

Mining and processing of non-ferrous metals in the Kyrgyz Republic: Overall contribution to the economy and possible impact of fiscal initiatives on it

Survey for 2014-2016

February 2018



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Background and key research objectives



The survey was aimed to assess the impact of fiscal initiatives on the contribution of the non-ferrous metals sector to the economy of the Kyrgyz Republic

- ▶ The state bill aimed at stimulating the construction of processing factories and suppressing possible corruption schemes
- ▶ Simultaneous increase of income tax (by 3%) and introduction of a 25% export customs duty

The proposed fiscal initiatives provoked a broad discussion. To make a reasoned decision, an independent survey was conducted to solve four problems:

1

Task 1

Calculation of the full sector's contribution to the economy

Calculate and analyze the full socio-economic contribution of the non-ferrous metals sector to the economy of the Kyrgyz Republic for 2014-2016

2

Task 2

Tax burden of the sector

Assess the tax burden in the sector and compare it with that in some Kyrgyzstan's neighboring countries

3

Task 3

The impact of fiscal initiatives

Assess the impact of proposed fiscal initiatives on the full contribution of the sector (each initiative separately and both together)

4

Task 4

Brief analysis of reforms

Conduct a brief analysis of the reforms in the mining sectors of some countries whose experience might be of interest and useful for Kyrgyzstan

Contribution of the sector to the socio-economic development of the country



The full contribution of the non-ferrous metals sector to the economy of the Kyrgyz Republic was calculated using the Cost-Output model in five indicators and three directions



The non-ferrous metals sector includes such types of minerals as:

- ▶ precious metals: gold and silver;
- ▶ non-ferrous and rare metals important for the economy of the country: copper, lead, tin, zinc, mercury, antimony, tungsten, and molybdenum.

The full social and economic contribution of the sector to the economy includes three components:

- ▶ direct contribution
- ▶ indirect contribution
- ▶ induced contribution

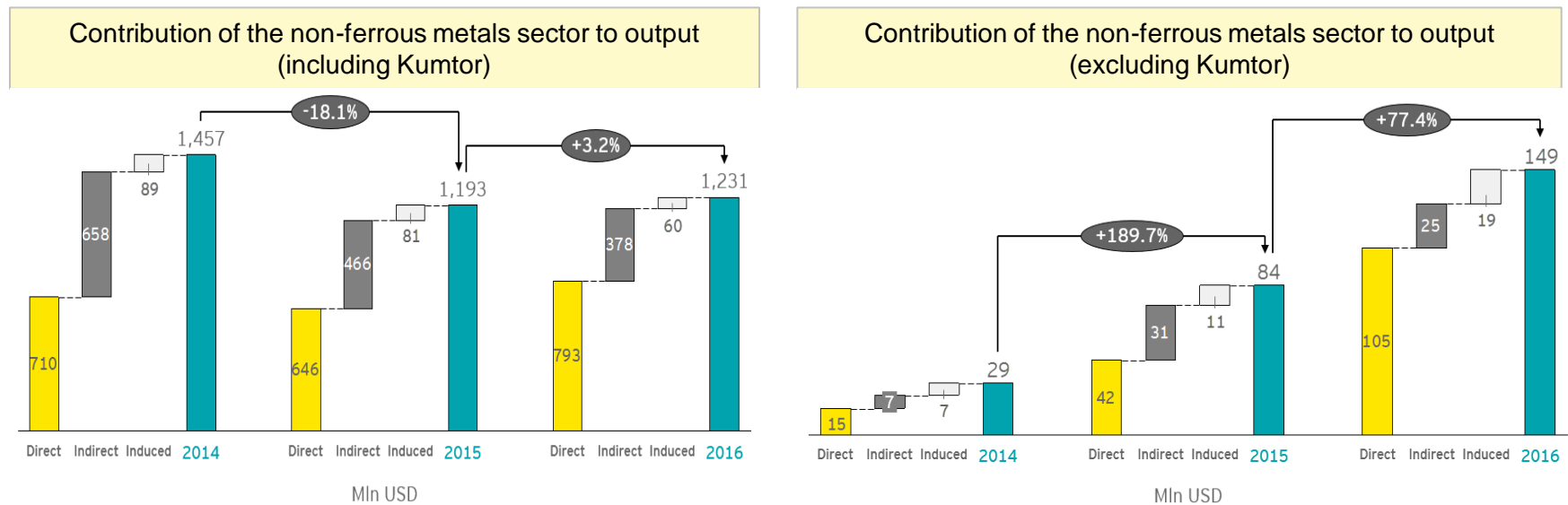
The evaluation of each component was carried out according to 5 indicators*:

- ▶ contribution to the output ●
- ▶ contribution to GDP ●
- ▶ contribution to employment of the population •
- ▶ contribution to labor income of the population •
- ▶ tax contribution ●

The results of the assessment are based on the Cost-Output model adopted by the governments and statistical agencies of many developed countries. The model was developed by Nobel Prize winner V. Leontyev*

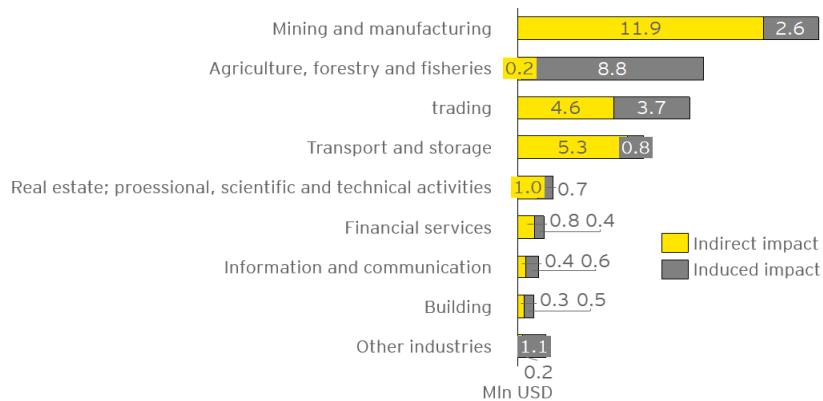
**более подробная информация в видах вкладов, методологии расчетов и допущениях приведена в Приложении*

In 2016, the total contribution of the non-ferrous metals sector to output in the Kyrgyz Republic was **86 billion soms**, or **9.2%** of the total output of goods and services in Kyrgyzstan



- ▶ For each som of production output by the non-ferrous metals sector, an additional 0.55 som of goods and services was produced by other sectors.
- ▶ For 2014-2016, the total contribution of the non-ferrous metals sector to the production of goods and services in the economy of the Kyrgyz Republic amounted to 241 billion soms.
- ▶ If we estimate the indicators of contribution to the output in soms (thus eliminating the devaluation factor), the total contribution of the sector to the output decreased by only 1.6% in 2015 compared to 2014, and the direct contribution even showed a 9% growth. Indicators of the contribution to the output without Kumtor grew during 2014-2016. Therefore, it can be argued that **the direct contribution of the sector to the output of the economy of Kyrgyzstan has demonstrated stable growth throughout the whole period under survey.**

The non-ferrous metals sector is an important component of the country's economy. It helps the functioning of many other sectors, such as agriculture, trade, and others

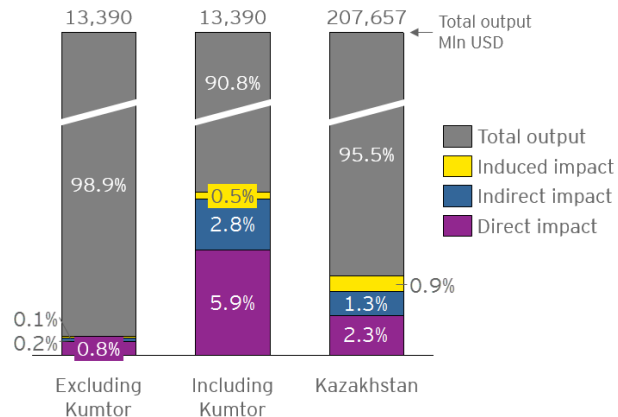


► The bulk of the **indirect impact** of the non-ferrous sector in 2016 (the purchase of products from other sectors of the economy), excluding Kumtor, falls on industry, transportation and warehousing, and trade

► The bulk of the **induced impact** (which is due to products purchased by employees of the companies of the sector, as well as employees of their suppliers) falls on agriculture, forestry and fisheries, trade and manufacturing

► Compared to Kazakhstan, where the share of the full contribution of the non-ferrous metals sector is about 4.5% of the total output, the share of this sector in the total output is almost twice as high in Kyrgyzstan. This means that **the enterprises of the non-ferrous metals sector are important for the country's economy.**

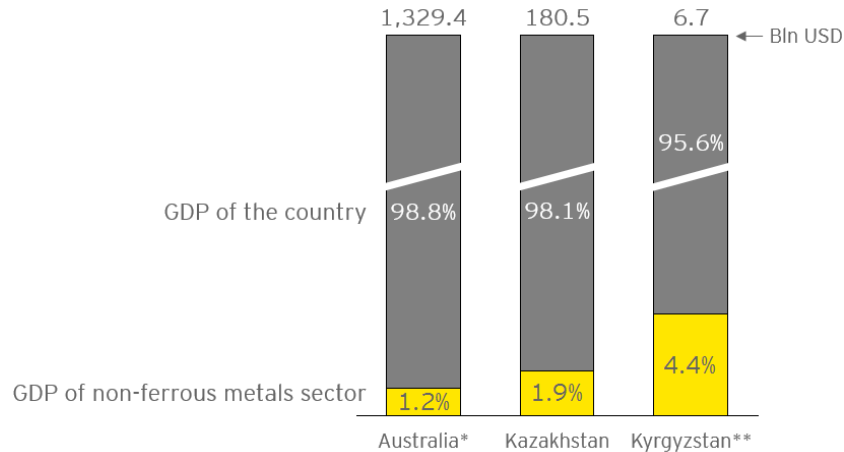
The share of indirect and induced impact of the sector on the output by separate industries (excluding Kumtor), 2016



Impact of the non-ferrous metals sector on the output of the Kyrgyz Republic with similar data for Kazakhstan, 2016

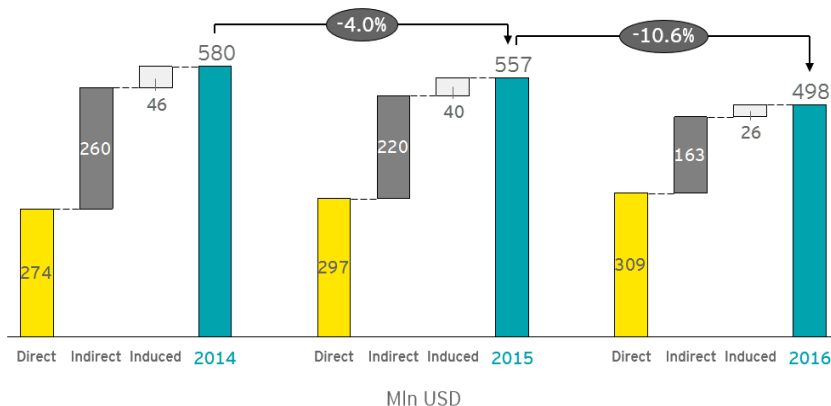
Direct contribution of the non-ferrous metals sector to GDP of the Kyrgyz Republic was about **4.4%** of the country's GDP in 2015, which is higher than in Australia and Kazakhstan

Direct impact of the non-ferrous metals sector on GDP, 2015

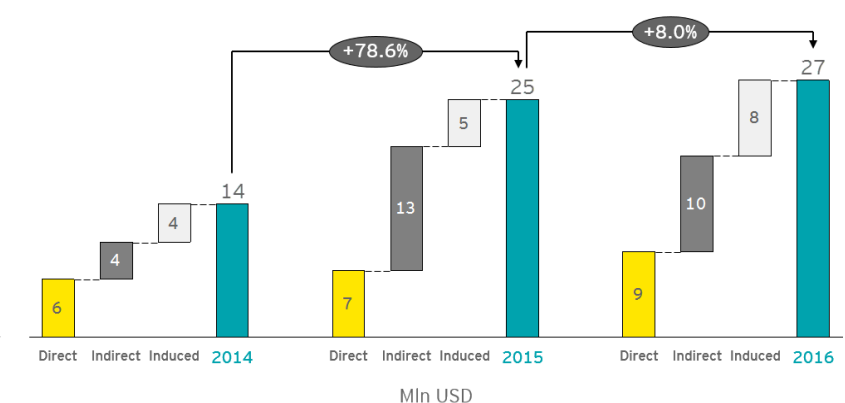


- ▶ Total for 2014-2016, the entire sector brought about 1.6 billion US dollars to the country's GDP, and 66 million US dollars without taking into account the results for the Kumtor deposit. This figure is significant for the economy. Without results of the Kumtor project, the above sector share in the GDP of the KR (adjusted for the GDP of countries) will be close to that in Australia, where the mining industry is highly developed and important for exports.
- ▶ The non-ferrous metals sector (including Kumtor) has a significant share in GDP of the Kyrgyz Republic - about 4.4% in 2015, while in Australia and Kazakhstan it was 1% and 2% of the country's GDP respectively.

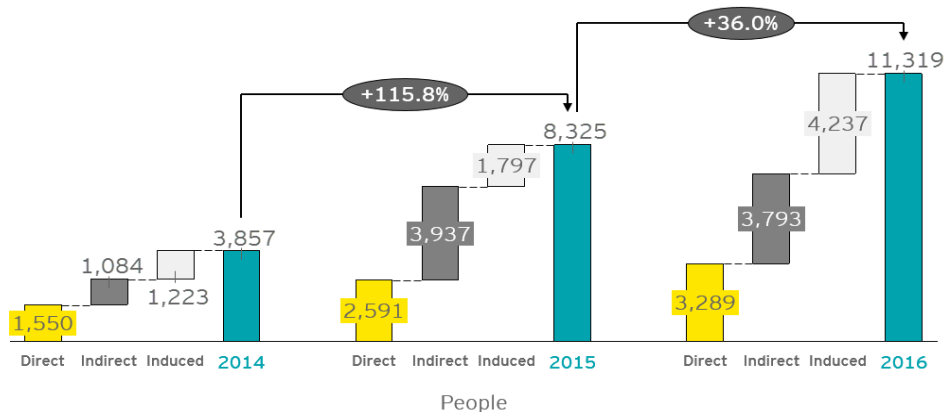
Impact of the non-ferrous metals sector on GDP (including Kumtor), USD million



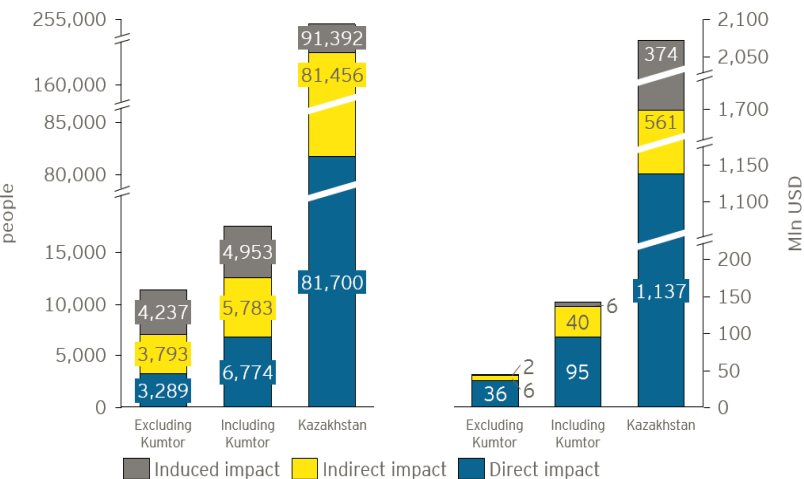
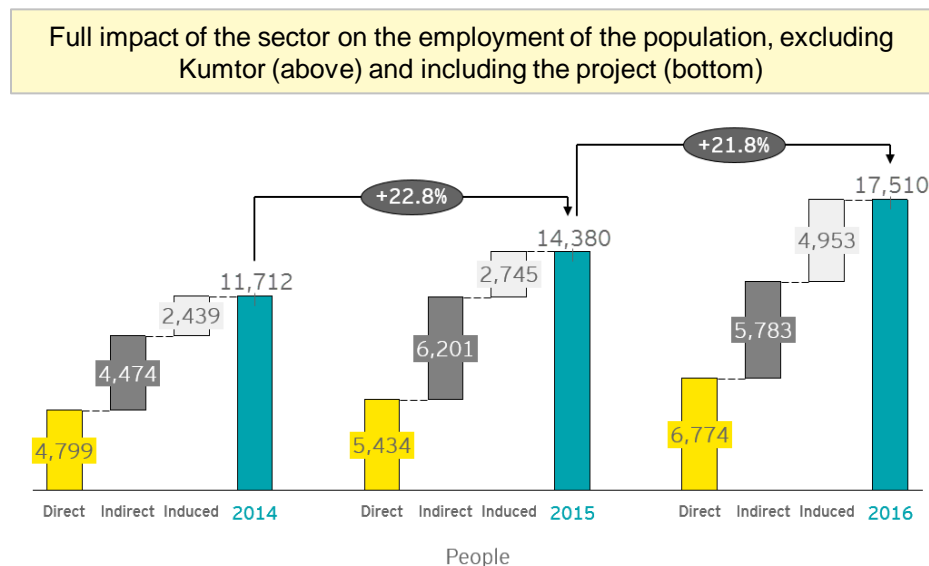
Impact of the non-ferrous metals sector on GDP (excluding Kumtor), USD million



More than **17,000 jobs** are created and supported in Kyrgyzstan through the non-ferrous metals sector

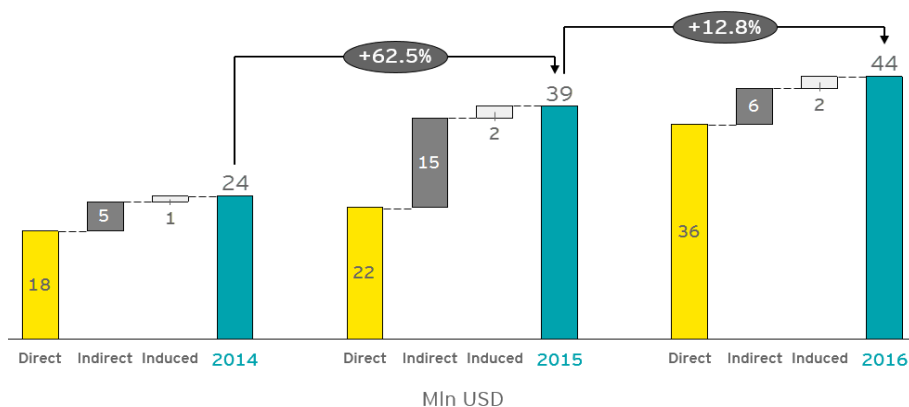


- ▶ For each job at the enterprises of the non-ferrous metals sector, there are **additional 1.6 jobs** in other sectors of the country's economy.
- ▶ The activities of the sector (including Kumtor) supported nearly **12,000 jobs in 2014, 14,000 jobs in 2015 and more than 17,000 jobs in 2016.**



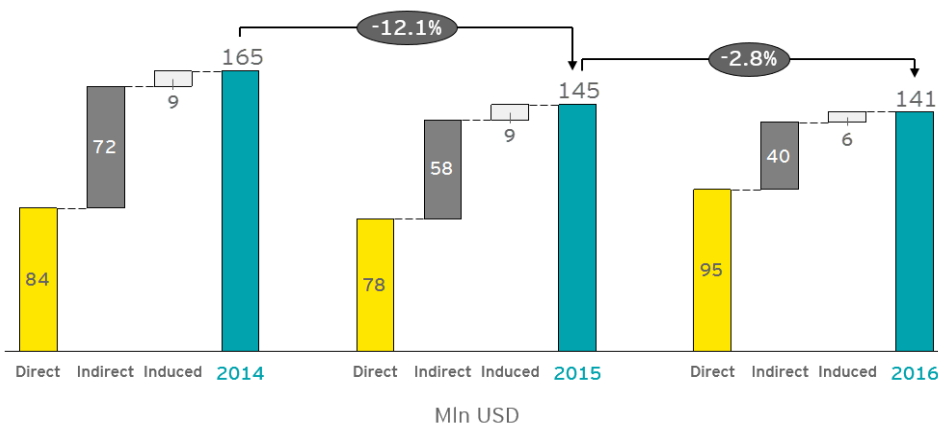
The impact of the sector to employment (left) and labor incomes of the population (right) in the Kyrgyz Republic as compared to the same indicator of the sector in Kazakhstan, 2016.

Total impact of the sector on the labor incomes of the population was **141 million US dollars** in 2016, or **9.7%** of the total labor incomes of the population in the Kyrgyz Republic



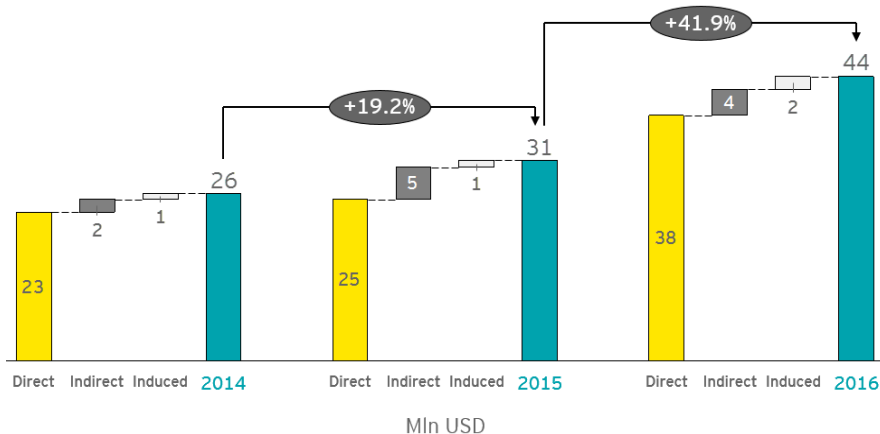
- ▶ The labor incomes of workers both at the enterprises of the sector and at enterprises of other sectors of the economy in which jobs were created thanks to the non-ferrous metals sector ranged from \$165 million to \$141 million per year, or \$450 million in total over three years.
- ▶ The dynamics of changes in the impact on labor income depends on the currency in which it is considered (in soms or in US dollars). There is a stable growth in the national currency: 8.8 billion soms in 2014, 9.3 billion in 2015 and 9.8 billion soms in 2016. This growth correlates with the increase in employed from year to year and with the contribution index in GDP in national currency.

Total impact of the sector on the labor incomes of the population, excluding Kumtor (above) and including this project (below)

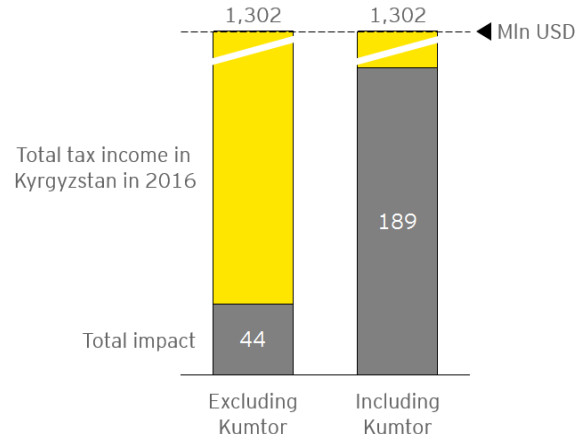
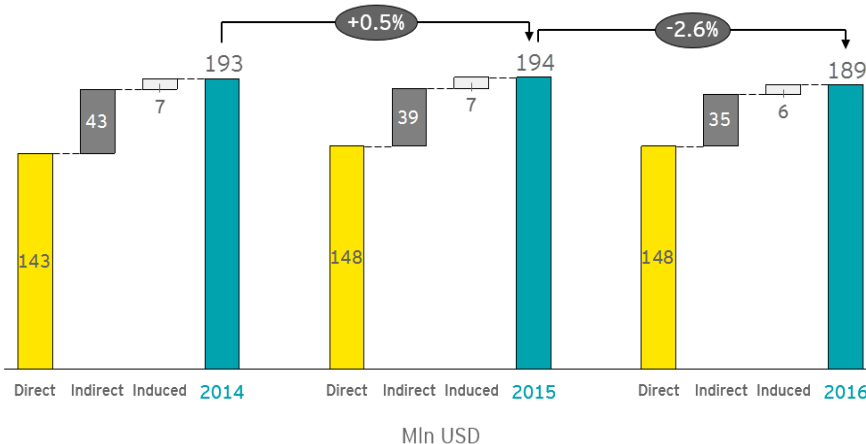


- ▶ However, if we consider the changes in the impact in foreign currency, then the income of employees in dollar terms was significantly lower, which may indicate that the growth of inflation and the som exchange rate against the dollar was faster than the indexation of the labor incomes of the population.

Total tax impact of the non-ferrous metals sector was more than **14% of total tax and non-tax revenues to the state budget** of the Kyrgyz Republic in 2016



Full tax impact of the sector, excluding Kumtor (above) and including this project (below)



Full tax impact of the sector compared to general tax revenues and other payments to the state budget in 2016

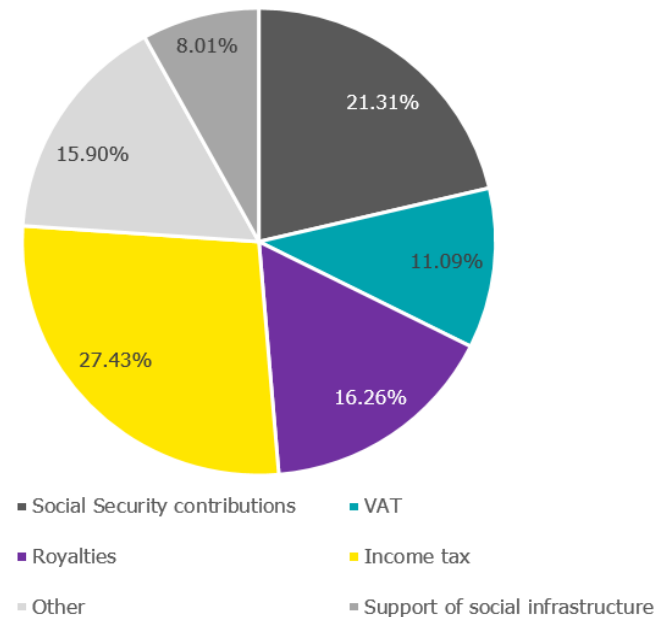
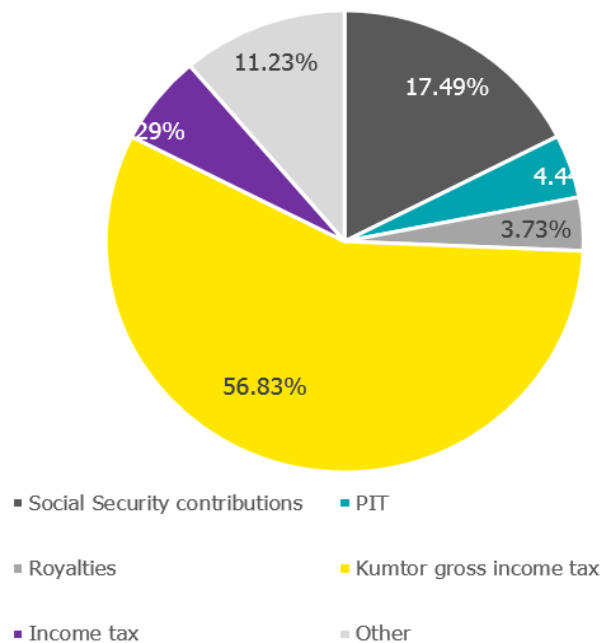
- ▶ In 2016, the share of the total tax impact of the non-ferrous metals sector on the total amount of taxes and payments to the state budget of the Kyrgyz Republic was 3.3% (3,045 million som) and 14.5% (13,208 million som) respectively, excluding Kumtor and including it.
- ▶ For each som of taxes and other mandatory payments paid by enterprises of the non-ferrous metals sector in 2016, the state received additional 0.27 som of revenues from other industries.

Tax burden in the mining sector and in the non-ferrous metals sector of Kyrgyzstan



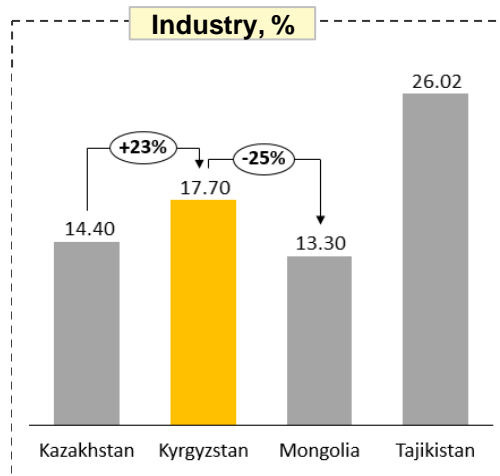
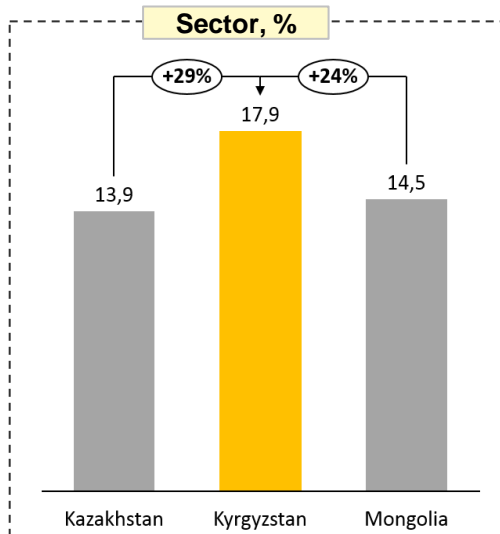
In the tax and non-tax payments of the non-ferrous metals sector, the main share is expected to be paid by the Kumtor project's operator

- ▶ In 2016, Kyrgyzstan's state budget (including the Social Fund) received 148.2 million US dollars of tax and non-tax revenues from companies engaged in the extraction of non-ferrous metals in the country
- ▶ Deductions of the Kumtor Gold Company were about 80% of this amount.



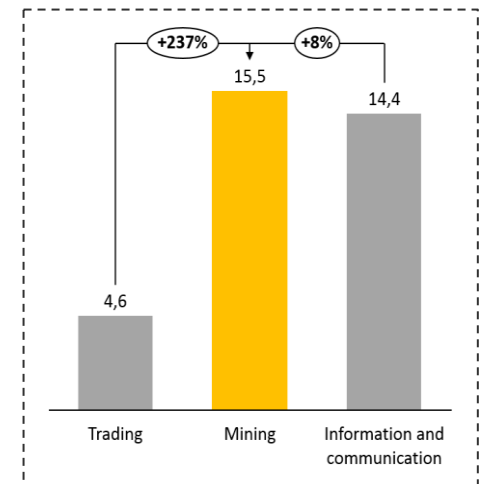
Tax and non-tax revenues of the Kyrgyz Republic from the non-ferrous metals sector for 2016, including Kumtor (left) and excluding Kumtor (right)

The survey also calculated the tax burden in the non-ferrous metals sector and in the mining industry in Kyrgyzstan. Comparisons were made with neighboring countries



- ▶ The tax burden is among the economic indicators characterizing the country's tax system: the amount of tax payments of the industry in relation to the added value created by it (direct contribution to GDP) or in relation to the industry's revenues. Different methods were used in different countries.
- ▶ The tax burden of the non-ferrous metals sector in Kyrgyzstan (taxes to revenue) is generally comparable, but still slightly higher than in Kazakhstan and Mongolia. However, it is much lower in Kyrgyzstan than in Tajikistan.
- ▶ The graphs on the left show the calculation separately for the non-ferrous metals sector and for the entire mining industry in Kyrgyzstan for 2016. The calculation takes into account tax and other payments including social contributions but the individual income tax (IIT) was excluded.

- ▶ The tax burden in the mining sector is one of the highest among other sectors of the economy of Kyrgyzstan.
- ▶ However, this situation is not unique for the countries with developed extractive industries. For example, in Kazakhstan, the tax burden on the extractive industry is also among the highest in the country.



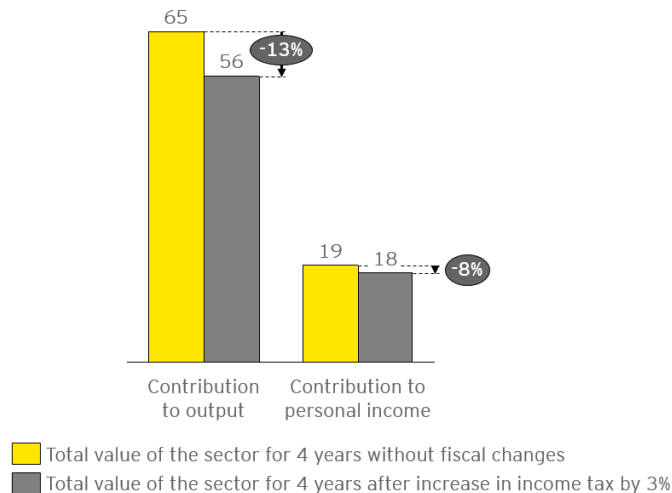
Tax burden in some sectors of Kyrgyzstan's economy, 2016 (excluding social contributions)

Impact of fiscal initiatives on the sector's contribution (scenarios)





To analyze the consequences of introducing fiscal initiatives, three scenarios were modeled:

Scenario 1 - a 3% increase in the income tax rate



The chart shows the projected potential impact on the sector's total contribution to output and labor income for 2018-2022 with a 3% increase in income tax, billion soms

-  Full impact of the sector for 4 years, no changes
-  Full impact of the sector for 4 years, after a 3% increase in income tax

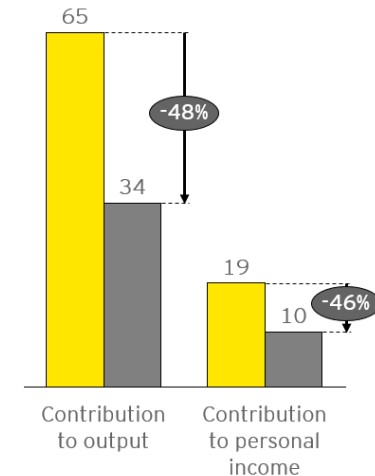
- ▶ The companies of the sector will be able to stay afloat and continue their activities. However, the profitability can immediately fall more than threefold.
- ▶ This will result in the maximum reduction in companies' investments in their future development, reduction of social activities and charity expenses, as well as of all other costs that are not critical for current activities

To analyze the consequences of introducing fiscal initiatives, three scenarios were modeled:

Scenario 2 - introduction of a 25% export customs duty

The graph shows the predicted impact on the total contribution of the sector to the output and labor incomes of the population for 2018-2022 if 25% customs duty is introduced, billion soms

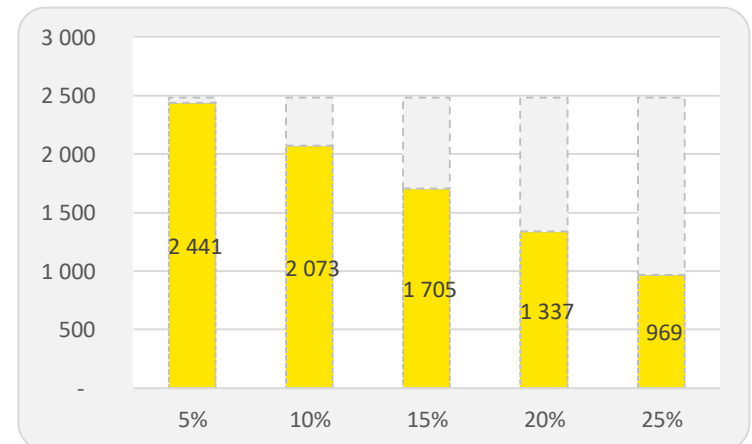
- ▶ Companies of the non-ferrous metals sector will face a total loss of more than 1.35 billion soms
- ▶ The companies will not be able to continue their further operational and investment activities, which can lead to bankruptcy and closure of most of them
- ▶ To stay afloat and continue working, the companies will be forced to significantly reduce their non-production costs including social responsibility, investment, financial expenses and, most importantly, staff costs



■ Total value of the sector for 4 years without fiscal changes
■ Total value of the sector for 4 years after imposing a custom duty by 25%

The diagram shows the projected reduction in the level of employment in the sector (jobs) with various rates of export customs duty

Employment in the sector at the 2016 level ☐
Employment in the sector after imposing of export customs duties ☒

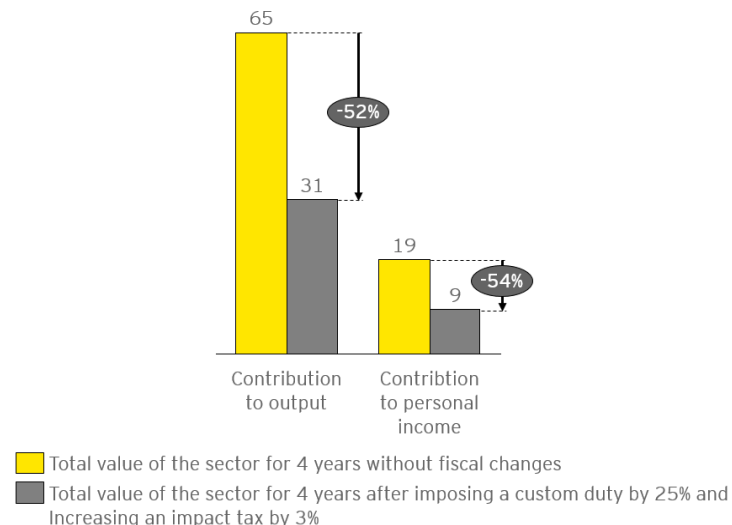


To analyze the consequences of introducing fiscal initiatives, three scenarios were modeled:

Scenario 3 - simultaneous introduction of both initiatives

The graph shows the predicted impact on the full contribution of the sector for 2018-2022 while simultaneously introducing a 25% customs duty and raising the income tax by 3%, billion soms

- ▶ The total loss of non-ferrous metals companies may reach about 1.7 billion KGS, which is one fifth of the total output of the sector in 2016 (excluding the Kumtor project)
- ▶ The state may suffer significant reputational losses as a result of corporate social responsibility costs, as well as significant financial losses in the medium and long term due to a reduction in investment.

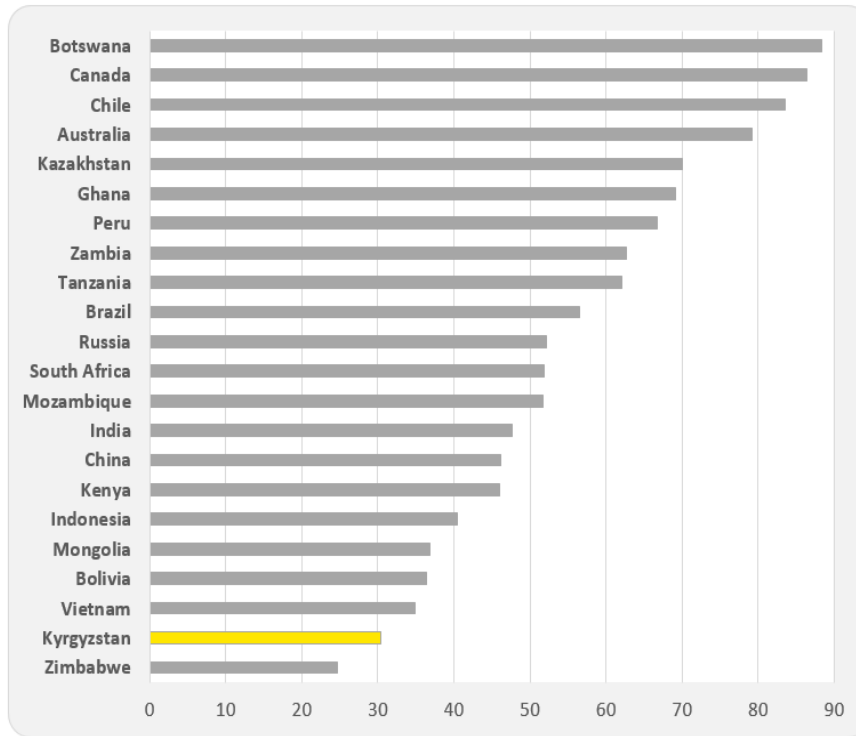


- ▶ The planned fiscal initiatives can have a significant impact on the future contribution of the non-ferrous metals sector to the economy of the country
- ▶ The desire to replenish the state budget by increasing the tax burden only can bring additional revenues for a very short period, but in the future it will have a reverse effect.
- ▶ Companies can move to deposits more rich and simple from the production point of view. At the same time, other deposits will remain under-invested or unclaimed, while they could operate benefiting the country and local residents
- ▶ Therefore, making decisions on the fiscal initiatives, it makes sense **to analyze not only the short-term benefits from them, but the full range of consequences that may affect the sustainable long-term development of both the mining industry and the entire economy of the Kyrgyz Republic.**

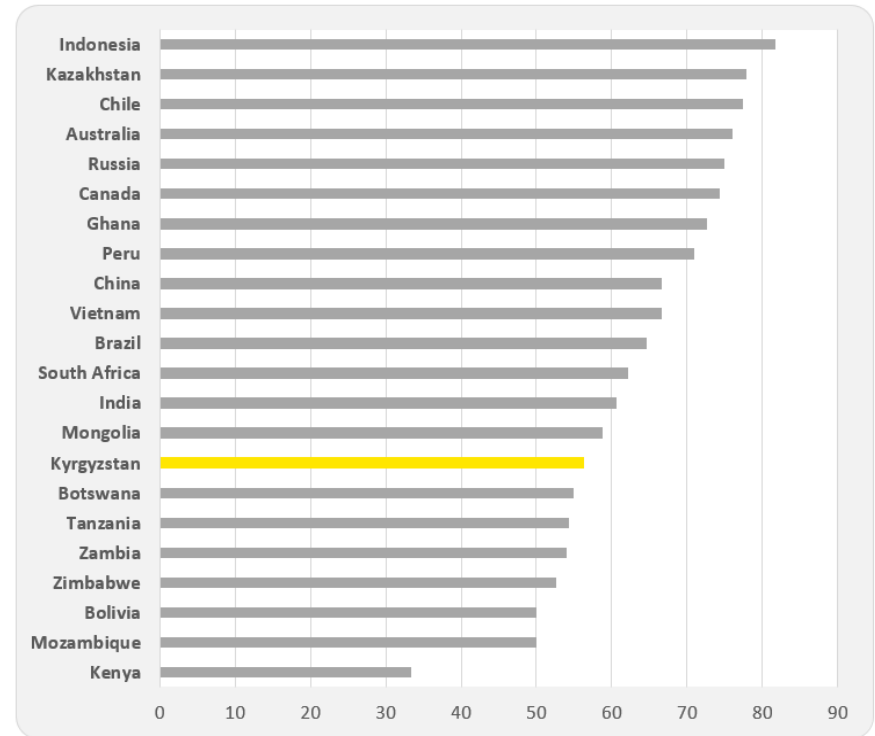
The need to reform the mining industry



To increase the investment attractiveness of the mining industry of the Kyrgyz Republic, it is necessary to improve the regulatory regime



Rating of some countries in **attractiveness of the regulatory regime** of the mining industry

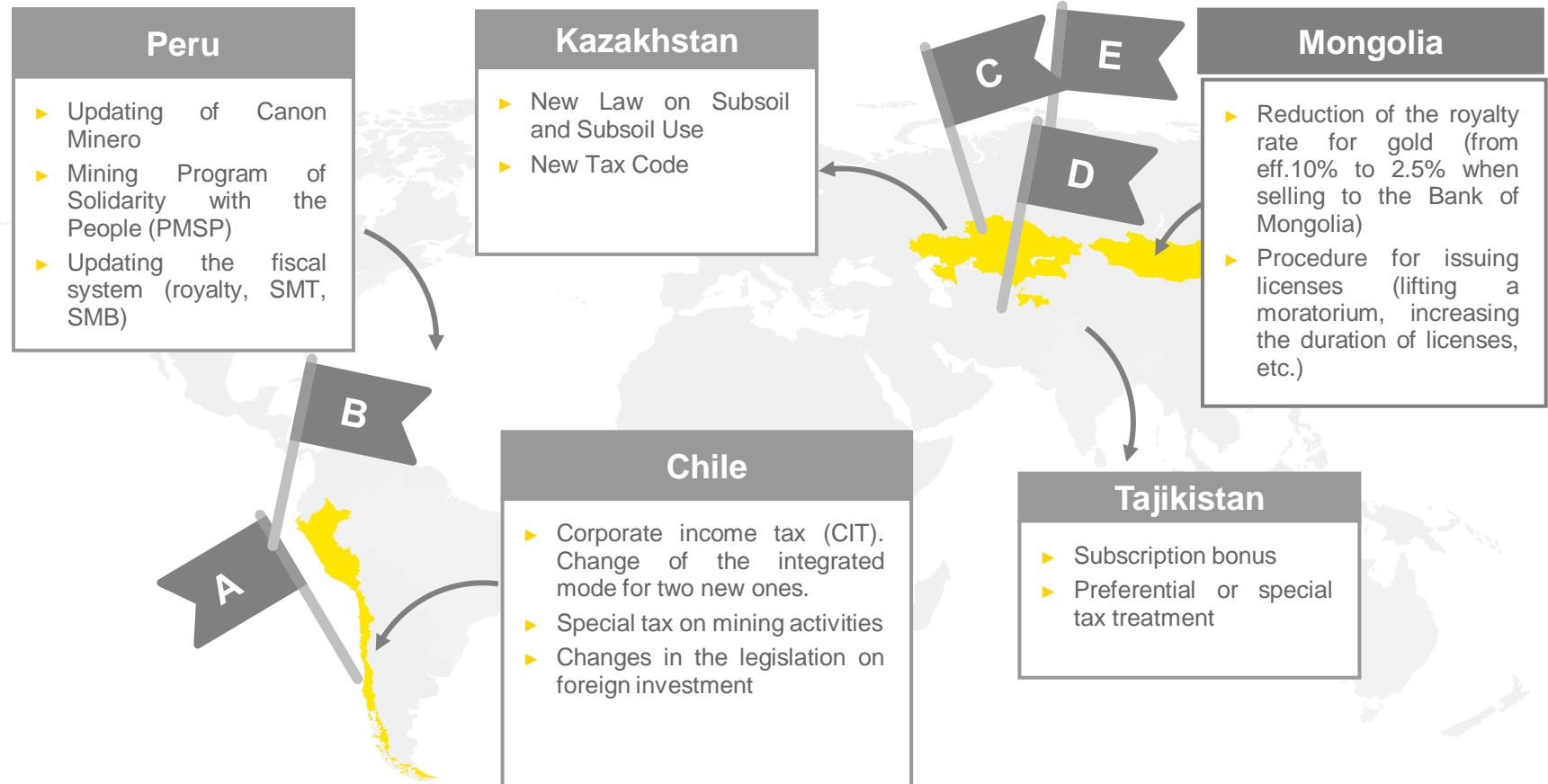


Rating of some countries in attractiveness of the **mineral resources base**

Although the mining industry of Kyrgyzstan is interesting for potential investments due to its mineral resources, the regulatory regime makes investors to invest carefully in in this industry

Reforming the mining industry: International experience that could be used in Kyrgyzstan

The mining industry is cyclical, and investments in exploration and development are related with these cycles. The ultimate goal of any state system of taxation of the mining industry is to ensure the maximum possible benefit to the population, while encouraging investments in the industry. This requires a realistic vision and a good balance between the goals of two key players: companies and governments.



Reforming the mining industry: Key findings

1

Carrying out work to improve the investment climate in the mining industry of Kyrgyzstan in order the country could be ready to fill the gap in the state's revenues due to the entry of new players into the industry and the growth of investments into it (the emergence of new Kumtors).

2

Optimization, simplification and improvement of regulatory efficiency in the industry, in particular, adoption of the Mining Code, streamlining control over the content of metals in the ore, expanding the tax base related to the production and financial capabilities and obligations of the sector's enterprises.

3

Stimulation of investments in exploration. There is no need to reinvent the wheel, but it is enough to use the experience of other countries in which this issue was successfully resolved.

4

Creation of conditions for the construction of gold extraction plants in the country. In addition to a detailed and impartial study of the environmental and technological aspects of such construction, conclusion of agreements with the industry's companies is among the methods that the State could apply in this case. Under such agreements, the State would give guarantees to enterprises (for example, benefits during the construction of the factory, an obligation to impose export restrictions on all players after construction), and enterprises would commit to build factories within a given time period and subsequently process ore and concentrates at them.

It is recommended to consider the possibility of using the tolling scheme, coupled with the State's stimulation of the jewelry industry development or the creation of a gold exchange in the country.

It is necessary to find a balance in the regulation of the country's mining industry, which would suit the State, the industry's enterprises and the local population

Interest of companies in the industry

- ▶ Reasonable tax burden
- ▶ Possibility of investing in new assets and projects
- ▶ Development of advanced technologies in the extraction of minerals and digitalization
- ▶ Ability to produce products with higher added value and accordingly increase in profits
- ▶ Environmental preservation

Interest of the State

- ▶ Increasing the investment attractiveness of the sector and attracting new investors, stimulating exploration works
- ▶ Decent working conditions for employees
- ▶ Development of regions where extractive enterprises present
- ▶ Environmental preservation

Interest of the population, local communities and other stakeholders

- ▶ *"If producers and investors do not consider the fiscal system fair, they will simply leave"*
- ▶ *If the government does not consider the system fair, it can terminate contracts, suspend licenses or wait for better offers*
- ▶ *If governments sign treaties that the population does not consider fair, then a new government will be elected at the next election, or resistance to new deals may be*
- ▶ *If governments conclude deals that local communities do not consider fair, public unrests may occur"*

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