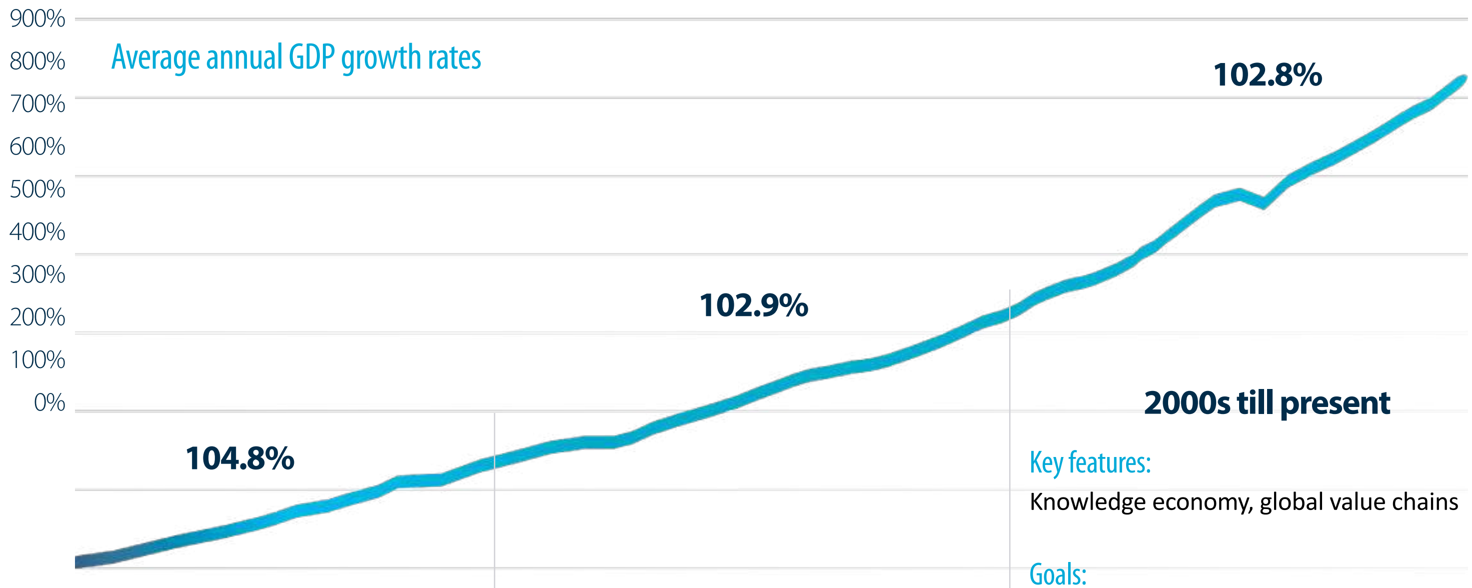
Development of the world economy, real GDP growth rates



Before 1980s

Key features:

Industrialization

Goals:

Creation of industries

Elements:

- Import substitution
- Development of emerging industries
- Sectoral strategies
- Selective openness to competition

The government's role in industrial policy-making:

Great government interference

1980s to 1990s

Key features:

Liberalization

Goals:

Market-led modernization

Elements:

- Limited interference by the government
- Development of horizontal policies
- Focus on attraction of foreign investment
- Openness to competition

The government's role in industrial policy-making:

Weak government interference

2000s till present

Key features:

Knowledge economy, global value chains

Goals:

Specialization, increasing productivity

Elements:

- Targeted strategies in open economies
- Development of digital technologies
- Participation in global value chains
- Attraction of foreign investment along with protection of strategic industries
- Support to small and medium-sized business
- Skills development

The government's role in industrial policy-making:

Enhanced role of the government, moderate influence on certain industries

New trends

Key features:

Digital technologies, sustainable development

Goals:

Use of modern technologies

Elements:

- Development of technologies
- Innovative products
- Public-private partnership in R&D
- Purchase of foreign technologies
- Development of startup projects

The government's role in industrial policy-making:

Greater influence in new areas, focus on inclusiveness

Industrial policy based on import substitution and development of certain industries is a thing of the past — it became irrelevant some 50 years ago. Just like liberal, market-based policies with minimum government interference that existed some 30 years ago. Today's trends tend to greater role of the government in industrial policy-making with the purpose to ensure efficient use of advantages and secure a good position in the global chains as well as to expand the use of modern technologies.

Source: UNCTAD

The world experience in applying industrial policy instruments for the development of the steel industry

As on late June 2018, OECD recorded over 3,000 state support measures aimed at development of the steel industry.

49%
of instruments are not public

The most popular instruments:

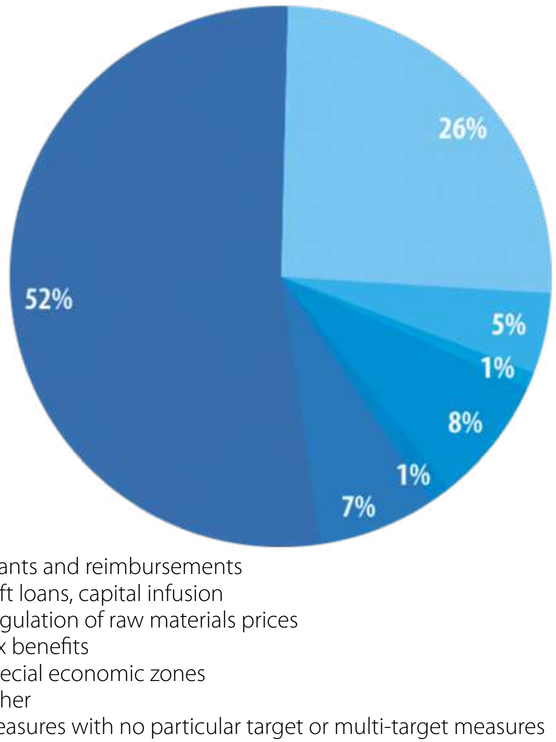
Fiscal:
- Tax benefits

Stimulating or liitation of foreign trade:
- Export tariffs and quotas
- Import tariffs and quotas
- Export subsidies

Direct government interference:
- Price regulation
- Preferences for buyers of local products
- Public procurement

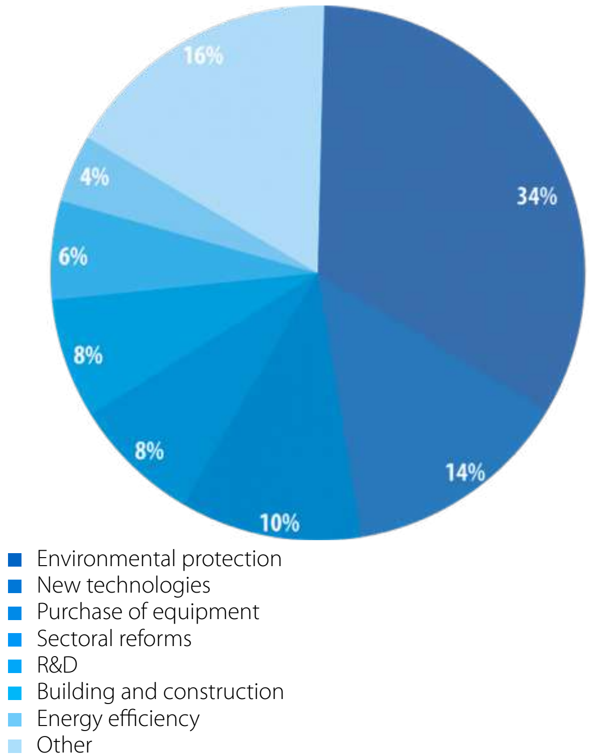
Financial:
- Grants and reimbursements
- Soft loans, purchase of debt instruments, capital infusion and debt-to-equity swap
- Guarantees and other assignments of obligations
- Debt write-offs or restructuring
- Government's stimulation of M&A

Structure of state support measures in the steel industry



The most popular measures are grants and reimbursements. Crediting and tax benefits are widely-used too. Information about 49% of applied instruments originates from non-official sources. That means that a great portion of such measures are not public. State support measures in the steel industry mostly aim at environmental protection, technologies, CAPEX, R&D. Interestingly, two thirds of the measures have no clear target or are multi-target.

Areas of state support measures in the steel industry worldwide



Areas of state support measures in the steel industry worldwide

90%

of industrial policies provide for having described clear investment measures

According to the OECD, a number of government policy measures are destructive. At the same time, some measures are eligible. The key eligibility criterion is this: application of an instrument should not cause unfair competition, made up competitive advantages to companies, create market distortions.

Non-eligible measures:

- Reimbursement of costs using any instrument
- Capital infusion, write-offs or assignment of debts
- Non-repayable financing
- Instruments aimed at expanding of capacities
- Instruments aimed at settling a particular problem
- Influence on pricing
- Export subsidies

Eligible measures:

- Grants for R&D, environmental protection; preference should be given to repayable grants
- Government loans — close to market conditions; could be aimed at technological improvements, environmental protection; preferably in the form of bonds, export guarantees in compliance with the OECD requirements
- Tax benefits — only in horizontal strategies, i.e. not for some particular sector
- Special economic zones should be temporary and provide no advantages to one particular sector
- Trade (export and import) restrictions — in compliance with the WTO requirements and other trade agreements

Investment instruments

Investment policy is a key industrial policy instrument. 90% of industrial policies provide for having described clear investment measures in place.

Investment instruments used in the process of implementation of industrial policies (structure, %):

Fiscal instruments:

Corporate income tax reduction/exemption

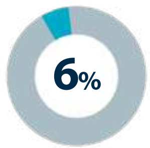
Customs duties reduction/exemption

VAT reduction/exemption

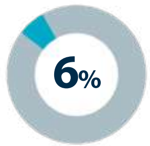
Other tax incentives

Financial instruments:

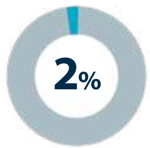
Grants



Allocation of land/reduced rental costs



Soft loans



Other instruments

How to become a leader.
User manual

Period of implementation:

2000–2015

Regulatory framework:

- 5-year government and local plans — Policy for the Steel Industry Development (2005, 2015)
- Steel Adjustment and Revitalization Plan (2009)
- State Council Policy (2010)
- Steel Industry Transformation and Development Action Plan (2015)
- Catalogue of Key Industries, Products and Technologies

Responsible authorities:

- Central Committee of the Party
- State Council
- Ministry of Industry and Information Technology
- National Development and Reform Commission
- Local authorities

Incentives:

- Grants: all the 35 largest companies used them in 2012; the grants were targeted at mostly technological improvements and environmental protection.
- Export subsidies: loans, grants and tax benefits for steel exporters. In 2004, Canada initiated an investigation regarding grants issued to Chinese exporters. According to the AISI, exports were still supported to an extend in 2015.
- Tax benefits: many measures at both national and local levels. The State Council Policy expressly provides for tax incentives for steel producers. In 2014, the Hebei Steel Group received a reward from the government for a considerable contribution to the national tax revenues. Tax benefits in the form of a 50% corporate income tax rate reduction are provided to companies working in the sectors included in the Catalogue of Key Industries, e.g. producers of stainless steel.
- Benefits for special economic zones: Jiangsu Yangtze International Metallurgical Industrial Park that grants tax benefits only to steelmaking companies (corporate income tax rate reduction, exemption from VAT and customs duties).
- Soft loans: granted via the four largest public banks on non-market conditions with almost zero rates.
- Capital infusion and debt conversion: debt-to-equity swap is made via public asset management companies; in 2011 Hebei Steel converted CNY 3.8 billion into equity, in 2014

Baotou Steel converted CNY 830 million.

- Energy subsidies: local authorities may set discounted tariffs for electricity, gas, coal.

In 2008, China granted USD 15.7 billion of energy subsidies to steelmaking companies. There were 2013–2015 several reductions of electricity tariffs for industrial companies in China.

- Control over prices for raw materials: restrictions of coke, ore and scrap exports as well as reimbursement of the cost of resources, grants for the development of raw material extraction or production projects.
- Preferences for the purchase of local equipment: VAT refund.

The program did not meet the WTO requirements but was closed only in 2008.

• Environmental regulation flexibilities: the government has always supported manufacturers where environmental issues are concerned.

• Encouraging of mergers and acquisitions with the purpose to optimize capacities. Set target:

TOP 10 manufacturers are supposed to achieve a 60% market share by 2025. In 2014, three agreements were signed. In 2016, as a result of merger of Baosteel and Wuhan (USD 8.7 billion), the world player No. 2 was created, and in 2018, a M&A financing fund was established.

Trade restrictions:

• technical barriers — 24
• antidumping duties — 7, of which **against Ukraine — 0**

Interesting facts:

• The most important measures to develop the industry were taken by the government in 2001 to 2010. In 2001, China acceded to the WTO and thus undertook to disclose information about government subsidies, in particular report on the subsidies granted at the national and regional levels every two years. The first report on the subsidies granted by the central government was prepared in 2006, and regional governments — only in 2016 when the most large-scale measures had already been completed.

• According to the reports submitted to the WTO, steel subsidies in China in 2016 amounted to USD 4.4 billion at the national level and less than USD 1 million at the local level.

• Subsidies are recorded in financial statements as profit. According to American researchers, the portion of profit of Chinese companies secured by the government reaches 80%. Between 2001 and 2017, the companies' profits totaled around USD 1 trillion.

• The measures taken by the government resulted in the formation of an investment pool for the companies within the industry. Chinese companies have become leaders in all capital-intensive industries due to the state support measures.

Today, government regulation aims at the industry restructuring with the following target indicators:

- reduction and utilization of capacities
- eco-friendliness
- investment in R&D and increased share of innovative products in the sales structure
- industry consolidation

127 million tonnes
steel output in 2000

807 million tonnes
steel output in 2016

INDIA

Unfulfilled leadership potential

Period of implementation:

2014 till present

Regulatory framework:

- National Steel Policy 2017
- Make in India
- Housing for all 2022

Responsible authorities:

- Ministry of Steel
- Department of Industrial Policy and Promotion (DIPP)
- Ministry of Commerce and Industry

Incentives:

• Industrial development: the target is to increase the share of industrial production in GDP from 15% in 2017 to 25% in 2025. The government facilitates the attraction of foreign investment in development of 25 sectors of the national economy, including automotive industry, aircraft engineering, building and construction, electrical mechanical engineering, mining, renewable energy.

India also seeks to increase steel production capacity from 122 million tonnes in 2016 to 300 million tonnes in 2030.

• Construction of 20 million homes for the poor by 31 March 2022.

• Transportation infrastructure development: USD 83.5 billion have been earmarked in the national budget for 2018–2019 fiscal years. The Economic Survey estimates that the overall investment demand will reach USD 4.5 trillion by 2040 to meet the infrastructure needs.

Trade restrictions:

• technical barriers — 3
• antidumping duties — 25, of which **against Ukraine — 1**
• import duties in the form of safeguards — 2

To protect the domestic market, India has banned imports of steel products that have not been certified under the national standards.

To provide domestic producers with raw materials, the Indian government imposed duties on iron ore exports that do not apply, however, to pellets. In 2009, the rate was 5%, in March 2011 it was raised to 20%. Since March 2016, the current export duty rate is 30%.

Interesting facts:

• According to the government forecasts, major growth in production in the metal consuming industries will start from the mid-2020s. Accordingly, a significant increase in demand for steel should be expected at that time. The current problem with the government incentive programs is underfunding.

81 million tonnes
steel output in 2013

106 million tonnes
steel output in 2018

JAPAN

How to build an industry if you have no competitive advantages

Period of implementation:

1950–1973

Responsible authorities:

Ministry of Industry and Commerce

Incentives:

• Grants and soft loans: the Japan Development Bank issued grants, loans at discounted rates, government guarantees. It also agreed to ease requirements to companies that received loans from the World Bank.

• Tax benefits: during 1962 to 1973, tax benefits in the form of accelerated depreciation were used to help attract investment in the industry.

• Encouragement of mergers and acquisitions: the Ministry of Industry and Commerce funded the merger of Yawata and Fuji Steel in 1970. This is how the world's largest steel company at that time, now Nippon Steel, was created. The purpose of the merger was to control prices.

• Ensuring access to new technologies: the Ministry of Industry and Commerce granted equal access to companies to purchase of licensing rights. That means that those who were more willing to implement the developments faster and more efficiently were given preference over those who paid more. The purchase of rights to basic oxygen steelmaking technology is an example. Technology purchase consortia are a feature of Japan.

• Assistance in settling of social issues: the Ministry of Industry and Commerce assisted steelmaking companies in employment of workers during crisis periods, as the practice of life-long employment in Japan did not allow for staffing reductions at the time.

Trade restrictions:

30% tariffs on steel imports were in force in the country by the end of the 1960s. Japan has never imported more than 2.7% of consumption volumes.

• Antidumping duties — 2, of which **against Ukraine — 0.**

Interesting facts:

• Japan has developed an industry in which it had no competitive advantage. With no government support, the country would have never achieved such results.

• Japanese steelmaking companies have lower profitability than the U.S. companies. However, Japanese manufacturers could afford it, as they worked within vertical multi-product structures where steel production was the basis for other industries.

• When Japan became the largest steel exporter in the world, trade conflicts with the U.S. began. The worsening of relations with the U.S. was a kind of an indicator of success.

5.0 million tonnes
steel output in 1950

119 million tonnes
steel output in 1973

U.S.

The art of war for the steel industry. Guide to protectionism

Period of implementation:

1968 till present

Regulatory framework:

- The Antidumping Act of 1921
- The Trade Act of 1974 (Section 201)
- The Trade Expansion Act of 1962 (Section 232)
- The Buy American Act (1933)
- Executive Order "Strengthening Buy American Infrastructure Projects Preferences" (31 January 2019)

Responsible authorities:

- President
- State Department
- Department of Commerce
- Department of the Treasury

119 million tonnes
steel output in 1968

87 million tonnes
steel output in 2018

Incentives:

• Priority public procurement of local steel products. In late January 2019, the President of U.S. signed a decree aimed at promoting the use of the U.S. steel products in infrastructure projects at the expense of the public funds.

Trade restrictions:

• technical barriers — 6
• antidumping duties — 164, of which **against Ukraine — 6**
• countervailing duties — 41

A 25% duty on steel imports was introduced in March 2018.

Historical examples of trade restrictions:

• Voluntary export restrictions: in 1968 to 1974 and 1982 to 1992, under pressure from the U.S. government, Japan and the European Union introduced quotas on steel exports to the United States.

• The minimum fair import price was in force for Japan and Europe during 1978–1981. Imports of products to the United States at prices below the set minimums have led to an expedited antidumping investigation.

• Bilateral agreements on minimum import prices for the Russian Federation (effective 1999–2004).

• Import tariffs: in 2002–2004, duties were imposed on imports of most types of steel products ranging from 8% to 30%.

Interesting facts:

• In 1947, the U.S. steel plants were the most efficient and productive in the world. They produced 57% of the world's steel output. In absolute terms, the U.S. production was 82.4 times higher than in Japan, 2.7 times higher than in the European Community, 3.9 times higher than in Eastern Europe. However, by the late 1960s, the American steel industry had lost its leading position and needed protection.

• In 1998, the U.S. Department of Commerce allowed retroactive duties to be imposed based on preliminary estimates of the dumping margin. This step enabled the imposition of antidumping duties on all imports that came from Japan, Russia and Brazil since 12 November 1998, on 23 November 1998.

• In 2016, the U.S. imposed a 522% import duty on cold-rolled sheets from China.

RUSSIA

Budget policy as a key instrument for industrial development

Period of implementation:

2013 till present

Regulatory framework:

• Strategy for the development of the steel industry untilт2020
• State Program "Industry Development and Increasing Its Competitiveness"
• Government Resolution No. 1312 of 30 December 2013 approving the Rules for granting subsidies from the Federal Budget to Russian organizations to compensate part of the expenditure on research and development…
• Government Resolution No. 3 of 3 January 2014 approving the Rules for granting subsidies from the Federal Budget to Russian organizations to compensate part of the costs of paying interest on loans…
• Government Resolution No. 566 of 8 June 2015 approving the Rules for granting subsidies from the Federal Budget to the State Specialized Russian Export-Import Bank for the purpose of offsetting the lost proceeds of loans granted in support of production of high-tech products

Responsible authorities:

• Government
• Ministry of Industry and Trade
• Industrial Development Fund

Incentives:

• Subsidies from the Federal Budget to cover part of R&D expenditures: RUB 105 billion were allocated in 2015.
• Provision of subsidies from the Federal Budget to offset part of the cost of paying interest on loans received from Russian credit institutions in 2014–2016.
• Provision of subsidies from the Federal Budget to the State Specialized Russian Export-Import Bank to compensate for the lost proceeds of non-performing loans granted to support the production of high-tech products.
• Soft loans for financing of investment projects from the Industrial Development Fund (at the rates of 1%, 3% and 5% per annum for up to 7 years in the amount of RUB 5 million to RUB 750 million).
• Infrastructure development: estimated investment in the framework of the main pipeline infrastructure upgrade and expansion is over USD 96 billion by 2024.
Among the planned projects are the construction of the high-speed Moscow-Kazan railway (the allocation from the State Budget is RUB 200 billion).

Trade restrictions:

• Antidumping duties — 8, of which **against Ukraine — 7**

Interesting facts:

• In 2018, Russian steelmaking companies topped the list of the world's most profitable companies: EBITDA of public companies was 30–35%.

70.2 million tonnes
steel output in 2012

71.6 million tonnes
steel output in 2018

SOUTH KOREA

Financial system facilitating industrialization

Period of implementation:

1962–1986
1997–2005

Responsible authorities:

- President
- Economic Planning Board (EPB)
- Ministry of Finance, Ministry of Trade, Ministry of Industry
- State-owned banks and investment funds

Incentives:

• Soft loans: in 1962, the government nationalized the Korea Development Bank, Export-Import Bank, and financed business through state-owned banks. Interest rate control was a major financial instrument of the industrial policy.

As a result, 65% of the capital of heavy-industry companies was provided by state-owned banks.

• Capital infusion: in 1978 and 1980, the government helped POSCO increase its capital. In 1992, the government rescued Sammi from bankruptcy; in 1997, Kangwon's debt was restructured.

• Infrastructure development: in 1986, the government funded the construction of a pier at Kwangyang Bay for the needs of POSCO.

• Price regulation: in 1999–2001, the government regulated the prices for semi-finished products depending on the direction of sale: export, domestic consumption, domestic sales for processing and further export.

• Tax benefits: in 2000–2005, POSCO was exempted from VAT on imported anthracite.

• Grants: in 1998–2005, the government provided R&D grants through the MOCIE Foundation.

Trade restrictions:

• technical barriers — 2 measures

• antidumping duties — 7, of which **against Ukraine — 1** (ferrosilicomanganese)

Interesting facts:

• Active financing of the steel industry by the government continued until the 1980s. When Korean businesses gained access to financing from market sources, public policies began to gradually liberalize.

• According to official statements by officials, following the Asian financial crisis, South Korea focused on liberalizing its economy in line with the global best practices to enhance its market institutions. But this policy was flexible. Thus, in the crisis and the first post-crisis years, the government actively supported the industry through tax benefits and price regulation.

• Korea actively subsidizes the shipbuilding industry, which has become the subject of WTO disputes with Japan and the EU. The new presidential administration declared it would support the industry through public procurement. Thus, by the end of 2018, orders for 63 vessels totaling USD 6.6 billion had been placed. This initiative is part of the declared course to "revive the processing industry and strengthen industrial competitiveness." Korea Maritime Shipping Finance Corporation has also been established to provide financing to companies in the sector through state-owned banks.

0.3 million tonnes
steel output in 1967

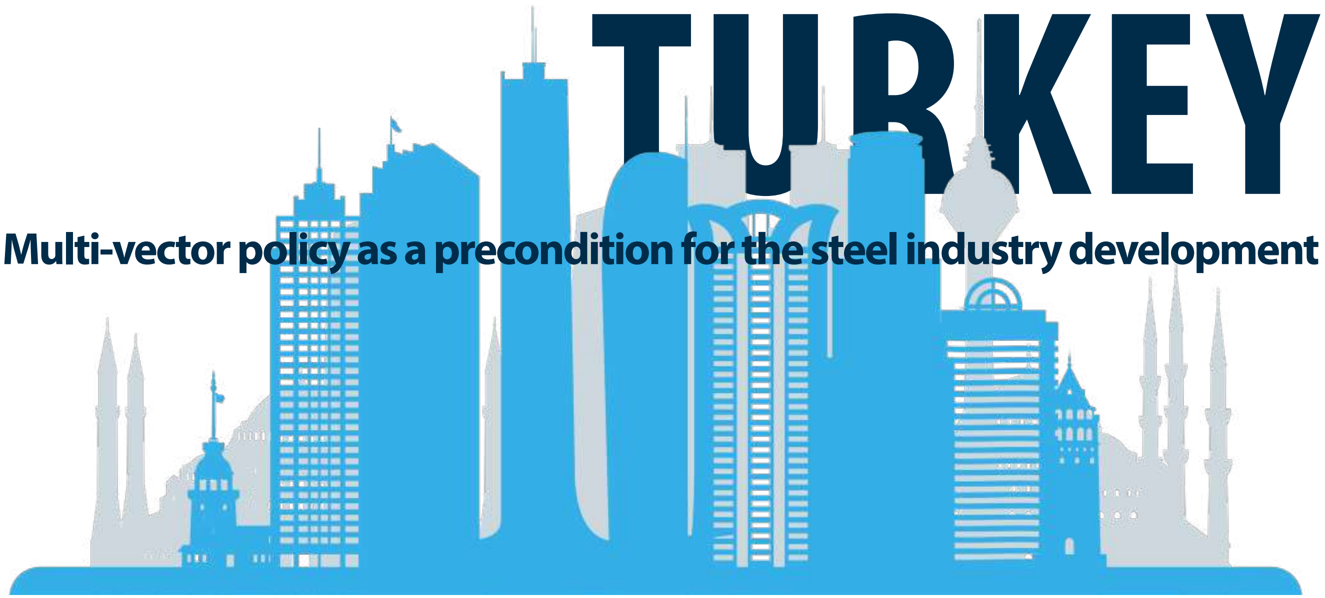
14.5 million tonnes
in 1986

42.5 million tonnes
steel output in 1997

47.8 million tonnes
in 2005

TURKEY

Multi-vector policy as a precondition for the steel industry development



Period of implementation:

2012–2016

Regulatory framework:

- 5-year plans
- Nonferrous Strategy Document and Action Plan 2012–2016
- The Input Supply Strategy (GİTES)

Responsible authorities:

- Ministry of Development
- Ministry of Industry and Technology
- Ministry of Trade

Incentives*:

• Preferences for local products: for use in wind farms and pipeline constructions; during public procurement for the implementation of public infrastructure projects, assistance in resolving trade disputes.

• Encouraging investment in raw materials: support to prospecting works for iron ore mining.

• Export support: providing export credit guarantees for supplies to the Middle East and Africa; improving road infrastructure and railways for exports to the neighboring countries.

• Control over prices for raw materials: exploring a possibility of reducing electricity tariffs for steelmaking companies.

• R&D support for emission reductions and implementation of energy efficiency projects.

*Provided for in the Nonferrous Strategy Document and Action Plan 2012–2016

Trade restrictions:

• Import tariff quotas: in October 2018, provisional tariff quotas were introduced for 200 days, providing for a 25% duty on imports of finished rolled products in case of exceeding the quotas: 3.1 million tonnes of flat products, 0.56 million tonnes of long rolled products, 0.27 million tonnes of pipes.

• technical barriers (certification) — 1

• antidumping duties — 15, of which **against Ukraine — 0**

The Nonferrous Strategy Document and Action Plan 2012–2016 provided for a number of measures aimed at protecting the domestic market, namely:

• investigating the negative impact of imported products on the domestic market;

• taking measures to counteract unfair competition in the flat products market.

Interesting facts:

• In the Nonferrous Strategy Document and Action Plan 2012–2016, the vision of the steel industry in Turkey is defined as the “base for high value-added products.”

34.1 million tonnes
steel output in 2011

37.3 million tonnes
steel output in 2018

EUROPEAN UNION

Playing by the rules

Period of implementation:

2016 till present

Regulatory framework:

- EEG 2017 — Reform of the Renewable Energy Law (Germany)
- Prolongation of tax reduction on electricity for manufacturing (Sweden)
- Changes in the differentiated energy taxation (Finland)

Responsible authorities:

- European Commission

Incentive measures (2016–2018):

- Grants: EUR 12 million; used in Belgium to implement environmental measures, in other countries for staff training programs.
- Interest rate compensation: EUR 128 million; used in Italy, Germany, the United Kingdom, the Czech Republic and other countries to implement energy efficiency measures, R&D.
- Tax benefits: EUR 493–1,030 million, including:
  - EUR 185–340 million; used in Germany for energy saving purposes
  - EUR 260–560 million; used in Germany and Finland to improve energy efficiency
  - EUR 48–130 million; used in Sweden to improve energy efficiency

Trade restrictions:

- import quotas — 1
- countervailing measures — 5
- antidumping duties — 45, incl. **against Ukraine — 2** (hot-rolled plates, seamless pipes)

In July 2018, in response to the U.S. import tariffs, the EU introduced 25% tariff quotas for all finished rolled products. In February 2019, the terms of tariff quotas were revised: global quotas were replaced by national quotas, their size depends on the average volume of imports in 2015–2017 and annually increases by 5%; the quotas are valid until July 2021.

Interesting facts:

- In 1981–1998, the European Coal and Steel Community arranged financing for the rehabilitation of steelmaking facilities.
- In 1981–1997, the German government actively supported the steel industry by compensating up to 20% of the CAPEX, writing off debts to state-owned banks, issuing grants and loans at reduced rates.
- In 1981–1997, the Italian government actively supported the steel industry by writing off debts of the steelmaking companies, providing credit guarantees and grants.
- Until 2001, subsidies were granted to shipbuilding companies in the EU countries. Subsidies amounted to 9% of the cost of the vessel.

162 million tonnes
steel output in 2016

168 million tonnes
steel output in 2018

BRAZIL

From government control to private investment

Period of implementation:

1956 till present

Regulatory framework:

- Crescer Infrastructure Development Program

Responsible authorities:

- Government
- National Bank for Economic and Social Development
- Mining and Steel Development Foundation

Incentives:

• Soft loans: issued through the National Bank for Economic and Social Development and the Mining and Steel Development Foundation.

• Reduced taxes on iron ore exports: in 1984, in case of sale in the domestic market, the tax rate for mineral resources was 15% (of the price at the mine + processing + delivery), and in the case of export — 7.5% (of 60% of the FOB price).

• Capital infusion into state-owned steelmaking companies: for example in 1977–1989 and in 1991, Cosipa, a pipe manufacturer, received a capital infusion from the government to expand capacity.

• Exemption of imported products, needed to expand and maintain capacities, from taxation applied to mining companies, ACESITA (1956–1992), and pig iron exporters.

• Government control over iron ore prices: the government set the maximum price level for domestic sales.

• Exemption of steelmaking companies from corporate income tax imposed on export proceeds. In fact, no company managed to take advantage of it because they did not record any proceeds during that time.

• Infrastructure development: through public-private partnerships. Adopted in 2017, the Crescer program provides for investments in excess of USD 14 billion in infrastructure projects.

Trade restrictions:

• technical barriers — 7
• antidumping duties — 29, of which **against Ukraine — 2**
• countervailing duties — 1

Interesting facts:

• Until the 1990s, most steelmaking companies in Brazil were state-owned. As a result of privatization, all state-owned companies became private.

• In the framework of steel import tariffs, Brazil has agreed with the U.S. a quota of 70% of exports in 2015–2017 for finished rolled products and 100% for semi-finished products.

3.6 million tonnes
steel output in 1967

34.7 million tonnes
steel output in 2018

CANADA

Protection of the interests of the local steel industry for the sake of the environment

Incentives:

• Project financing through state-owned banks' credit facilities: the government of Canada is ready to allocate up to USD 1.7 billion in the following two years: USD 800 million through the Business Development Bank of Canada (to help steel and aluminum companies enter new markets, improve operational and environmental efficiency, acquire new technologies) and USD 900 million through the Export Development Canada (to support the liquidity of steel and aluminum companies).

• Financing of innovations: the government allocated almost USD 250 million to the Strategic Innovation Fund to support investments by steelmaking companies related to purchase of new technologies and new equipment as well as training of the personnel that is supposed to operate such new technologies/equipment.

• Grants for the development of new markets (in particular new free trade areas, CETA and CPTPP). The public funding totaled USD 50 million over 5 years.

Trade restrictions:

• technical barriers — 1
• antidumping duties — 52, of which **against Ukraine — 3**
• countervailing duties — 11

Interesting facts:

• In the 1980s, Canada was considered to be the second most efficient steelmaking economy after Japan.

• Steel production in Canada is one of the most environmentally friendly in the world. Casting of 1 ton of steel at Canadian steel works results in 1.1 tonnes of greenhouse gas emissions, while Chinese manufacturers emit 3.5 tonnes.

Period of implementation:

2018 till present

Regulatory framework:

• Special Imports Measures Act (SIMA)

Responsible authorities:

• Department of Finance (Finance Canada)
• Department of Foreign Affairs, Trade and Development (Global Affairs Canada)
• Business Development Bank of Canada (BDC)
• Export Development Canada (EDC)
• Strategic Innovation Fund

Therefore, Canada initiated the introduction of an environmental tax levied on imports of products manufactured with higher emissions than local factories demonstrate.

• Since 25 October 2018, Canada has been applying a 25% duty on the U.S. imports of the following products: steel plates, concrete rebar, pipes used in the energy sector, hot-rolled sheets, painted rolled products, stainless steel wire, wire rod.

• USD 49.9 million were allocated from the Strategic Innovation Fund in 2018 to finance modernization of ArcelorMittal Canada Inc.'s production facilities.

12.6 million tonnes
steel output in 2016

13.0 million tonnes
steel output in 2018

SOUTH AFRICA

Multi-vector policy as a precondition for the steel industry development — 2

Period of implementation:

2017 till present

Regulatory framework:

- National Industrial Policy Framework
- National Industrial Participation Program

Responsible authorities:

- Government
- Department of Trade and Industry
- Economic Development Department
- International Trade Administration Commission of South Africa
- Industrial Development Corporation (administrator of the Steel Development Fund)

Incentives:

- Granting discounts on the import duty on steel products provided such products are not manufactured in the Republic of South Africa or if the latter exports goods manufactured from the imported products.
- Public procurement of local steel products.
- Support to the U.S. customers: a team is working in Washington to help the U.S. consumers of South African products apply for customs duty exemptions on imports of products that are not produced in the U.S.
- Soft loans: provided to steelmaking and related companies through the Steel Development Fund (ZAR 1.5 billion, equivalent of USD 113 million).

Trade restrictions:

- antidumping duties — 0, of which **against Ukraine — 0**
- import duties in the form of safeguards — 1

To protect the domestic market, in 2017, South Africa raised the import duty on a number of products to the maximum levels established under the WTO most favored nation treatment.

Interesting facts:

- South Africa initiated the introduction of export duties on scrap.

6.1 **million tonnes**

steel output in 2016

6.3 **million tonnes**

steel output in 2018

EGYPT

Trade restrictions:

3 antidumping duties on rebar from China (17%), Turkey (10–19%), **Ukraine (15–27%)**. At the beginning of 2018, they have been extended for 5 more years.

Energy subsidies, including for gas and petroleum products, businesses and households. They are expected to be abolished by 2019.

Infrastructure development:

The country is going to attract USD 30 billion of foreign and domestic investment in the Suez Canal Economic Zone to develop the infrastructure over 5 years.

VIETNAM

Infrastructure development:

Planned investments total USD 921 million (2018–2020).

Trade restrictions:

- antidumping duties — 7, of which **against Ukraine — 0**
- import duties in the form of safeguards — 1

Construction:

The government program aimed at building 1 million affordable homes by 2020.

INDONESIA

Incentives:

Tax holidays for foreign investors.

Allocation of economically advantageous areas near ports and producers of raw materials to private investors for the construction of steelmaking plants.

Prevention of illegal imports.

Trade restrictions:

- technical barriers — 5
- antidumping duties — 34, of which **against Ukraine — 1**
- import duties in the form of safeguards — 3

Infrastructure development:

USD 35 billion were allocated in 2018. There is a USD 424 billion 10-year infrastructure development plan.

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PHILIPPINES

Infrastructure development:

The USD 150–170 billion Build, Build, Build Infrastructure Program (2017–2022).

Trade restrictions:

- technical barriers — 14
- antidumping duties — 0
- import duties in the form of safeguards — 1

THAILAND

Infrastructure development:

A 5-year investment plan was approved for the development of the so-called Eastern Economic Corridor infrastructure for the amount of USD 43 billion. In 2019, the government expects to form a USD 1.5 trillion infrastructure development fund.

Trade restrictions:

- antidumping duties — 43, of which **against Ukraine — 1**
- import duties in the form of safeguards — 3

UK

Incentives:

Reimbursement of costs associated with the CO_2 emission reduction measures (including costs for purchasing emission quotas): in 2017, 9 mining & metals companies received GBP 5.9 million as reimbursements.

Development of an infrastructure development plan until 2030, which gives an idea of the future needs in steel.

Buy British — preference of public procurement of products made of local steel.

Authorities responsible for the development and implementation of the industrial policy

Country	Responsible authorities	
	Initiative	Implementation
China	Central Committee of the Party, Government	Ministry of Industry and Information Technology
India	Ministry of Commerce and Industry	Ministry of Steel Department of Industrial Policy and Promotion
Japan	Ministry of Industry and Commerce	Ministry of Industry and Commerce
U.S.	President (Section 232 enacted by the Presidential Decree)	State Department Department of Commerce Other authorities
Russia	Government	Ministry of Industry and Trade
South Korea	President	Ministry of Industry State-owned banks and investment funds
Turkey	President Ministry of Development	Ministry of Industry and Technology
EU	European Commission	European Commission
Brazil	Government	Government State-owned banks and investment funds
Canada	Government	Department of Finance Department of Foreign Affairs, Trade and Development State-owned banks and investment funds
South Africa	Government, Economic Development Department	Department of Trade and Industry
Ukraine	**Ministry of Economic Development and Trade**	**Ministry of Economic Development and Trade**

Instruments used to develop the steel industry

Countries that have used the instrument / Instrument	China	India	Japan	U.S.	Russia	South Korea	Turkey	EU	Brazil	Canada	South Africa	Egypt	Indonesia	Vietnam	Philippines	Ukraine
Grants	+		+		+	+		+		+						
Export subsidies, other forms of export support	+		+							+	+					
Tax benefits	+		+		+	+		+	+		+		+			
Special economic zones	+		+													
Soft loans	+				+	+		+	+	+	+					
Capital infusion and debt conversion	+					+			+							
Reimbursement of the cost of raw materials	+											+				
Control over prices for raw materials, including raw materials export restrictions	+	+			+	+	+		+					+		+
Preferences for local manufacturers	+						+				+					
Encouraging mergers & acquisitions	+		+			+										
Boosting domestic consumption markets	+	+	+	+	+	+		+					+	+	+	
Import restrictions		+	+	+	+		+	+	+	+		+	+	+	+	
Assistance in the sectoral infrastructure development		+			+	+	+		+			+	+			

Industrial policy instruments used in Ukraine

Of all possible industrial policy instruments, only one is used in Ukraine — scrap export restrictions (duty). Import restrictions in Ukraine are represented by only two anti-dumping duties: against seamless pipes from China (2014) and against rebar from Russia (2018), while 30 antidumping measures are in force against the steel products made in Ukraine.

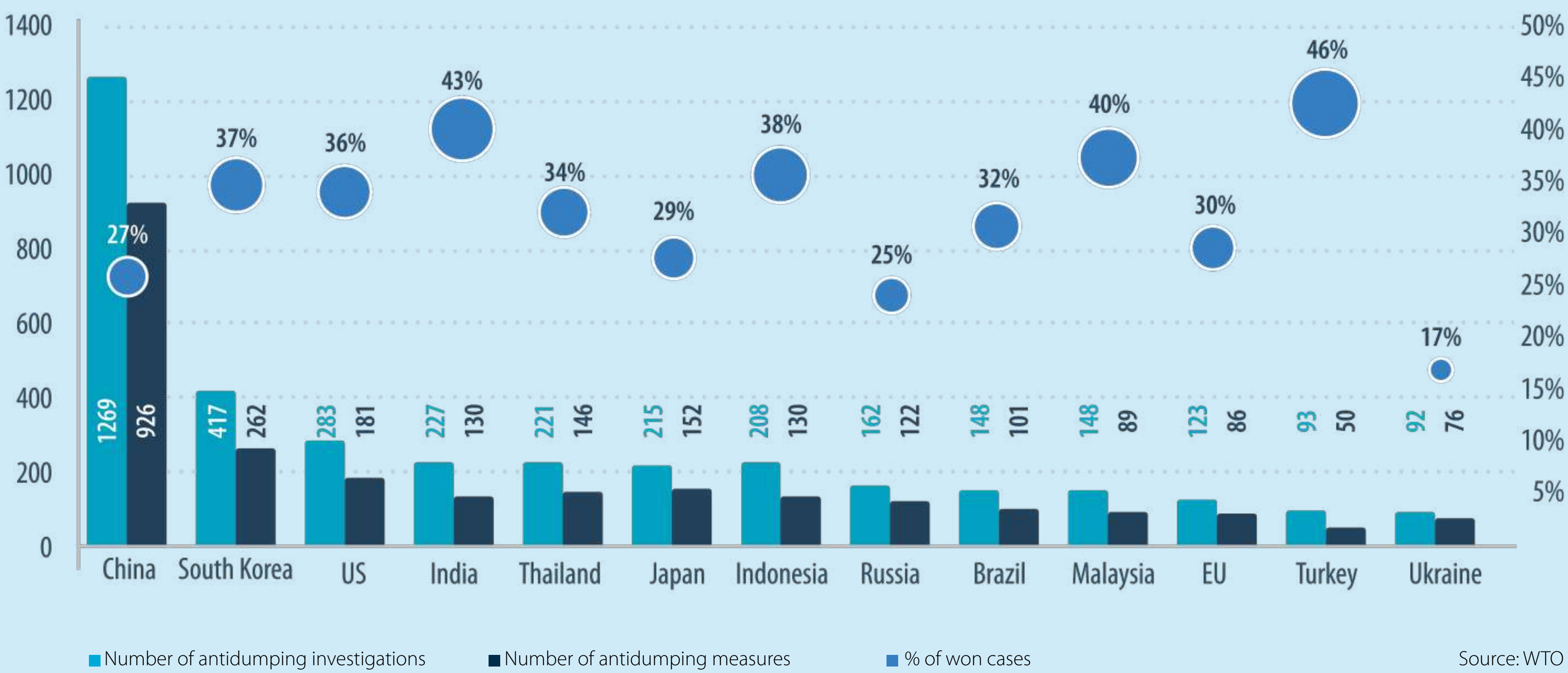
Ukraine ranks one of the last in the world in terms of effectiveness of trade dispute resolution (see the chart below).

Due to the lack of the industrial strategy (policy) and, accordingly, its effective instruments, the steel industry in Ukraine cannot fully exploit its potential, despite having significant competitive advantages over other countries.

31.7 million tonnes
steel output in 2000

21.1 million tonnes
steel output in 2018

Trade dispute resolution efficiency



12 key conclusions for Ukraine

1. All the leading countries have development programs for the steel or related industries.
2. For developed countries, steel industry is important as a systemic employer, a basis for the development of other industries, a condition for sustainable development.
3. Aggressive, decisive actions has altered the deployment of forces in the global steel market.
4. The recent trends show that the increasing role of the government in the implementation of industrial policy is a characteristic of all countries.
5. Countries with developed capital markets support the steel industry by means of domestic markets protection.
6. In the countries with underdeveloped capital markets, public institutions play an active role in financing of the industry.
7. The practices of some countries are not suitable for others (different economic structures, technologies, macroeconomic situation).
8. The key measures for the steel industry development are securing liquidity, access to capital since the industry is capital intensive.
9. Development instruments are evolving. Governments use the same tax benefits and soft loans, but for the purposes of increasing efficiency, R&D, personnel training.
10. Protectionism has intensified. Its purpose is to protect strategic industries what is in line with the latest global industrial policy trends.
11. Ukrainian iron & steel industry has no government support measures, except scrap export duty. Thus, Ukraine - is an example of the best practices of market regulation, openness and fair competition.
12. But Ukrainian steel producers face with numerous export restriction measures, that distorts competitive advantages and aggravates global problem of inefficient capacities.

Industrial policy and the mining & metals sector

Steel as a key product remains one of the most widely-used materials in the world. The Ukrainian iron & steel sector accounts for about one third of the country's total export proceeds. In 2018, it was the steel industry that became the major factor of export growth and inflows of foreign currency. Comprehensive development of the Ukrainian economy is impossible without powerful industrial sector, while powerful industrial sector is impossible without the developed steel industry. The iron & steel sector of Ukraine is the key sector of the national industry and economy. Implementation of a long-term national industry development strategy is a key to Ukraine's development and existence. The implementation of such strategy is important not only for the mining & metals sector, but also for all other industries: energy, mechanical engineering, chemical industry, infrastructure development, etc.

The development and implementation of a modern industrial policy are only possible given effective interaction between all participants and stakeholders: members of the Ukrainian Parliament, heads of ministries and other public authorities, heads of public monopolies and systemically important companies, representatives of big business, sector and business associations, experts and think tanks.

GMK Center

We are a think tank and a web resource, a discussion platform dedicated to the recent trends in the development of the Ukrainian and global iron & steel sector. We are building a common space for the sectoral dialogue between experts, analysts, entrepreneurs, government and anyone interested in the industry, including steel sector.

Why did we create GMK Center?

Our mission is to show the contribution of the national and global steel industry to the economy, its strength and growing dynamism and innovation, its prospects and future. It is important to us to talk about the changes that are taking place in this industry, to reflect the role of steel companies in the economy and life of the country, and to create a discussion around the difficult challenges and problems of the iron & steel sector and the whole Ukrainian industry.

Key components of GMK Center activities:

- media portal (our journalists cover all key events and trends in the Ukrainian and global steel sector)
- think tank (our analysts study the situation inside and outside the country)
- events (our experts organize open discussions and meetings for market participants)

Our goals:

- comprehensive unbiased coverage of the mining & metals sector domestically and abroad
- creation of a communication platform and initiating an expert discussion on the Ukrainian and global steel industry
- representing the interests of the Ukrainian steel sector internationally as one of the market leaders
- offering high-quality industry analytics

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Estimation techniques

Iron & steel sector has the following composition: coking coal mining, coke production, iron ore mining, steel production, production of metal structures except for mechanical engineering.

The contribution of iron & steel sector to GDP, including indirect and induced effects, was estimated on the basis of the Input-Output table compiled by the State Statistics Service, and on the assumption that the share of iron & steel sector in the gross output of each industry corresponds to iron & steel sector share in added value generated by each such industry. The share of iron & steel sector in the total wages, GRP of regions were estimated in the same way.

The output in Coking Coal Mining was taken as the volume of products consumed in connection with Coke Production and produced by Coal Mining companies according to the Input-Output table. The output in Iron Ore Mining was taken as the volume of products consumed in connection with Steel Production and produced by companies engaged in Mining of Metal Ores and Other Minerals according to the Input-Output table.

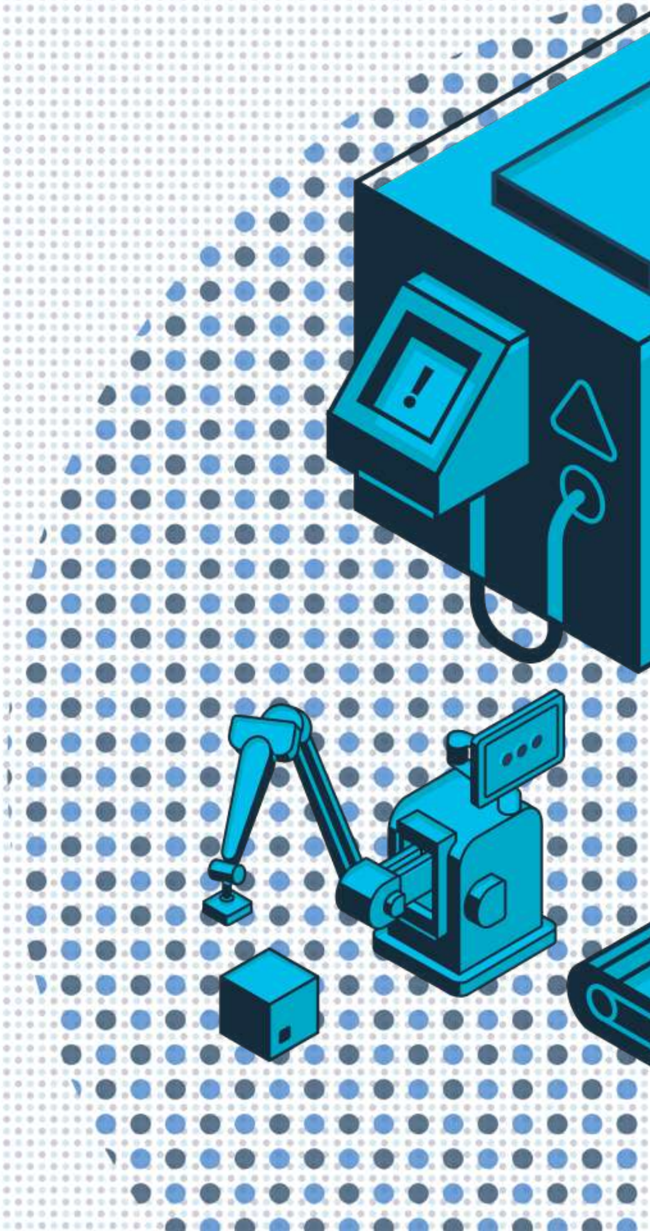
The contribution of iron & steel sector to employment was estimated on the basis of its pre-estimated contribution to the total wages and the average wage in Ukraine.

The share of iron & steel sector in exports, transportations (including by various modes of transport), collected taxes, consumption of electricity and mechanical engineering products, collected and paid social payments was estimated on the basis of comparison of the relevant indicators of iron & steel sector and summarized indicators for Ukraine as a whole, according to relevant sources of information.

The current trends in industrial policies and examples of their implementation in different countries have been studied empirically, based on available documents on the subject. The following methods were used in the study: analysis, synthesis, induction, deduction, scientific abstraction.

Data sources

Materials of the following consulting companies were used in preparing this report: KPMG, E&Y, IHS, Steel Business Briefing; public authorities: U.S. Department of Commerce, International Trade Administration, Ministry of Industry and Trade (Russian Federation), Indonesian Iron and Steel Industry Association, National Economic and Development Authority (Philippines), Department of Trade and Industry (South Africa), Standing Committee on International Trade (House of Commons, Canada), National Steel Policy 2017 (India), Department of Finance (Canada), Ministry of Science, Industry and Technology (Turkey), Government of Canada, European Commission, State Statistics Service of Ukraine, State Pension Fund of Ukraine, State Fiscal Service of Ukraine; international organizations: OECD, UNCTAD, World Trade Organization, World Steel Association; media outlets: Reuters, Metal Expert, Egypt Today, Egyptian Streets, We Build Value, ASEAN Briefing, Financial Express, World Maritime News and others.



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