

# **Non-Ferrous metals production and processing**

The sector's total contribution  
to the economy of the Kyrgyz  
Republic and the effects of  
fiscal initiatives on it

The study for 2014-2016

February 2018



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## ACKNOWLEDGMENTS

In order to conduct this study, a lot of collaborative work has been done with many stakeholders: from state agencies and non-ferrous metals companies to private individuals. Therefore, we would like to thank:

- U all companies of the non-ferrous metals sector of the Kyrgyz Republic who participated in the study and provided detailed information on their activities;
- U state agencies of the Kyrgyz Republic: deputies of Zhogorku Kenesh, the Ministry of Economy, the State Tax Service, the State Customs Service, the State Agency for Environmental Protection and Forestry, the National Statistics Committee and others who provided valuable comments for the study and our requested data;
- U all other stakeholders who participated in the preparation of the study, including business associations of the Kyrgyz Republic.

We would like to express a special gratitude to the State Committee for Industry, Energy and Subsoil Use for their support in conducting the study from the beginning; active assistance in the project implementation and data collection, including statistics; for providing opportunity to discuss preliminary results and, most importantly, independent opinion on the results of the study.

Thanks to your support, the provision of valuable comments and recommendations, as well as a critical and independent opinion, this study became available to stakeholders both in the country and abroad.

Your reviews and comments on this study could either be sent to the e-mail of the International Business Council [office@ibc.kg](mailto:office@ibc.kg) or to the address below:

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# 1. EXECUTIVE SUMMARY

The Kyrgyz Republic is rightfully believed to enjoy an abundance of natural resources. Deposits of minerals such as coal, oil, gas, molybdenum, iron ore, tungsten, aluminum raw materials, tin, mercury, antimony, uranium, rare earth metals, and gold have been discovered here. Mineral resources, and their production and processing thereof are of great importance to the Kyrgyz Republic's economy.

Gold mining is presently the largest sector of the mining industry in the Kyrgyz Republic. According to the estimates provided in the National Mining Strategy section, gold accounts for approximately 87% of the total value of the country's minerals, with 10% being attributed to coal and the rest mainly to copper and silver.<sup>1</sup> At present, gold makes 90% of the total national mineral output and is the country's most exported product.

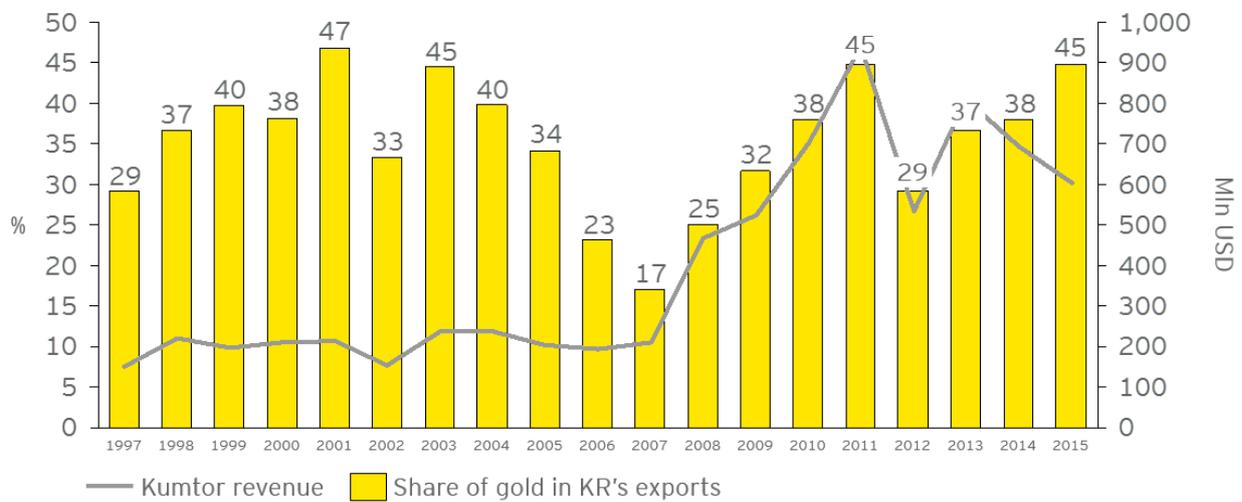


Figure 1. The share of gold in KR export and the gold sales revenue of Kumtor operator<sup>2</sup>

Over the past few years, the Kyrgyz Republic has repeatedly initiated the issue of increasing the customs duty rate for the export of ores and concentrates containing precious metals. The state proposed a bill which main goal was stimulation of enterprises to build ore processing factories on the territory of Kyrgyzstan, as well as to suppress the possible emergence of corruption schemes during the export of gold ore and precious metals from the Kyrgyz Republic. At the same time, the draft law proposing significant increase in the export duties and income taxes rates, which, according to the law initiators, should contribute to the revenues of the state budget. In particular, the following fiscal initiatives are proposed:

- ▶ the introduction of an export customs duty on precious metals ores and concentrates in the amount of at least 25% of the customs value of the goods;
- ▶ increase of the income tax rate for gold ore and gold concentrate by 3%.

The proposed fiscal initiatives have provoked a broad discussion among all stakeholders, and so far no unequivocal solution has been developed. Enterprises operating in the sector, as well as the country's expert community, have arguments against the fiscal initiatives proposed by the state. Taking into account the importance of the sector to the country's economy, it was decided to conduct an independent and

<sup>1</sup> Mogilevskii, R., N.Abdrazakova and S.Chalbasova (2015) The Impact of Kumtor Gold Mine on the Economic and Social Development of the Kyrgyz Republic. University of Central Asia's Institute of Public Policy and Administration Working Paper No. 32.

<sup>2</sup> Exports of basic commodities, thousand dollars: National Statistical Committee of the Kyrgyz Republic, revenue from gold sales by Kumtor: Kumtor Gold Company website

detailed study of the full contribution of the sector to the economy of Kyrgyzstan and to assess the possible consequences from fiscal initiatives implementation. The decision was supported by the stakeholders (state bodies, including State Committee on mining, energy and industry, mining companies, business associations) and the International Business Council was responsible to conduct such a study.

To carry out the research, an independent consulting company EY was hired. Company had following tasks to accomplish:

1. Calculate and analyze a total socio-economic contribution of the non-ferrous metals sector to the economy of Kyrgyzstan for 2014-2016.
2. Calculate a tax burden in the sector and compare it with that in some neighboring countries.
3. Assess the impact of the proposed fiscal initiatives on a total contribution of the sector (each separately and both together).
4. Conduct a brief analysis of the mining reforms of some countries (Mongolia, Kazakhstan, Chile, Peru, Tajikistan), whose experience might be interesting and useful for the development of the mining industry in Kyrgyzstan.

The main results of described above tasks are below, and the detailed results are given in Sections 5, 6.2, 6.3 and 7 of this study, respectively.

According to calculations carried out within the framework of this study, the sector's contribution to Kyrgyzstan's economy in 2016 to has been as follows:

- ▶ *direct* contribution to the economy's output of production—about 793 million USD, *total* contribution—1,231 million USD. This makes 5.9% and nearly 9.2% respectively of Kyrgyzstan's total output of goods and services;
- ▶ *direct* contribution to the GDP amounted to 309 million USD, while the *total* contribution reached 498 million USD, or 4.7% and 7.6% respectively of Kyrgyzstan's total GDP;
- ▶ the precious and non-ferrous metal sector *directly* employed approximately 6,800 people, or 0.3% of Kyrgyzstan's total working population with a total salary of 95 million USD, which is over 6.5% of Kyrgyzstan's total labor income. The sector's *total* contribution by these indicators amounted to 17,500 people (0.7%) and 141 million USD (9.7%), respectively;
- ▶ companies of the non-ferrous metal sector paid about 148 million USD as taxes and payments, or 11.4% of the total tax revenue and payments to the KR national budget. The sectors's *total* tax contribution amounted to 189 million USD (14.5%).

In order to access and compare taxation of non-ferrous metals sector, was calculated tax burden for Kyrgyzstan and several other countries. Tax burden is one of the economic parameters that characterize the country's taxation system and could be calculated as: ratio of taxes paid by industry to industry value added, and/or ratio of taxes paid by industry to industry revenues (the method varies depending on the country).

The tax rates paid by companies in Kyrgyzstan's non-ferrous metal sector are more or less similar to those in neighboring countries but less flexible. However, the tax burden in both the mining industry and non-ferrous sector is relatively high. So, the ratio of taxes to revenue of KR mining industry is 23% and 25% higher than that in Kazakhstan and Mongolia, respectively.

The analysis of the consequences of the fiscal initiatives possible introduction for both the non-ferrous metals sector<sup>3</sup>, and the entire economy of the Kyrgyz Republic was carried out in three scenarios:

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<sup>3</sup> The sector of non-ferrous metals excluding the Kumtor project, because the described fiscal initiatives will not concern the company-operator of this project.

- 

**Scenario 1**  
Increase in the income tax rate by 3% of existing rates
- 

**Scenario 2**  
Introduction of customs duties with rates up to 25% of the customs value of exported products
- 

**Scenario 3**  
Simultaneous increase of the income tax rate by 3% and introduction of customs duties to 25%

A scenario analysis revealed the following:

- ▶ In case if the income tax rate is increased by 3% (*Scenario 1*) of the existing rates only, the profitability of non-ferrous metal sector might fall more than 3 times. The companies of the sector will be able to "stay afloat" and continue their activities. However, this situation would probably intend the companies to reduce any investment in future development and the costs associated with social activities.
- ▶ In case of customs export duty introduction with a rate of up to 25% of the commodities customs cost (*Scenario 2*), non-ferrous metal sector companies will lose over 1.35 billion KGS, which is more than twice as much as the sector's direct contribution to the GDP in 2016 (the Kumtor project not included). Obviously, this scenario would prevent companies of the sector from maintaining their operations and investments, probably causing most of them to go bankrupt with closure, and the sector may cease to exist.

In order to stay afloat and continue its activities, companies in the sector would have to cut down expenses to a much greater extent than in the first scenario. Since it is not possible to reduce manufacturing costs significantly, businesses would have to reduce their non-manufacturing costs such as: corporate social responsibility and charity, personal and investments to maintain a certain level of output and profit. The table below shows the impact on GDP and output by the sector from the introduction of customs duties.

*Table 1. Decrease of GDP and output depending on the export customs duty rate variations*

| Duty rate options  | 5%    | 10%    | 15%    | 20%    | 25%    |
|--|-------|--------|--------|--------|--------|
| Sector GDP, millions KGS                                 | 618   | 480    | 393    | 332    | 288    |
| Sector output, millions KGS                              | 7,088 | 5,507  | 4,505  | 3,810  | 3,302  |
| Sector GDP decrease as compared to 2016, millions KGS    | -21   | -159   | -246   | -307   | -351   |
| Sector output decrease as compared to 2016, millions KGS | -241  | -1,822 | -2,824 | -3,519 | -4,027 |
| Sector GDP decrease as compared to 2016, %               | -3    | -33    | -63    | -92    | -122   |
| Sector output decrease as compared to 2016, %            | -3    | -25    | -39    | -48    | -55    |

- ▶ in case if the income tax rate will be increased and customs duty will be introduced at the same time (*Scenario 3*), the total losses of non-ferrous metal sector companies might amount to nearly 1.7 billion KGS, which equals one fifth of the sector's total output in 2016 (the Kumtor project not included). The consequences here are similar to those described above, i.e. all businesses might shut down and go bankrupt, causing the non-ferrous metal sector *to collapse*. And they are incommensurable with possible additional revenues to the budget in the amount of just over 1.9 billion KGS.<sup>4</sup>

In more detail, each scenario is discussed in section 6.3.4 "Analysis of the possible consequences of fiscal initiatives" (page 77).

For the mining industry of Kyrgyzstan the need to develop a mineral resource base is crucial, and requires large investments. The deposits being developed now are gradually depleted. At the same time, investments to the exploration of new deposits and additional exploration of existing ones are falling (Figure), which could lead to the inability to replace the Kumtor mine, which is expected to stop production by 2026.

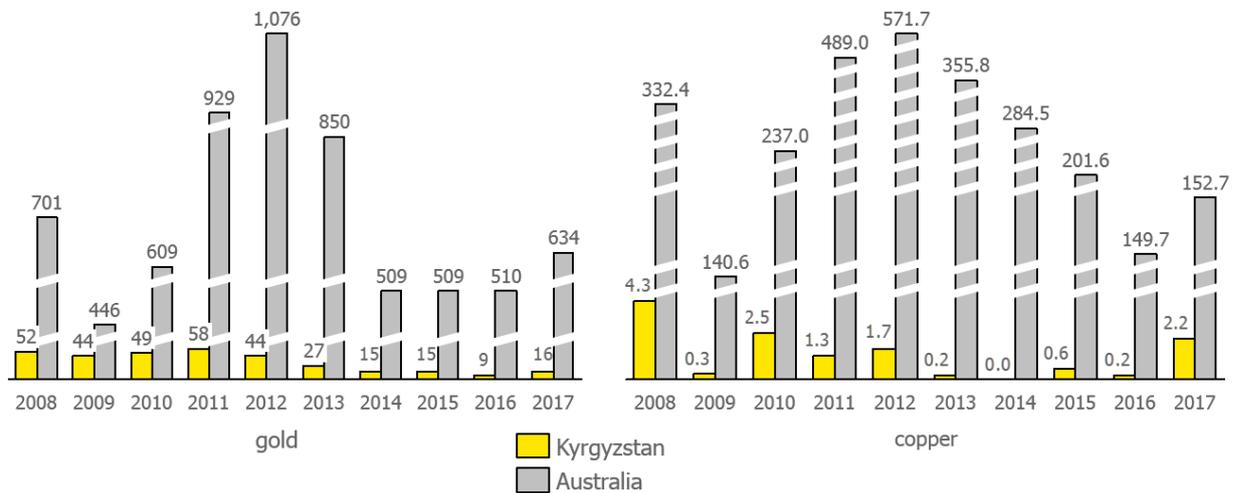


Figure 2. Investments in exploration of gold and copper deposits in Kyrgyzstan and Australia, USD million<sup>5</sup>

It is highly significant that other large and mid-sized deposits should be in full operation by that time to at least partially compensate Kumtor's contribution to the national economy. Yet, the investment attractiveness of the industry, in particular its taxation, make doubtful will they be able to replace the Kumtor project in terms of output when it will be out of operation. And what is more important, unattractive industry regulatory regime (Figure 13), may scare off new investors, whose investments could help create new "Kumtors", and invest in exploration.

Therefore, when deciding on the introduction of proposed fiscal initiatives in the country, it makes sense to analyze not only the short-term benefits from them, but the entire range of consequences that may affect the sustainable long-term development of both the mining industry and the entire economy of the Kyrgyz Republic. To avoid the possible consequences that are described above, it seems appropriate:

<sup>4</sup> A very rough estimate of additional revenues to budgets, under increasing the rate of income tax and the introduction of export customs duties.

<sup>5</sup> According to S&P Global Market Intelligence data

1. Carrying out work to improve the investment climate in the mining industry of Kyrgyzstan, so that the country will 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 "Kumtor").
2. Optimization, simplification and improvement of regulation in the industry, in particular, the adoption of the Mining Code, streamlining control over the content of metals in the ore, expanding the tax base, tied 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" it is enough to look at the experience of other countries in which this issue was successfully resolved.
4. Creating 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, one of the methods that the state could apply in this case is the signing of agreements with industry companies. Under such agreements, the state would give certain guarantees to enterprises (for example, privileges at the stage of construction of the factory, an obligation to impose export restrictions on all players after construction), and enterprises would commit to build factories in a given time interval and further process ores and concentrates on them. Also can be considered application of the tolling scheme, coupled with the stimulation by the state of development of the jewelry industry in the country or the creation of a gold exchange in it.

A presentation by Columbia Center for Sustainable Investments contained the following text, which vividly illustrates the challenge that the government of the Kyrgyz Republic is facing: to find a balance in regulating the country's mining industry that would be equally acceptable by the government, mining companies, and the local population. Indeed, it is a difficult problem, and we hope that this study will contribute to solving it.

- ▶ *"If manufacturers and investors find the fiscal system to be unfair, they'll just quit.*
- ▶ *If the government finds the system to be unfair, it can terminate contracts, suspend licenses, or wait for better offers.*
- ▶ *If governments sign contracts that the population finds to be unfair, a new government will get the votes in the next election, or an opposition to new deals could arise.*
- ▶ *If governments make deals that local communities find to be unfair, civil unrest is possible."*

## 2. ABOUT THE STUDY

This study provides an assessment of the total socio-economic contribution of the non-ferrous metal sector to the economy of the Kyrgyz Republic. The non-ferrous metal sector was defined to include the following minerals:

- ▶ precious metals; gold and silver;
- ▶ non-ferrous and rare metals that are important to KR economy, such as copper, lead, tin, zinc, mercury, antimony, tungsten, and molybdenum.

The key objective of the study was to estimate the effect that the fiscal initiative would have on the economy of the Kyrgyz Republic if implemented by analyzing the way they influence the total economic contribution of the non-ferrous metal sector. For more details on the changes suggested by the government, see Section 6.3 Governmental fiscal initiatives in the sector. The initiatives will primarily effect companies producing and processing metals such as gold, copper, and silver, since the metals make over 95% of the national non-ferrous metal sector.

A major share of the contribution of the non-ferrous metal sector is attributable to the operator of the Kumtor gold deposit. Therefore, all values characterizing the sector's contribution were calculated both inclusive of the Kumtor project and excluding it in order to provide a better insight into the role that the sector plays in Kyrgyzstan's economy.

Five contribution types (parameters) were used:

- ▶ contribution to to the production of goods and services in the economy of the KR (output);
- ▶ contribution to the national GDP;
- ▶ contribution to population employment;
- ▶ contribution to the labor income;
- ▶ tax contribution.

Each parameter was estimated for three contribution types, the sum of which make the sector's total contribution to the economy of the Kyrgyz Republic:

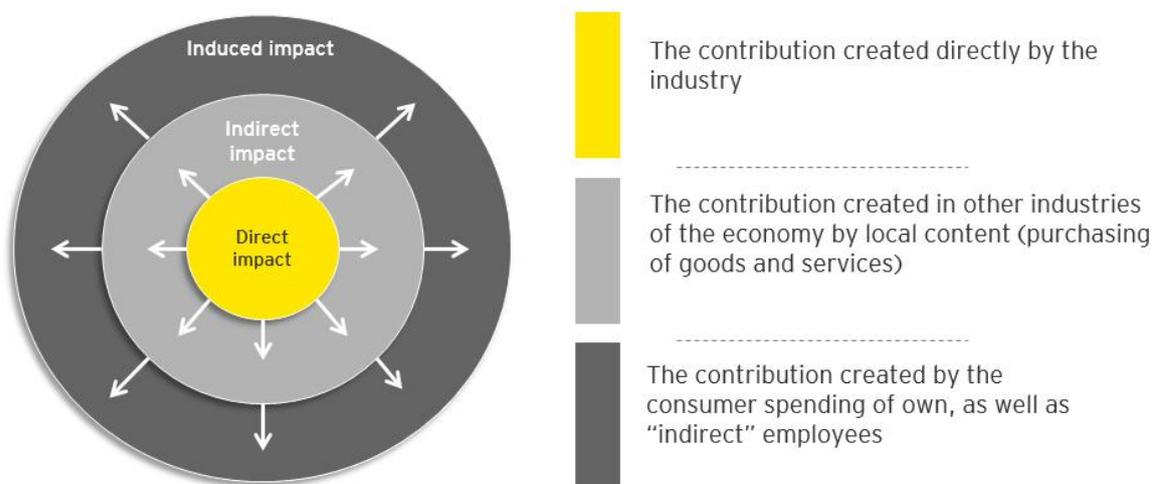


Figure 3. A diagram representing the components of the total contribution of the non-ferrous metal sector to the economy of the Kyrgyz Republic

Apart from estimating the sector's total socio-economic contribution in 2014–2016, the study estimated its expected contribution in case the scheduled tax reforms—see Section 6.3 Governmental fiscal initiatives in the sector for more details—are implemented. That is to say, it analyzed the way in which the sector's current contribution to the national economy would change if the factors influencing the sector were modified. That is, a scenario analysis was carried out (see Section 6.3.4 An analysis of potential effects of the fiscal initiatives).

for more details on the methodology of the study, please see Section 8 on page 116

An industry analysis was also carried out for indicators of the sector's economic contribution. This provided an insight into what part of the contribution, both qualitatively and quantitatively, can be attributable to which branch of Kyrgyzstan's economy.

The figure below (Figure 4) contains a diagram that is to some extent illustrative of how the non-ferrous metal sector influences the economy of the Kyrgyz Republic. In particular,

- ▶ metal producers procure goods and services from the local business community, thus contributing to the production of goods and services in the country's economy (output) and its' GDP;
- ▶ besides, companies in the sector help maintain jobs in a direct, indirect, and mediated way (contribution to employment and remuneration of labor);
- ▶ businesses in the sector also fill the state budget, both directly and indirectly, due to taxes paid by companies and the population (tax contribution).

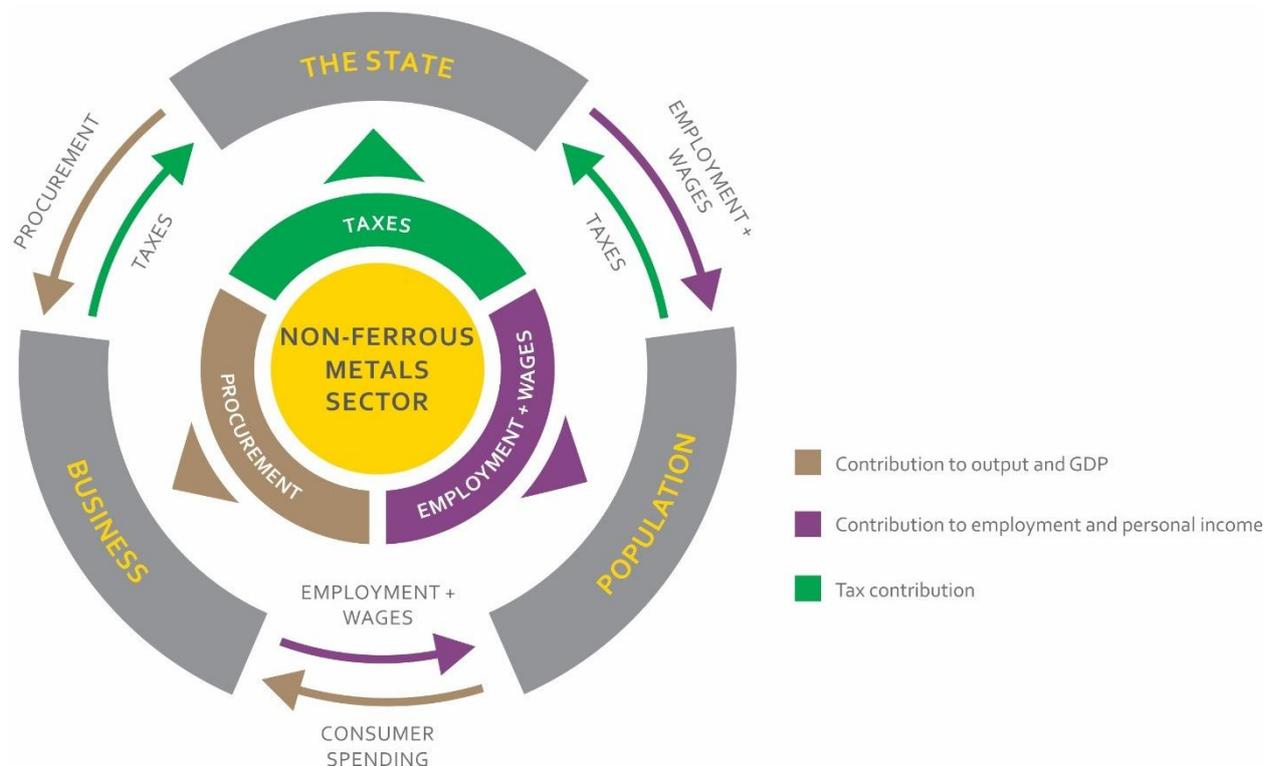


Figure 4. The influence of the non-ferrous metal sector on Kyrgyzstan's economy

Apart from analyzing the contribution of the non-ferrous metal sector to the KR economy, the study included the following:

- ▶ analyzing the current taxation of the non-ferrous metal sector and studying the tax and other mandatory payments that companies in the sector pay. Tax burden in Kyrgyz Republic was also



compared with that in a number of other countries. The results of these activities are presented in Section 6 on page 49.

- ▶ a general analysis was carried out of mining reforms in a number of countries (Mongolia, Kazakhstan, Chile, Peru, Tajikistan) whose experience might be of interest and use in terms of mining development in Kyrgyzstan, covering the meaning of the reforms, their effect on the respective countries' industry and economy.

This project was the first multipurpose project of this type in Kyrgyzstan. Therefore, there was no established approach to collecting and consolidating data required to analyze the total socio-economic contribution of the non-ferrous metal sector to the country's economy. EY was guided by similar projects from other countries, primarily CIS members.

### 3. AN OVERVIEW OF THE ECONOMY OF THE KYRGYZ REPUBLIC

#### 3.1 THE COUNTRY'S ECONOMY AND ITS KEY INDUSTRIES

The economy of the Kyrgyz Republic consists of a number of industries. Judging by contribution to the GDP, however, the following 6 industries have been of key importance in the recent 5 years<sup>6</sup>:

- ▶ mineral production and processing (including base metal manufacturing),
- ▶ education,
- ▶ construction,
- ▶ agriculture,
- ▶ manufacturing (excluding base metal production),
- ▶ and trade.

See data on the GDP shares of the key KR industries<sup>7</sup> below (Figure 5).

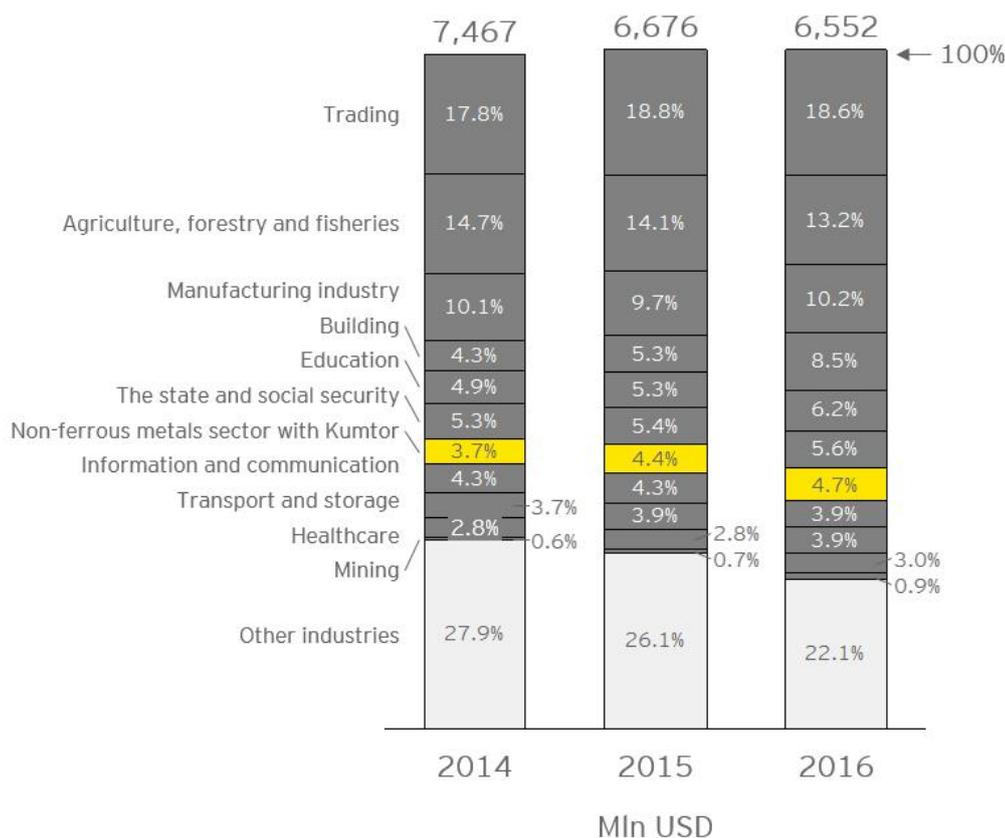


Figure 5. GDP of the Kyrgyz Republic and the shares of it attributable to key industries<sup>8</sup>

<sup>6</sup> If net taxes on products that are used in calculating the structure of GDP are not included

<sup>7</sup> Source - National Statistical Committee of the Kyrgyz Republic (document «7.07.00.03 (3) ВВП по видам экономической деятельности в текущих ценах»)

<sup>8</sup> The total values may include inaccuracies due to rounding

The above data suggests that the structure of key GDP branches has remained essentially unchanged and stable over the past three years. Trade had the largest GDP share in each year in question, varying from 17.8% in 2014 to 18.6% in 2016.

However, an analysis of the key KR industries that produce the greatest amount of tax and non-tax payments suggested a somewhat different structure (see Figure 6). The distribution is based on figures provided in an analytical review of governmental revenue implementation for each period and includes information on tax and other payments but no figures for state or social insurance, since the data is hard to obtain in industrial breakdown.

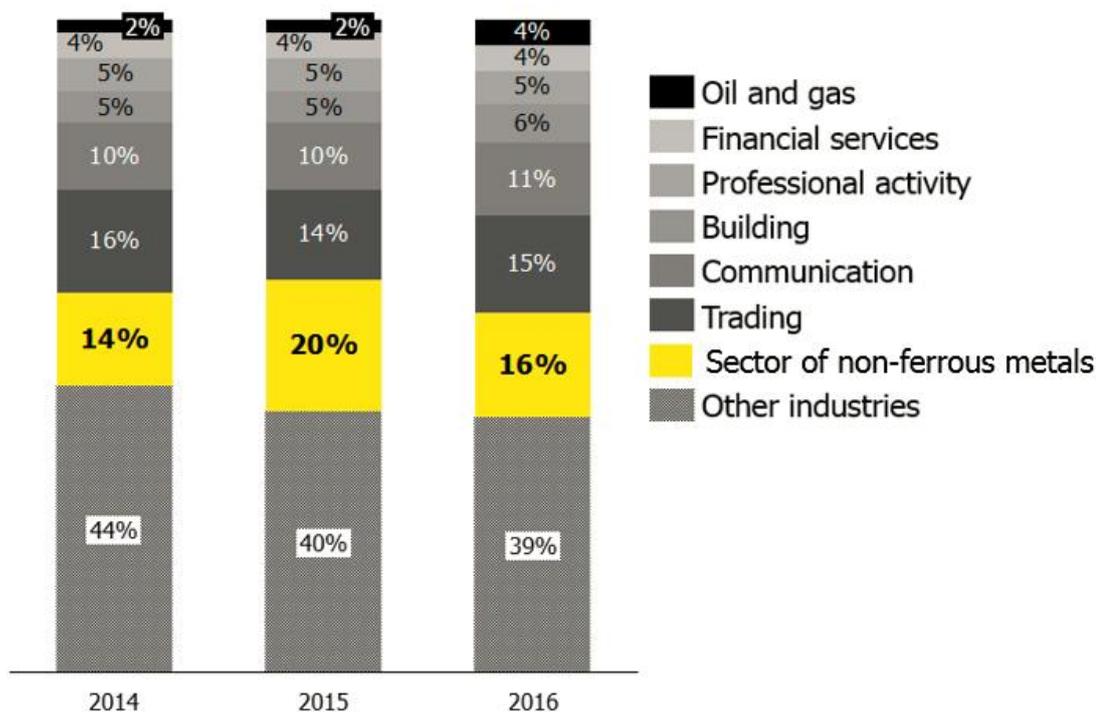


Figure 6. Industrial distribution of tax and non-tax payments among (excluding state and social insurance payments)

Note: mineral production values in this graph include data in the state revenue share of Kumtor Project, the activities of which is classified as Base Metal Manufacturing in Manufacturing Industry according to the Common Classifier of Economic Activity of the Kyrgyz Republic.

The non-ferrous metal sector of mining industry accounted for the highest state revenue in the form of tax and non-tax payments in the period in question<sup>9</sup>, though the industry's share (in particular including the base metal manufacturing sector) of GDP was as small as 5.05% in 2016.

the mining industry generates the highest payments in favor of the government

<sup>9</sup> The data source for analyzing the shares of the main sectors in the structure of state revenues is analytical reviews of the execution of the revenue side of the state budget for the relevant years from the website of the Tax Service of the Kyrgyz Republic. These data include tax and non-tax revenues from industries other than deductions to the Social Fund.

## 3.2 HOW THE NATIONAL ECONOMY HAS BEEN DEVELOPING SINCE INDEPENDENCE

The national economy was characterized by a GDP increase from 1,062.4 USD million in 1993 to 6,678.2 USD million in 2015 from the time that the Kyrgyz Republic became independent to 2015.<sup>10</sup>

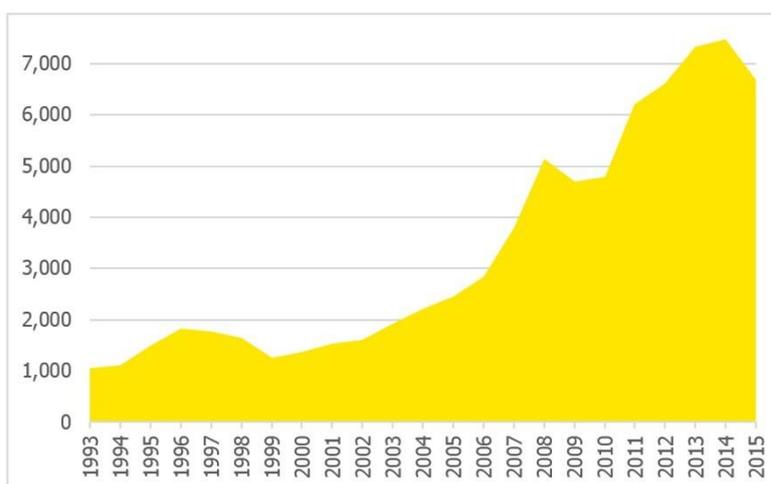


Figure 7. KR GDP from 1990 to 2015, USD millions

KR economy obviously underwent a formative stage in the 1990s. However, it further developed at a rapid pace (from 2000 to 2015), more than doubling from 2000 to 2007 and growing by a factor of over 4 from 2000 to 2015.

Of special interest is how human development index (HDI) has been changing in the KR, which enables us to measure cumulatively and compare to other countries such human potential parameters as standard of living, literacy, education, and longevity of the population. KR has essentially been able to improve its HDI, which can be proven by how it changed from the country's independence to 2015 (see Figure 8)<sup>11</sup>. Immediately after the USSR dissolution, KR HDI was 0.615, which value kept decreasing until 1995 (making 0.562, i.e. decreasing by 8.6% as compared to the 1990 value), which was largely attributable to the formative period of the new independent state's economy and the transition from state-planned to market economy.

However, a consistent increase of HDI characterized the period from 2005 to 2015, ultimately reaching 0.664, a value 18% higher than in 1995. Still, the improvement of this value in the KR was slow compared to other neighbor countries (excluding Tajikistan), which were ahead of Kyrgyzstan.

<sup>10</sup> National Statistical Committee of the Kyrgyz Republic, file «10.010.00.05 ВВП по видам расходов в текущих ценах»

<sup>11</sup> United Nations Development Programme, Human Development Reports

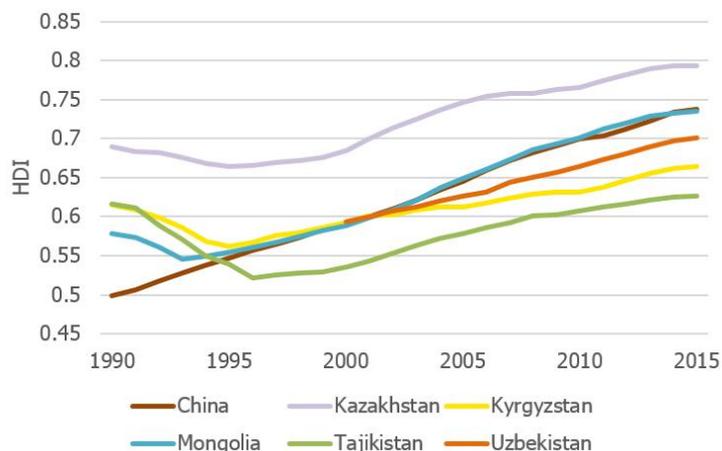


Figure 8. KR human development index (HDI) from independence to 2015

Curiously, the 2015 KR value only exceeded that of Tajikistan, while in 1990 the KR had a higher HDI than its neighbor countries (China, Mongolia, Uzbekistan, and Tajikistan).

Taking into account the relatively narrow HDI range and its somewhat delayed development as compared to neighbor countries, no correlation can be established between GDP and HDI changes in the KR over the period in question. It can be inferred, however, that the HDI growth rate is lower than Kyrgyzstan's GDP growth rate. The 6-fold increase of GDP has brought about no significant improvement of the standard of living for most of the population. This is the reason why issues like whether marginal product redistribution among social strata is fair and the increased income gap between the rich and the poor are discussed at a regular basis. The population of outlying regions often does not view the development of the country's mineral resources as beneficial.

However, if we analyze KR economy with a focus on changes of foreign direct investment (FDI) in the country and KR export, in particular the export share of the mining industry, this might suggest a certain correlation. Changes in the total FDI amount in KR generally indicate an increase (see Figure 9)<sup>12</sup>. FDI amounted to 136,301 thousand USD in 1998, while in 2008 and 2015 it stood at 866,200 and 1,573,243 thousand USD, respectively.

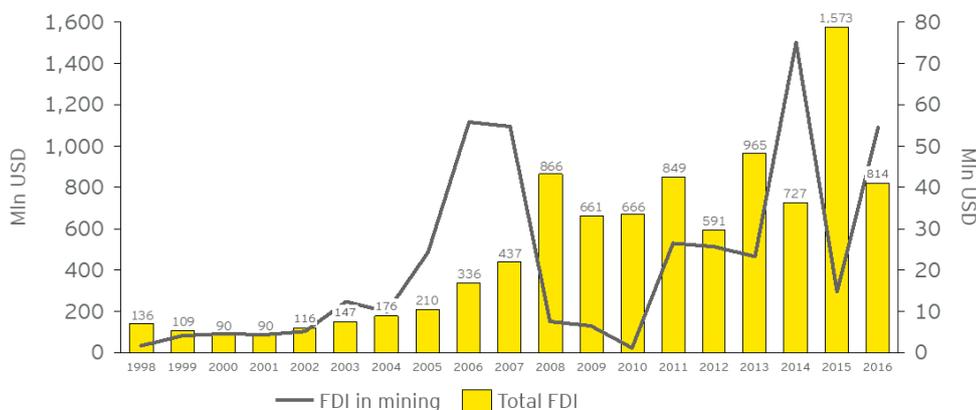


Figure 9. Total foreign direct investment (FDI) in the KR, mln USD

<sup>12</sup> National Statistical Committee of the Kyrgyz Republic, files «4.04.00.06 (2)» and «4.04.00.06 (3)», both named «Поступление прямых иностранных инвестиций по видам деятельности»

The period since 2008 has been marked by a general growth rate reduction as well as alternating increases and decreases from 2011 to 2016, probably as a delayed effect of the financial crisis of 2007–2008.

To see how KR export and the export share of mining have changed (see Figure 10)<sup>13</sup> is of certain interest, too.

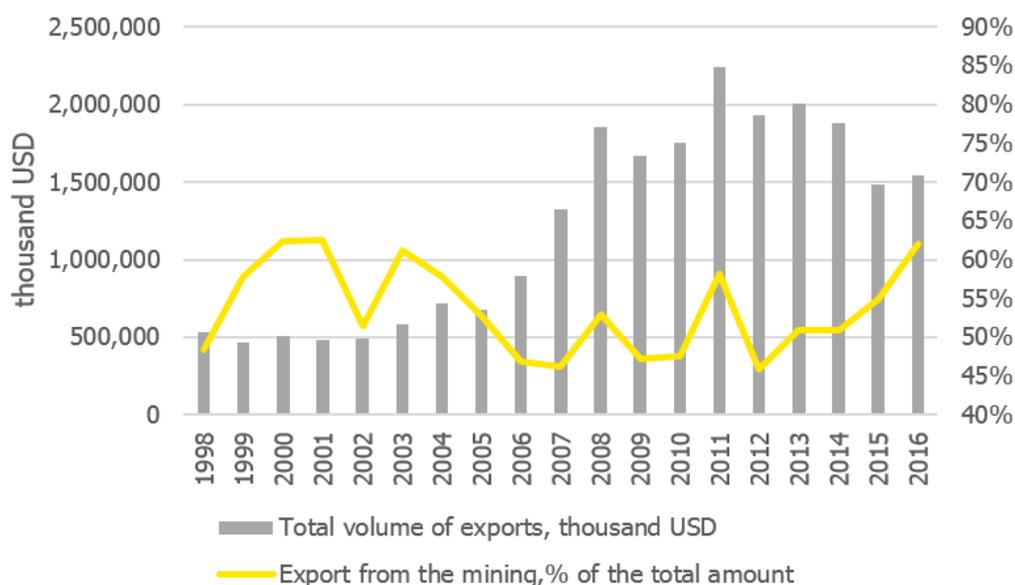


Figure 10. Export amount in thousands USD and the export share of the mining industry as % of the total amount from 1998 to 2015

KR export essentially grew over the period in question, making 535,066 thousand USD in 1998, 1,855,566 thousand USD in 2008, and 1,482,942 thousand USD in 2015. The export share of the mining industry remained stable within a range of 45% to 65% despite a number of jerks, which made the industry key to KR foreign economic activities.

As has been mentioned above, changes in KR GDP, FDI, and export amount from independence until today (a period from 1998 was analyzed for export because of lack of data) are indicative of a certain correlation. That is, while KR GDP has been growing since the 1990s, a general trend of increasing FDI and export amounts, largely attributable to the mining industry, has established.

Taking into account the above, it is important to study the KR's investment attractiveness in general and that of KR mining in particular. The results of the Fraser Institute's 2015 annual survey of mining companies were used (see Figure 11)<sup>14</sup>.

<sup>13</sup> National Statistical Committee of the Kyrgyz Republic, data for 1998-2015 гг. – file «4.03.00.02 Экспорт товаров по разделам Товарной Номенклатуры Внешнеэкономической Деятельности (ТНВЭД) (тыс.

<sup>14</sup> Fraser Institute's Annual Survey of Mining Companies: 20145

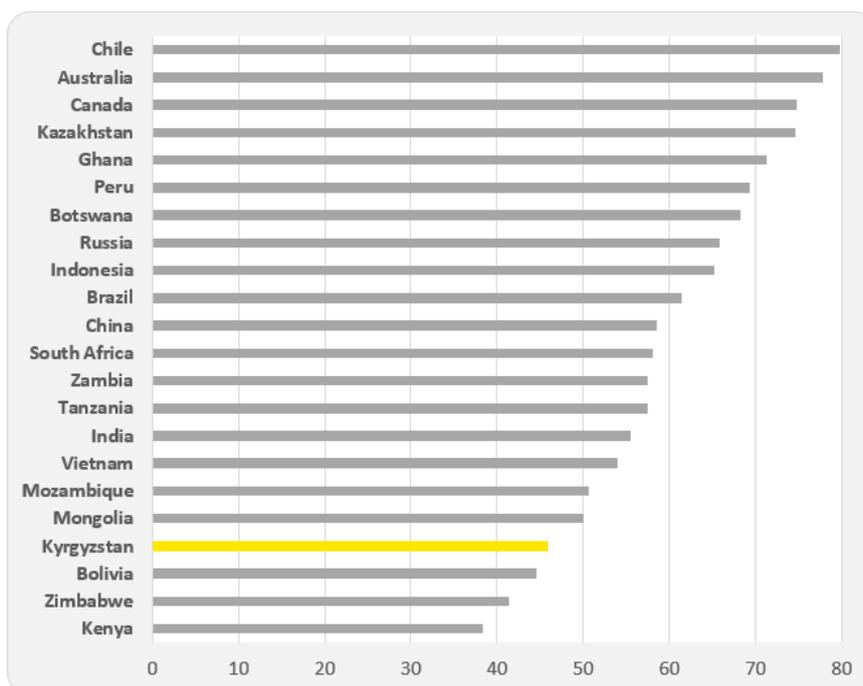


Figure 11. Investment attractiveness index of the mining industries of some countries, 2015

A comparison of the indices showed that Kyrgyzstan had a significant potential for increasing the investment attractiveness of the national economy. The investment attractiveness index of the mining industry that grew slowly but consistently from 2013 to 2015 indicates that the mining industry has been developing in the right direction (see Figure 12).

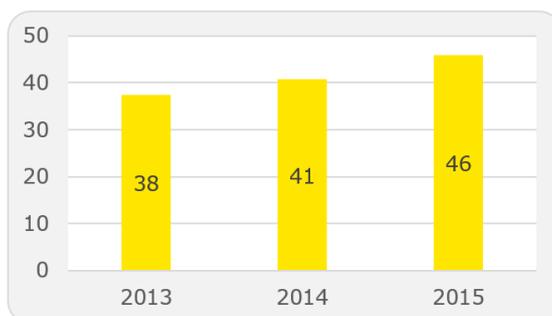


Figure 12. The investment attractiveness index of Kyrgyzstan's mining industry in 2013–2015<sup>15</sup>

Looking at the index more precisely. In the figures below, the total investment attractiveness index is classified into the following two components: the index characterizing the attractiveness of mining regulations (Figure 13) and the index characterizing industry attractiveness in terms of mineral resources (Figure 14). Comparing the two diagrams suggests an interesting inference: even though Kyrgyzstan's mining industry has a potential investment appeal in terms of mineral resources, a number of flaws and drawbacks of the regulatory regime in the industry make investors very cautious about investing in it, thus preventing investment growth.

<sup>15</sup> The source is the same, the survey by the Fraser Institute

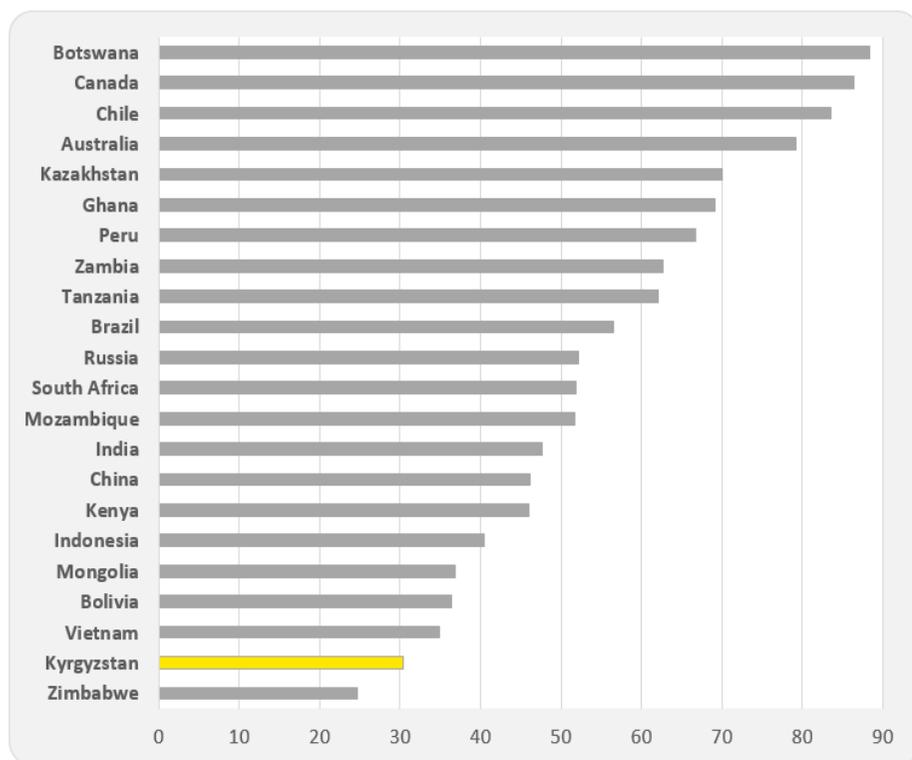


Figure 13. Are the existing mining regulations attractive?

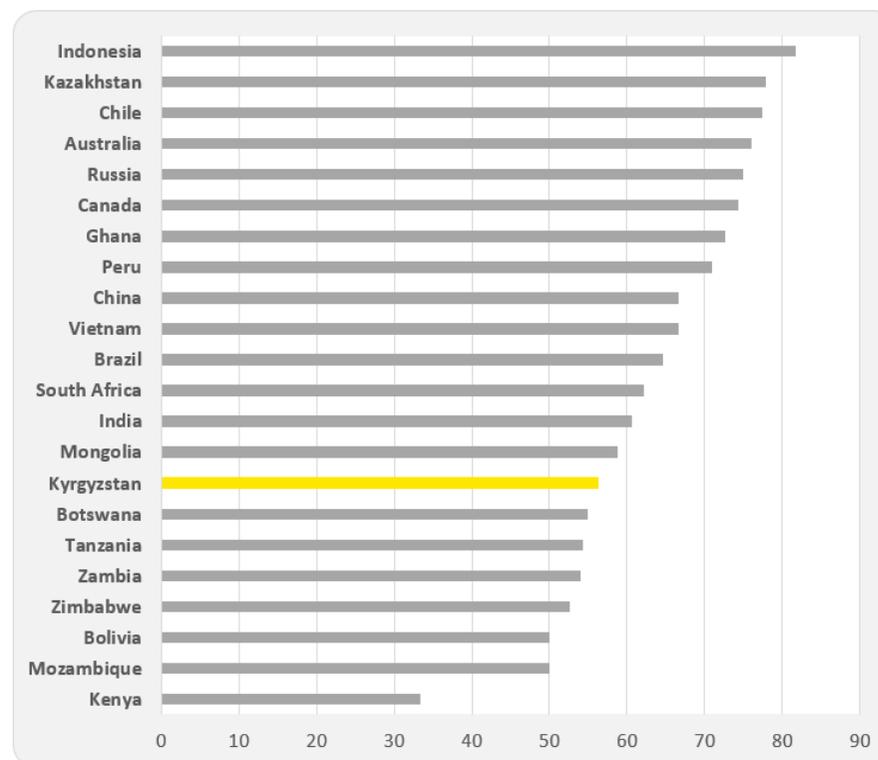


Figure 14. How attractive is the mining industry in terms of interest in the existing minerals?

Even though the analysis showed a certain correlation between GDP growth, increased FDI, and increased export in the KR (a major share of which is attributable to the mining industry), an analysis of KR investment attractiveness parameters as compared to other countries made the impression that the current mining situation does not really favor investment.

This can be due to the KR's relatively backward infrastructure. The study also showed that even the current KR taxation does not attract investment in the KR efficiently in comparison with other countries.

Thus, an in-depth analysis of the mining industry is of crucial importance before implementing potential changes to KR taxation in this industry.

## 4. THE KR MINING INDUSTRY: AVERAGE OR PROMISING?

### 4.1 WHAT THE KR MINING INDUSTRY LOOKS LIKE

Mineral resources, production and processing thereof are of great importance to the Kyrgyz Republic's economy. According to State Committee of Industry, Energy and Subsoil Use of the Kyrgyz Republic, the state register of mineral reserves included the following base ore minerals in late 2016:

- ▶ Gold (including alluvial gold) with an explored reserve of 694.4 tons (87 deposits)
- ▶ Silver – 609.3 tons (20 deposit)
- ▶ Copper – 653.2 th. tons (11 deposits)
- ▶ Iron – 549.1 th. tons (2 deposit)
- ▶ Mercury – 40.3 tons (4 deposits)
- ▶ Fluorite – 2,282.3 th. Tons (4 deposits)
- ▶ Tin – 186.8 th. tons (2 deposits)
- ▶ Tungsten – 117.2 th. tons (2 deposits)
- ▶ Lead – 41.4 th. tons (4 deposits)
- ▶ Zinc – 24.8 th. tons (3 deposits)
- ▶ Antimony – 265.6 th. tons (7 deposits)
- ▶ Arsenic – 65.2 th. tons (2 deposits)
- ▶ Rare earth metals – 51.5 th. tons (1 deposit)
- ▶ Molybdenum – 2,523.1 tons (2 deposits)
- ▶ Bismuth – 5,083.6 tons (3 deposits)

The Kyrgyz Republic has a large number of gold and silver deposits. Vein gold is the key resource, while the placer reserves are relatively small.

Kumtor is the largest vein gold deposit. The Kumtor deposit was discovered in 1978. The Kumtor Project as a joint venture of the KR government and Canadian investors started in early 1993. Gold production began in 1997. A total of 10.9 million ounces of gold (339.6 tons) was produced from that time until 2016<sup>16</sup>. The proven and possible reserves of the Kumtor deposit were estimated at 85.2 million tons of ore containing approximately 241 tons of gold as of December 31, 2015.<sup>17</sup>

Three other vein deposits (Makmal, Terekkán (the Danly Site), and Solton Sary), operated by Kyrgyzaltyn state-owned company, and the Bozymchak and Taldybulak Levoberezhny deposits produced gold in 2016. Three more deposits (Ishtamberdi, Jamgyr, and Karakazyk) were operated by Chinese and Kazakhstani companies. The latter produce gold concentrate only, which is processed outside of the Kyrgyz Republic.<sup>18</sup>

A number of companies also produce placer gold in the Kyrgyz Republic. However, those are small deposits producing a total of up to 100 kg gold yearly. For instance, LLC "Kumbel LTD" operates the Byurlyusu deposit, and LLC "GMK Alliance" operates the Saraisai deposit. According to the State Agency for Geology and Mineral Resources, over 80 licenses have been issued for gold placers in Kyrgyzstan.<sup>21</sup>

<sup>16</sup> Kumtor's website

<sup>17</sup> Kumtor's website, more recent data were not found in public sources

<sup>18</sup> Mogilevskii, R., N.Abdrazakova and S.Chalbasova (2015) The Impact of Kumtor Gold Mine on the Economic and Social Development of the Kyrgyz Republic. University of Central Asia's Institute of Public Policy and Administration Working Paper No. 32.

<sup>19</sup> Kazminerals' website

<sup>20</sup> Kyrgyzaltyn's website

<sup>21</sup> Kazakhstan's mining portal

Table 2. Major companies in the KR non-ferrous metal sector by the amount of tax and non-tax payments in favor of the government in 2016

|   | Company                     | Managing/<br>parent company   | Head office<br>location | Production<br>start date |
|---|-----------------------------|---|-------------------------|--------------------------|
| 1 | CJSC "Kumtor Gold Company"  | Centerra Gold Inc. (JSC "Kyrgyzaltyn" owns 26% of the company's shares) | Canada                  | 1997                     |
| 2 | LLC "Alтынken"              | Superb Pacific Limited Joint Venture: 60%<br>JSC "Kyrgyzaltyn": 40%     | China, Kyrgyzstan       | 2015                     |
| 3 | LLC "KAZMinerals Bozymchak" | KazMinerals   | UK                      | 2015                     |
| 4 | JSC "Kyrgyzaltyn"           | A state-owned company   | Kyrgyzstan              | 1992                     |
| 5 | LLC "Vertex Gold Company"   | LLP "VERTEX HOLDING"  | Kyrgyzstan              | -                        |
| 6 | CJSC "Kichi Chaarat"        | Tun-Lin   | China                   | 2017                     |
| 7 | LLC "Fullgoldmining"        | Linbao Gold Ltd, "Linsi" LLC  | China                   | 2016                     |
| 8 | LLC "Kaidi"                 | Private   | China, Kyrgyzstan       | 2016                     |
| 9 | LLC "Eti Bakyr Tereksay"    | JSC "Eti Bakyr"<br>JSC "Kyrgyzaltyn"                                    | Kyrgyzstan              | -                        |

CJSC "Kumtor Gold Company" is the largest company of the above as well as the key investor and taxpayer of the Kyrgyz Republic.

Table 3. Key economic indicators of CJSC "Kumtor Gold Company"<sup>22</sup>

| Indicator  | 2011   | 2012  | 2013  | 2014  | 2015  | 2016  |
|--|--------|-------|-------|-------|-------|-------|
| <b>Product output</b>                                |        |       |       |       |       |       |
| USD millions   | 583.2  | 533.6 | 810.9 | 694.6 | 604.5 | 686.4 |
| % of the national gross industrial output            | 26.1   | 18.9  | 24.0  | 23.1  | 22.5  | 23.4  |
| <b>Gold export</b>                                   |        |       |       |       |       |       |
| USD millions   | 1006.2 | 562.3 | 736.8 | 792   | 707   | 641   |
| % of the national gross industrial output            | 26.4   | 18.3  | 23.0  | 21.8  | 21.5  | 22.9  |
| % of the national gross output                       | 7.22   | 3.96  | 5.44  | 4.61  | 4.51  | 5.13  |
| <b>Capital costs, USD millions</b>                   |        |       |       |       |       |       |
| According to the old definition                      | 180.7  | 399.8 |       |       |       |       |
| According to the new definition (maintenance+growth) | -      | 208.4 | 88.9  | 88.8  | 64.7  | 75.8  |

<sup>22</sup> Mogilevskii, R., N.Abdrazakova and S.Chalbasova (2015) The Impact of Kumtor Gold Mine on the Economic and Social Development of the Kyrgyz Republic. University of Central Asia's Institute of Public Policy and Administration Working Paper No. 32. Kumtor Quartely reports, EY calculations.

## 4.2 HOW THE INDUSTRY HAS BEEN DEVELOPING SINCE THE 1990S

### 4.2.1 A Brief History of the KR Mining Industry

As part of the USSR, Kyrgyzstan had a relatively well-developed mining industry employing about 50,000 people. The republic's share of the total mineral product output was, depending on the period of the Soviet era, as follows; 15–18% for lead, 40–100% for mercury, 100% for antimony, up to 30% for rare earth metals, and up to 15% for uranium. Governmental funding of prospecting and exploration amounted to 50 million rubles yearly.

The situation deteriorated after the dissolution of the Soviet Union because connections were lost with well-established market outlets. However, the market of minerals, especially gold, remained quite stable, and the national government prioritized the development of mining to obtain the revenue required to develop the economy and maintain the state budget.

Several thousands of facilities classified as mineral deposits and occurrences had been discovered and included in the state register by the time the Soviet Union was dissolved due to significant investment in the exploration of the Kyrgyz SSR. Those included gold ore deposits that were fully prepared for development, namely Kumtor (340.2 tons), a world class deposit, Jeruy and Taldy Bulak Levoberezhny (85 tons each) with average reserves, and at least ten dozens with reserves of 28 tons.

Kyrgyzstan is rightfully believed to enjoy an abundance of natural resources. Deposits of minerals such as coal, oil, gas, molybdenum, iron ore, tungsten, aluminum raw materials, tin, mercury, antimony, uranium, rare earth metals, and gold have been discovered here. Gold mining has been the key branch of Kyrgyzstan's mining industry since independence. It presently makes 90% of the total national mineral output and is the country's most exported article.

For instance, Kumtor is the biggest geological discovery and operating gold mine in Kyrgyzstan. The Canadian mining corporation Cameco was engaged in its development, which later co-founded Kyrgyzaltyn and held shares of Centerra Gold Inc. public company. It had sold its shares by late 2009, part of which was transferred to Kyrgyzaltyn under the Agreement on the New Terms for the Kumtor Project. After operation began in 1997, however, the state revenue generated by the development of the Kumtor Project was largely used to repay previously contracted loans, and thus could not fully maintain the national budget. The state revenue of the Kumtor deposit was indirect at that time and until 2004, taking the form of payments from companies providing services to the Kumtor project operators (construction, transport, and power companies as well as building material suppliers), allocations to the Social fund, and insignificant tax payments.



Figure 15. The share of gold in KR export and the gold sales revenue of Kumtor, 1997–2015<sup>23</sup>

<sup>23</sup> Export of basic goods, thousand dollars: National Statistical Committee of the Kyrgyz Republic.

Apart from the Kumtor Project, in the early 1990s the Government of the Kyrgyz Republic granted licenses for the development of the Taldy Bulak Levoberezhny and Jeruy deposits to investors, who for various reasons failed to start mining operations within the established time frame, hoping to create jobs and an infrastructure, ensure new income for the budget and the Social fund, and attract new technology, in particular in management. The investors' licenses were revoked, or their development rights were transferred to other investors. The mining laws of that time did not fully reflect the value of previous geological works and discoveries (including investment in exploration), while licenses were granted following direct negotiations, often of dubious transparency (e.g. selling at understated prices).

A power shift took place in 2005, causing structural changes in the country and bringing about a revised procedure for granting licenses for mineral development and production.

The share of the mining industry in the national GDP increased from 5% to 12% from 2005 to 2010, making 39% of the total cost of industrial output and 40% of the total export. The industry accounted for 12% of the country's tax revenue in 2010, primarily due to an increase in world prices for gold.

April 2010 was marked by civil unrest and a crisis of the political system seizing the country and causing another shift of the power elite. Investment in mining was stuck at the previous year's level. Investors were facing the dilemma whether they should suspend their operations in Kyrgyzstan until the situation was stabilized or transfer their assets to more stable countries.

Local conflicts with mining companies, revised regulations, and general uncertainty about the government's intentions threatened the stability of the industry. Issues such as the physical possibility of operating their facilities, obtaining and maintaining licenses became critical to many mining companies. A number of mining companies moved their assets to other geographically adjacent states such as Uzbekistan and Tajikistan. The situation did not attract new players to the market. The only exception was foreign investors with an experience of working in difficult conditions and/or governmental support. This resulted in increased presence of Chinese mining companies that were prepared to work in high-risk conditions.<sup>24</sup>

When the situation had stabilized, the companies' relations with local residents began to improve, while mining regulation grew more liberal and well-systematized. In particular, the development of small gold ore deposits, such as Ishtamberdy, Jamgyr, and Karakazyk, began in 2011. Their total reserves to be developed have been estimated at 22 tons of gold.

### Mining Industry Regulation

The development of mineral production policies in the Kyrgyz Republic is hampered by a number of problems. The procedure was relatively simple in the Soviet time due to highly centralized power and the state-controlled system of mineral production management. After independence was proclaimed, there was a transition from central planning to market economy, causing the mining industry to be underestimated dramatically.

The government and local authorities do the administrative management. The responsibilities of the RK Government in environment and mining regulation are as follows: issuing licenses and permits, analyzing estimated environmental and social impacts, planning for regional and local development, control of compliance with environmental, health and safety standards, investing and distributing mineral development profits.

As for the mining management system, the State Agency for Geology and Mineral Resources was re-organized as the Ministry of Natural Resources (Ministry of Nature)<sup>25</sup> in 2009 to become the State Agency for Geology and Mineral Resources in 2011.<sup>26</sup> In 2016, its functions were assigned to the State Committee for Industry, Power, and Subsoil Use (SCIPUS) of the Kyrgyz Republic.<sup>27</sup>

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<sup>24</sup> Annex to the toolbox with practical examples: Mining, development and the environment in Central Asia; Review of the regulatory framework in the mining industry of the Kyrgyz Republic: Environmental safety,

<sup>25</sup> Ministry of Justice of the Kyrgyz Republic. Centralized Bank of Legal Information of the Kyrgyz Republic

<sup>26</sup> Website of the Government of the Kyrgyz Republic; Agency for Promotion and Protection of Investments of the Kyrgyz Republic

<sup>27</sup> Ministry of Justice of the Kyrgyz Republic. Centralized Bank of Legal Information of the Kyrgyz Republic

Extensive powers were delegated to the Ministry. It became responsible for issues previously addressed by other specialized agencies. For example, the Ministry of Natural Resources was responsible for licensing, supervision, regulatory control, and policy development in mineral production. The increasing organizational "centralization" facilitated the operations of mining companies in the country considerably. The Ministry of Natural Resources was active had been active for three years when another reform followed.

The new government of Kyrgyzstan, formed in late 2011, dissolved three ministries, including the Ministry of Natural Resources. It was re-organized as the State Agency for Geology and Mineral Resources (State Geological Agency) under the Government of the Kyrgyz Republic. The management of Kyrgyzstan's mining industry was thus brought back to the organization of 2009 (divided between two governmental agencies) except for a number of functions related to state environmental inspection of projects within geologically licensed sites, which were preserved. The resolution was taken that the State Geological Agency should remain responsible for monitoring and licensing (within two of its departments, the Department for Mineral Resources Analysis and Monitoring and the Department for Subsoil Use Policies), while the respective ministries should address policy-making issues. That is, the functions related to the mineral resources management and use strategy were assigned to the Ministry of Economy and Antimonopoly Policy. The newly established State Agency for Geology and Mineral Resources was to implement the Subsoil use policy. This ensured governmental control over the mining policy and its more efficient integration with the general policy and plans for the country's economic development.<sup>28</sup> The most recent transformation of the agency as the SCIPSU re-assigned to it the function of developing and implementing the national industrial policy.<sup>29</sup>

The Subsoil Law of 1992 was among the first acts to appear after independence, which put an emphasis on the high priority of mineral resources in terms of economic development. The new law declared a transition to market economy, while the government maintained strict control over subsoil users' operations. A new subsoil law was adopted in 1997, and further bills and amendments to the subsoil law appeared in 2000, 2010, and 2011 without being signed by the KR President. A revised subsoil law was adopted in 2012 and amended in 2014 and 2017. The Subsoil Law was revised and amended three times from 2012 to 2017.

#### Introducing and clarifying terms and definitions, changes to the procedure of providing geological data (May 2014)

The concept of license agreement was introduced, providing for contractual subsoil use. A detailed and clear classification of minerals into 8 groups was provided to prevent conflicts regarding license compatibility.

The concepts of land provided for subsoil use, suspension of the subsoil use right, and social package were clarified. A regulation was adopted allowing restriction of claiming subsoil use rights for a period of up to 3 months.

Changes were introduced to the procedure of providing geological information resources. The standards regulating who can be a subsoil user were according to the Incorporation Act and the Civil Code. Changes were introduced to the tender procedure and the procedure for suspending and terminating subsoil use rights. Changes were introduced to the tender procedure and the procedure for suspending and terminating subsoil use rights. Social package criteria as well as the procedure of social package approval and settlement of disputes between the subsoil user and the local community were clarified. Changes were introduced to the article regulating the transfer of license according to the subsoil use right, in particular, the form of the pledge agreement and its subject were specified. A regulation was adopted entitling the license holder to transfer the license to another person three years after project implementation. The fund for re-cultivation of disturbed soils is to be formed not just from the beginning of development but from the beginning of geological exploration.

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<sup>28</sup> Review of the regulatory framework in the mining industry of the Kyrgyz Republic: Environmental safety, mining and good governance

<sup>29</sup> Ministry of Justice of the Kyrgyz Republic. Centralized Bank of Legal Information of the Kyrgyz Republic

### Specifying the powers of governmental bodies (February 2017)

Changes were introduced to specify the powers of two governmental bodies in terms of ensuring reasonable subsoil use and subsoil protection. The functions were transferred from the governmental body for the implementation of the governmental subsoil policy to the authorized governmental body for supervision and control over environmental and occupational safety.

### Amendments concerning bonuses and subsoil use rights (April 2017)

Changes were introduced to the Subsoil Law concerning the amendments to the Tax Code regarding bonus calculation and payment for transferring one's license to another person or changing interest in the subsoil user. A regulation was adopted that allowed the subsoil use right to be suspended for a period of up to 3 month if the user failed to inform the authorized governmental body of changed interest in the subsoil user within the established period where the change entailed a bonus according the KR tax legislation.

## 4.2.2 The role of the mining industry in the national economy

According to the International Council on Mining and Metals, the Krgyz Republic was rated 39th of over 180 countries by the share of the mining industry (excluding coal) in the national export in 2014.

Table 4. Export contribution (minerals except for coal and oil) <sup>30</sup>

|    | Income classification | Country                  | 1996  | 2012  | 2014   | Change (%) |           |
|----|-----------------------|--------------------------|-------|-------|--------|------------|-----------|
|    |                       |                          |       |       |        | 1996–2012  | 1996–2014 |
| 1  | Average income        | Botswana                 | 80.9% | 91.6% | 91.92% | 10.7       | 11.02     |
| 2  | Low income            | DROC (Congo)             | 72.4% | 81.5% | 78.26% | 9.1        | 5.86      |
| 3  | High income           | French Polynesia         | 71.0% | 64.0% | 72.9%  | -7         | 1.9       |
| 4  | Average income        | Zambia                   | 76.1% | 69.2% | 69.05% | -6.9       | -7.05     |
| 5  | Average income        | Mongolia                 | 57.5% | 74.6% | 64.23% | 17.1       | 6.73      |
| 6  | Average income        | Mauritania               | 35.9% | 62.9% | 69.05% | 27         | 22.92     |
| 7  | High income           | Chile                    | 47.7% | 61.6% | 56.92% | 13.9       | 9.22      |
| 8  | Average income        | Peru                     | 48.3% | 60.1% | 53.71% | 11.8       | 5.41      |
| 9  | Low income            | Guinea                   | 76.3% | 60.1% | 53.15% | -16.2      | -23.15    |
| 10 | Average income        | Guyana                   | 37.4% | 58.5% | 51.52% | 21.1       | 14.12     |
| 11 | Low income            | Burkina Faso             | 8.2%  | 46.3% | 49.65% | 38.1       | 41.45     |
| 12 | Average income        | Tajikistan:              | 30.2% | 58.5% | 48.51% | 28.3       | 18.31     |
| 13 | Average income        | Jamaica                  | 49.7% | 39.1% | 48.14% | -10.6      | -1.56     |
| 14 | Average income        | Armenia                  | 24.6  | 44.5% | 47.3%  | 19.9       | 22.7      |
| 15 | Low income            | Mali                     | 8.4%  | 42.3% | 47.12% | 33.9       | 38.72     |
| 20 | High income           | Australia                | 24.5% | 57.3% | 42.33% | 32.8       | 17.83     |
| 39 | Average income        | Kyrgyzstan <sup>31</sup> | 6.19% | 36.7% | 47.5%* | 30.51      | 41.3      |

\* - 2015 data

41 countries worldwide had an extractives dependence index of over 25% in 2014. The index is calculated as a ratio of the country's export of metals and other minerals (coal not included) to its total export. The table below reflects the clear trend of the dependence indices increasing since 1996. The increasing

<sup>30</sup> International Council on Mining & Metals (ICMM)

<sup>31</sup> World bank: World Integrated Trade Solution - ore and metals (331 mln usd), gold and precious metals ore and concentrates (6317 mln usd), also for 2015

dependence on mineral resources is partly due to the fact that the price super-cycle increased until 2011 and partly attributable to an increase in the amount of minerals produced by low-income countries.

Governments receive an average of 7–10% of the earning of mining companies, though the percentage can be much higher in some countries. However, the contribution of the mining industry to state revenue is generally much higher than the direct state revenue that the industry generates via corporate taxes and royalties imposed on mining companies, though it attracts most of public attention. Governments also receive indirect tax income from economic activities stimulated by the industry, which includes additional income from corporate and individual income tax on new jobs created in the supply chain and employee expenditures.

A number of factors influence the amount of contribution that any mining project makes to state revenue, including the project size, the size of the economy, the deposit development stage, and the commodity price. Fluctuating prices for metals and mineral resources influence the industry profitability as well as the output, which also influences the level of revenue that companies pay to the government.

Unfortunately, it is common to present oil, metal, and coal production taxes as a single indicator in countries that have mineral deposits (including oil resources). This explains why the income of the mining industry alone is provided for 12 countries of the 24 below, while the data for the remaining 12 includes the oil and gas sector. The figure below shows the average GDP amounts of taxes paid from 2000 to 2013 as a percentage of the total state income and the respective GDP.

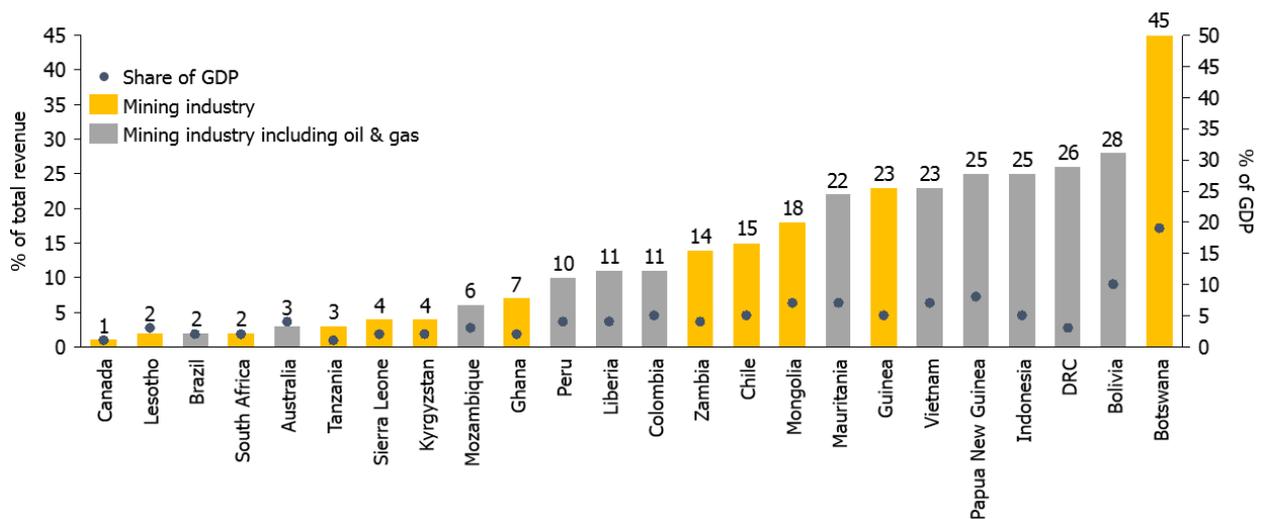


Figure 16. State revenue generated by the mining industry (the average value for the period from 2000 to 2013)<sup>32</sup>

Despite the average values provided in the above diagram, in clearly mining-oriented countries the contribution of mineral extraction was 2 to 4% of the total state income in some years and over 30% in others depending on metal prices.

Below is the variation of the share of mining companies' payments to the respective governments stating the minimum and maximum share of the contribution.

<sup>32</sup> International Council on Mining & Metals (ICMM), pages 34-35

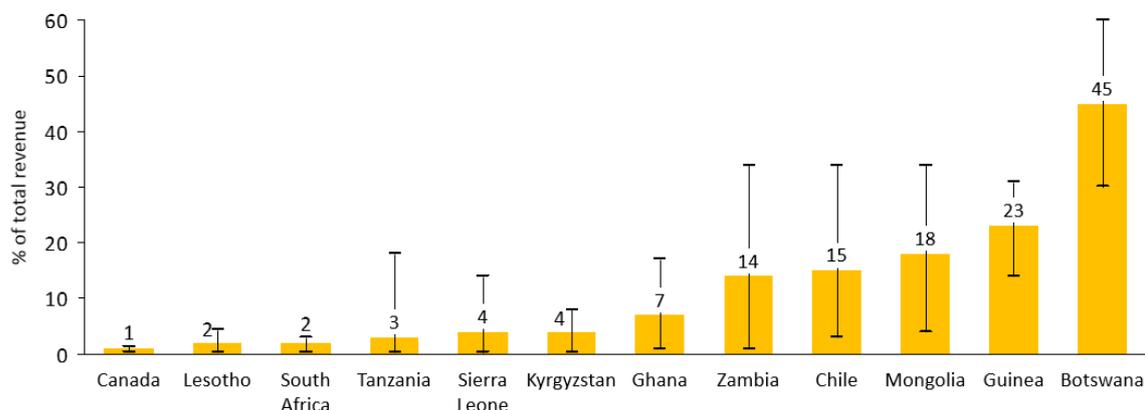


Figure 17. State revenue generated by the mining industry (minimum, average, and maximum) from 2000 to 2013<sup>33</sup>

Stable employment is an overriding need for people who live near mines, quarries, and mining and processing plants, especially in remote areas where alternative employment options are limited. Employment is also a priority for national governments as it decreases poverty and improves living standards as well as productivity, enabling people to invest in themselves and their families by contributing to healthcare, education, etc.

The mining industry ensures employment directly by employing people for mining projects (including long-term suppliers) and indirectly via a supply and procurement chain. The mining industry typically accounts for just several percent of the country's total employment directly. Its indirect contribution to employment as well as mediated contribution are many times higher.

National statistics can estimate the total employment in the mining industry. However, further breakdown of employment by sectors within the mining industry as mineral extraction appears problematic. The national statistics of many countries includes workers of building material quarries that are not engaged in mining while excluding workers who are engaged in mining while belonging to other categories (such as construction and services). Data can also include artisanal and small-scale production in certain countries while excluding it in others. Therefore, the figures should only be regarded as a very rough estimate.

As for direct contribution to employment, the best information currently available is offered by the International Labor Organization (ILO) database. The database includes data from surveys by national statistic agencies for respective countries, though the aforementioned limitations apply. Besides, data is only available for some countries and for varying intervals, which makes comparison difficult.

<sup>33</sup> International Council on Mining & Metals (ICMM)

Table 5. The contribution of the mining industry to employment, a country breakdown

| Country         | Year | Number of employees in the mining industry | Total number of employees nationwide | Direct contribution to employment, % |
|-----------------|------|--|--------------------------------------|--------------------------------------|
| Peru            | 2013 | 198,000                                    | 4,598,800                            | 4.3                                  |
| Mongolia        | 2014 | 40,900                                     | 1,110,700                            | 3.7                                  |
| Kazakhstan      | 2013 | 249,300                                    | 8,570,600                            | 2.9                                  |
| RSA             | 2014 | 428,000                                    | 15,317,000                           | 2.8                                  |
| Ukraine         | 2015 | 399,100                                    | 16,443,200                           | 2.4                                  |
| Zambia          | 2012 | 90,000                                     | 5,386,100                            | 1.7                                  |
| Zimbabwe        | 2014 | 92 300                                     | 6,265,900                            | 1.5                                  |
| Madagascar      | 2012 | 126,800                                    | 10,441,900                           | 1.2                                  |
| Ghana           | 2010 | 112,700                                    | 10,243,500                           | 1.1                                  |
| Guinea          | 2012 | 53,300                                     | 4,982,500                            | 1.1                                  |
| Iran            | 2014 | 159,500                                    | 21,304,300                           | 0.7                                  |
| The Philippines | 2015 | 234,500                                    | 38,740,800                           | 0.6                                  |
| Turkey          | 2015 | 118,800                                    | 26,618,500                           | 0.4                                  |
| Kyrgyz Republic | 2016 | 11,069                                     | 2,363,700                            | 0.5                                  |

## 5. THE ROLE OF THE NON-FERROUS METALS SECTOR IN KR ECONOMY

### 5.1 GOLD PRODUCTION AND PROCESSING AS THE INDUSTRY'S KEY SECTOR

Gold mining is presently the largest sector of the mining industry in the Kyrgyz Republic. Apart from precious metal deposits, a number of commercial deposits of coal, iron, non-ferrous metals (copper, antimony, tin, tungsten, etc.), and non-metallic minerals (limestone, gypsum, clay, and other construction materials) are developed. According to the estimates provided in the national mining strategy section, gold accounts for approximately 87% of the total value of the country's minerals, 10% being attributed to coal and the rest mainly to copper and silver.<sup>34</sup>

A survey by the World Gold Council showed Kyrgyzstan's indirect and direct contribution of gold mining to be relatively high as compared to other countries (using data by IMF available in 2016).<sup>35</sup> The text below studies in greater detail the contribution of the non-ferrous metal sector of the Kyrgyz Republic as represented primarily by gold, the production and processing of which makes the primary contribution of the mining industry to the national economy.

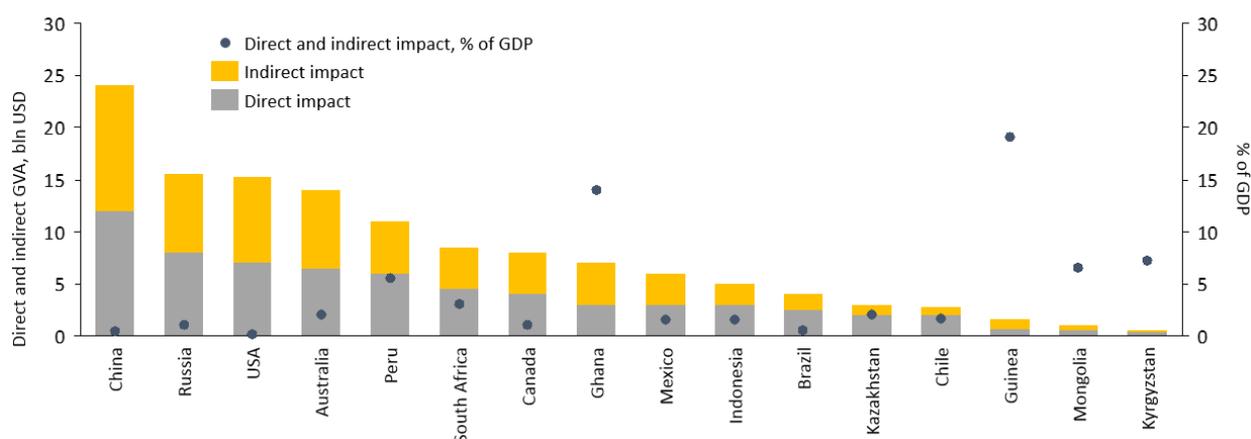


Figure 18. Direct and indirect gross value added (GVA) of gold mining as related to GDP among 30 top producer countries in 2013

The company's largest gold miners are Kumtor Gold Company and JSC "Kyrgyzaltyn". *Kumtor Gold Company* is a member of the international corporation Centerra Gold (based in Toronto, Canada) and Kyrgyzstan's largest gold miner<sup>36</sup>. *JSC "Kyrgyzaltyn"* is a state-owned company of 11 units, of which 4 are in gold mining. Kyrgyzaltyn owns 3 gold deposits. Besides, Kyrgyzaltyn is the largest shareholder of Centerra Gold.<sup>37</sup>

<sup>34</sup> Mogilevskii, R., N.Abdrazakova and S.Chalbasova (2015) The Impact of Kumtor Gold Mine on the Economic and Social Development of the Kyrgyz Republic. University of Central Asia's Institute of Public Policy and Administration Working Paper No. 32.

<sup>35</sup> World Gold Council. Socio-Economic Impact of Mining Gold (Published 3rd June 2015)

<sup>36</sup> Medium-term and long-term mining development strategy project of the Kyrgyz Republic (2013). Ministry of Economy of the Kyrgyz Republic.

<sup>37</sup> Medium-term and long-term mining development strategy project of the Kyrgyz Republic (2013). Ministry of Economy of the Kyrgyz Republic.

As has been mentioned above, the gold mining sector of KR economy is represented primarily by the Kumtor deposit. According to the KR National Statistics Committee and company data for 2016,

- ▶ the share of the Kumtor project operator in the country's GDP stood at about 4.5% (the entire non-ferrous metal production sector amounting to 4.7%);
- ▶ Kumtor's share of the total industrial output is 22.9%.<sup>38</sup>

The KR Government is presently preparing three-year estimates for the mining industry. However, to justify political decision requires long-term estimates of income, expenditures, and economic growth. Long-term estimates are of special importance because the Kumtor deposit can stop to produce gold by 2026. It is thus critical that other large and mid-sized deposits should be in full operation by that time to compensate for Kumtor's contribution to the national economy at least partially. Yet, the investment attractiveness of the industry, in particular its taxation, make it doubtful that they will be able to replace the Kumtor project in terms of output when it is out of operation. Most importantly, a long-term estimate can show how the role of mining industry in the economy will change if prices for primary commodities increase/decrease and the output changes. For example, the approved state budget for 2017 and the estimate for 2018–2019 include mid-term estimates for three types of mineral production taxes.

Prognosis is always difficult, especially when the prices of primary commodities are unstable, which affects the estimated income and contribution to the national economy dramatically. It can be beneficial to study the potential for centralized processing of semi-finished products (concentrates) at a cluster gold extraction plant (in terms of technology, economy, and environment) to manufacture full-fledge surplus products. The issue of exporting concentrates abroad for processing has become politically charged lately, interfering with smooth plant operation and making product export troublesome. This brings about multiple risks such as businesses being unable to pay their investors, their projects being economically unprofitable, and even businesses shutting down.

The fact that not all deposits have similar ore properties is another complicating factor. Therefore, some mining companies export gold-copper concentrate, while others produce doré to be processed within the Kyrgyz Republic. A functional and independent approach to preparing and using mineral resource development estimates based on economic modelling can be helpful in achieving more realistic and reliable prognosis when developing mid- and long-term policies for the development of the mining industry and its contribution to the national economy. The KR Government could use the prognosis to estimate the country's share of mining projects, recoverability of investments, progressivity, and the time frame within which miners generate income. Efficient coordination among the governmental bodies that determine the policy for the industry's development and its implementation is crucial to the reliability of the prognosis.

Besides, the KR Government could estimate long-term income from increasing the national mineral output significantly. However, while hypothetical long-term prognosis shows that there is a potential for increasing income from mineral development as part of state revenue (e.g. more than 15–20% due to being recognized as a resource-rich country by the IMF), the government will need to develop and implement specific policies to reasonably manage and allocate production income (e.g. by establishing private future generations funds, regional development funds, and microcredit organizations based on such funds). This might require either reducing the external national debt by conserving excess profit in the stabilization fund or by investing profit to enlarge the tax base, in particular through a dedicated mineral fund. To this end the government could establish a regulatory framework taking into account the fact that the establishment of such funds is associated with certain administrative costs (e.g. offices and salaries), and a comprehensive statutory instrument on the transparency of independent external supervision, limitations in case of excessive risk, clear depositing and drawing rules, and a well-considered management structure.

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<sup>38</sup> Kumtor Gold Company website

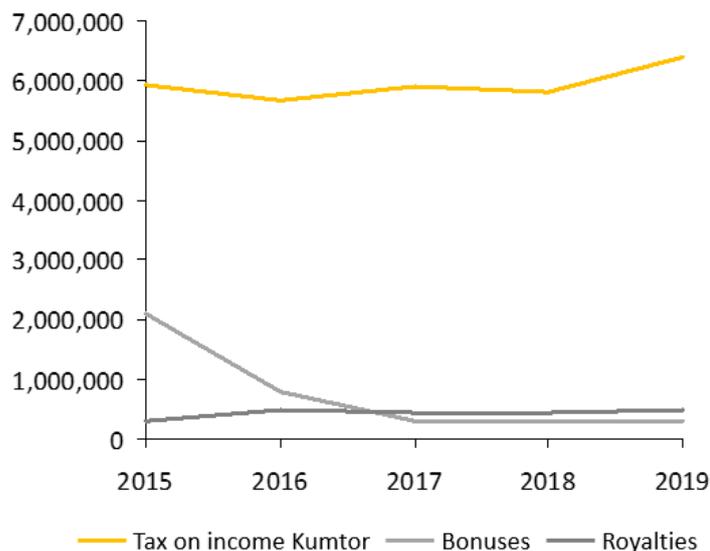


Figure 19. Gross revenue tax imposed on the operator of the Kumtor deposit as related to industry-specific bonuses and royalties, KGS thousands, 2015–2019 (prognosis for 2018 and 2019)

As has been mentioned above, production is expected to stop at the Kumtor deposit by 2026. Therefore, the KR Government should make the investment climate as attractive as possible to fill the gap in the national revenue by that time according to the estimates.

## 5.2 CONTRIBUTION TO THE ECONOMY'S PRODUCT OUTPUT AND THE NATIONAL GDP

The non-ferrous metal sector (including the company operating the Kumtor deposit) plays a major role in the national economy. However, the sector's share decreased significantly in 2015, in which its contribution to output was 8% than in 2014, while the contribution to GDP increased by 7% in 2015 (Figure 20). The decreased contribution of the Kumtor deposit to output in 2015 as compared to 2014 and its increase in 2016 as compared to 2015 correlates with the deposit's ore output: 8,640 thousand tons in 2014, 6,583 thousand tons in 2015 (24% less), and 8,911 thousand tons in 2016 (35% more).<sup>39</sup>

the total contribution of the precious and non-ferrous metal sector to the product output of KR economy amounted to 241 billion KGS (for 2014–2016).

However, even though the total contribution of the non-ferrous metal sector excluding the Kumtor deposit operator makes a small part of the total national output and GDP, this share is growing. This suggests that the non-ferrous metal sector has a high potential for the country's economy.

<sup>39</sup> Kumtor Gold Company website

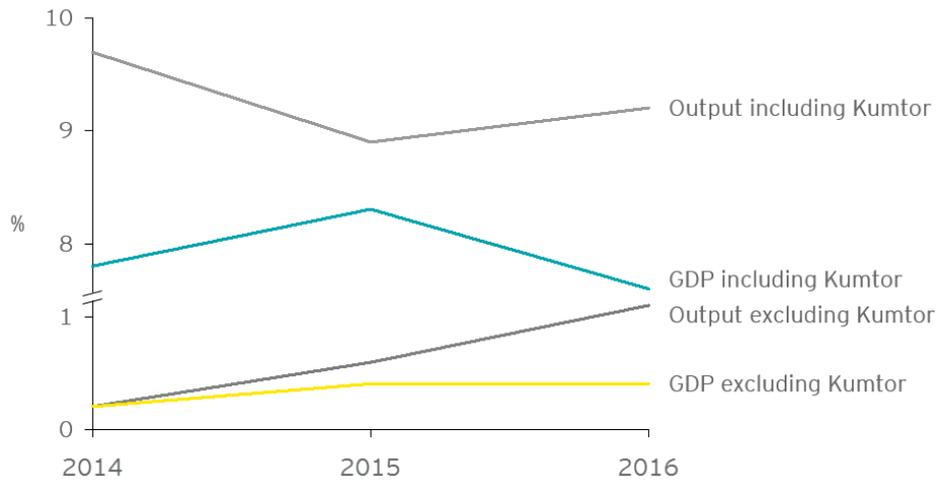


Figure 20. The sector's total contribution to output and GDP as a percentage of the total KR output and GDP

Below is the direct contribution of the non-ferrous metal sector (data for the Kumtor project included) as related to the national output and GDP (Figure 21 and Figure 22). The contribution has been growing since 2014, while the output and GDP shares of other key KR industries such as agriculture, transport and warehousing, information and communications has been decreasing. This can be viewed as another evidence to prove the potential behind the country's mining industry.

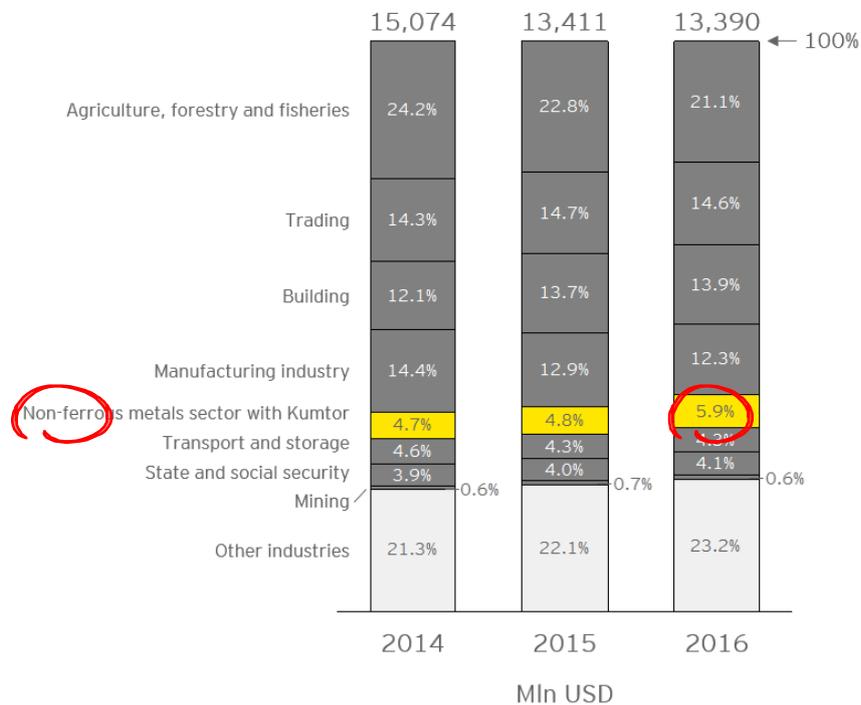


Figure 21. The sector's direct contribution to output as a percentage of the total national output, industrial breakdown

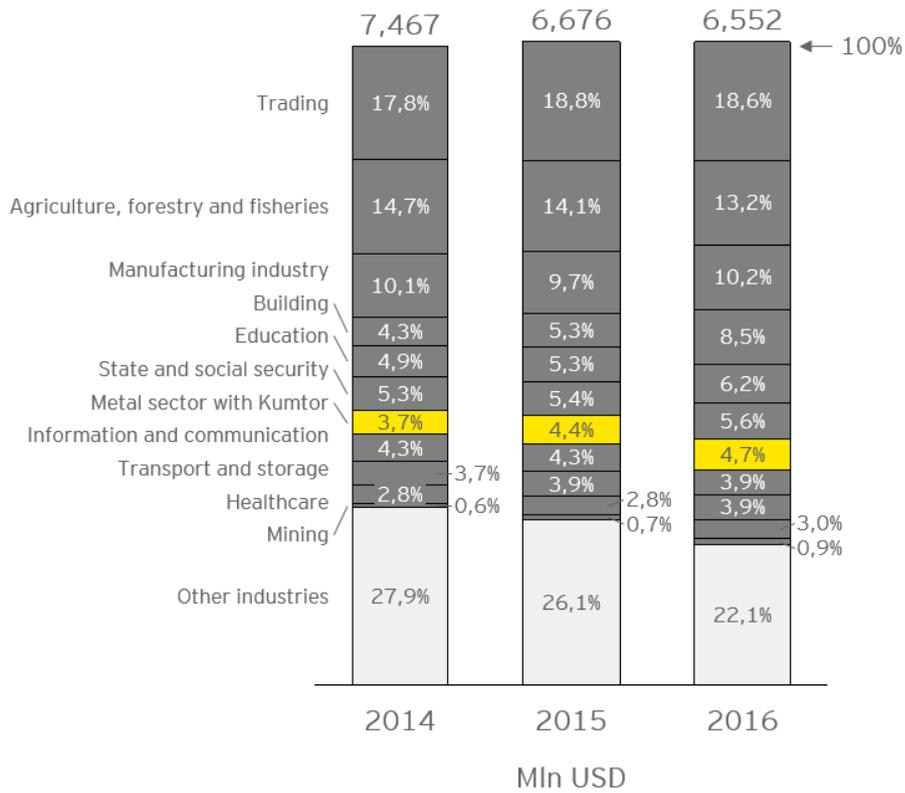


Figure 22. The sector's direct contribution to GDP as a percentage of the country's total GDP, industrial breakdown

From 2014 to 2016, the sector's total contribution to KR product output amounted to approximately 3,880 million USD: 1,457 million USD in 2014, 1,193 million USD in 2015 (18% less), and 1,231 million USD (3% more).

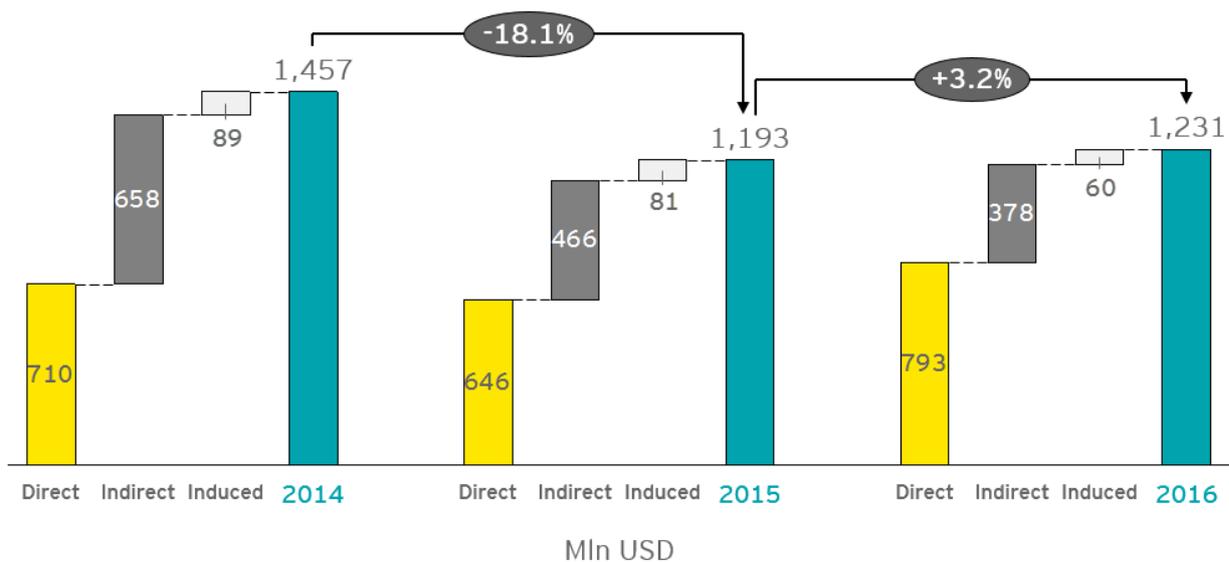


Figure 23. The contribution of the non-ferrous metal sector (including the Kumtor project) to the KR economic output

As the figure above (Figure 23) shows, the share of direct contribution generated by the non-ferrous metal sector is volatile. The direct contribution decreased by 9% in 2015 as compared to 2014 but increased by 23% in 2016 as compared to 2015. Similar patterns apply to total contribution. It should be noted, however, that since contribution to output is presented in USD for comparison with other countries, it was largely the exchange rate difference (depreciation of the KGS) that caused the decrease in direct and total contribution to output in 2015 as compared to 2014. The figures in KGSs show that total contribution to output decreased by as little as 1.6%, while direct contribution increased by 9%. It can be thus inferred that the sector's direct contribution to KR economic output grew consistently throughout the research period.

an additional goods and services output of KGS 0.55 was generated by other industries per 1 KGS of output of the non-ferrous and precious metal sector

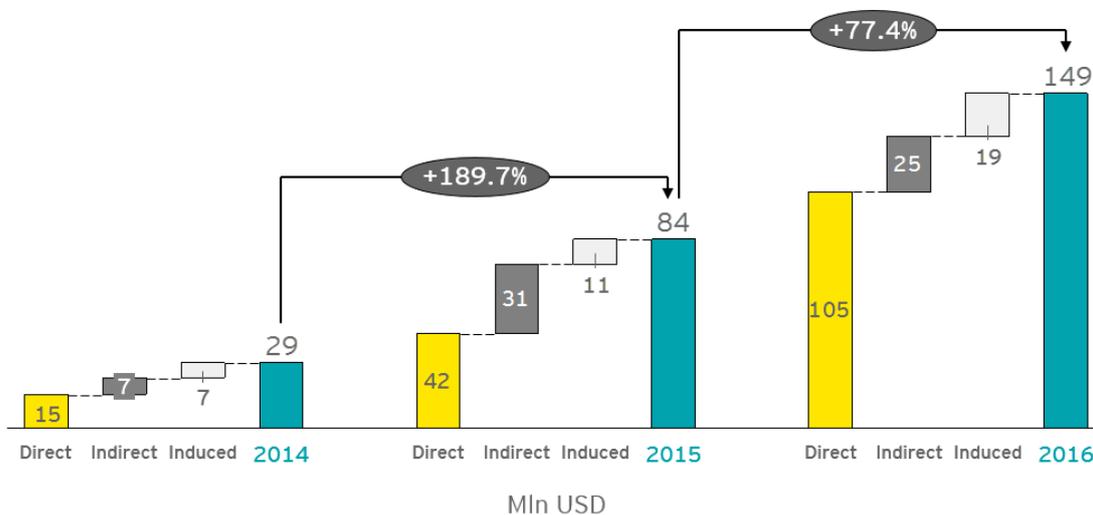


Figure 24. The sector's contribution to output (excluding Kumtor)

As the figure above (Figure 24) shows, the total contribution of the non-ferrous metal sector (excluding Kumtor) to output increased significantly in 2015 and 2016 as compared to the preceding periods. Direct contribution made the greater part of it, which is characteristic of the country's extractive industries in general. Besides, the ratio of total and direct contribution to output in the KR can be determined by the fact that some miners in the sector are still preparing for production and have not reached the design capacity.

Thus, the sector's indirect and mediated contributions are expected to grow if the macroeconomic situation is favorable in the medium term to due large-scale procurement from local suppliers and increased payments to employees in the sector (increasing consumer demand for goods and services in Kyrgyzstan's economy).

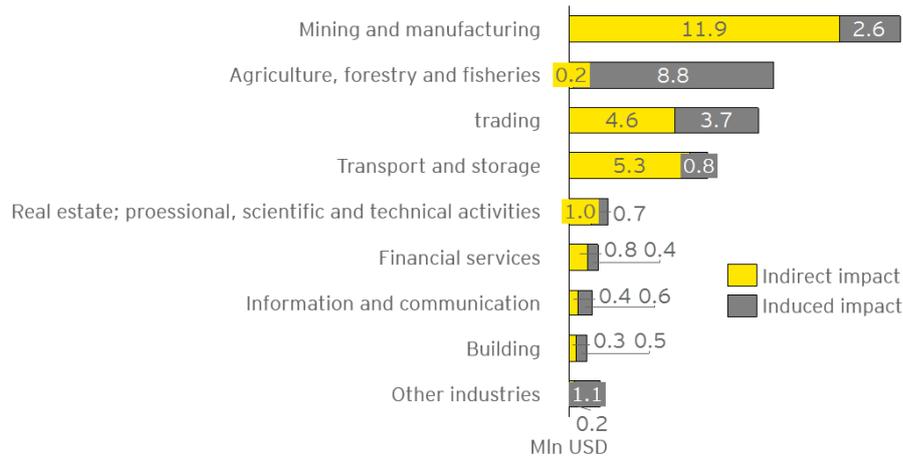


Figure 25. The share of the sector's indirect and mediated contribution to output, industrial breakdown (excluding Kumtor), 2016

An industrial breakdown of the sector's contribution to output is presented above (Figure 25). It should be noted again that the indirect contribution of the non-ferrous metal sector is the sector's procurement of products required to maintain its operation from other sectors. In contrast, mediated contribution is due to products purchased by employees of the companies as well as those of supplier companies, such as foods (agriculture), clothing, and household items (trade and manufacturing). If we view the non-ferrous metal sector separately, excluding Kumtor, for 2016, most of its indirect contribution is attributable to industry, transport, and warehousing as well as trade, while the majority of its mediated contribution is due to agriculture, forestry and fishery, trade and manufacturing.

It can be interesting to compare the structure of the total contribution of Kyrgyzstan's non-ferrous metal sector with data for the respective sector of Kazakhstan's economy. As has been mentioned at the beginning of the section, the total contribution to output of the non-ferrous metal sector was about 9.2% of Kyrgyzstan's total output. Compared to Kazakhstan, where the total contribution of the non-ferrous metal sector amounts to about 4.5% of the total output, the share of the total output attributable to the respective sector of Kyrgyzstan is nearly twice as high. This probably indicates that the sector is of greater relative importance to Kyrgyzstan's economy. Interestingly, the ratio of different contribution types (direct/indirect/mediates) within the total contribution is quite similar in both countries.

about one tenth of KR's national output is generated due to the precious and non-ferrous metal sector

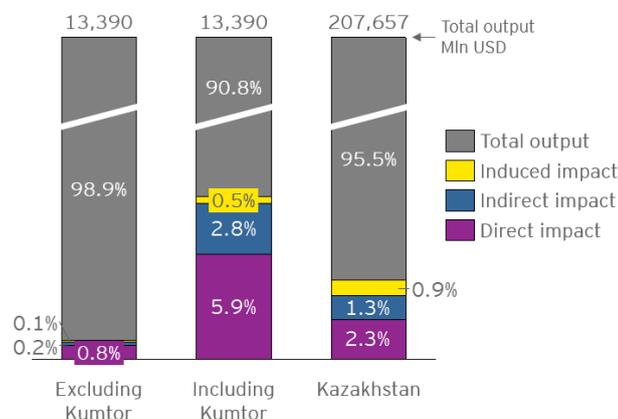


Figure 26. Types of contributions of the non-ferrous metal sector to KR output as compared to the respective data for Kazakhstan, 2016

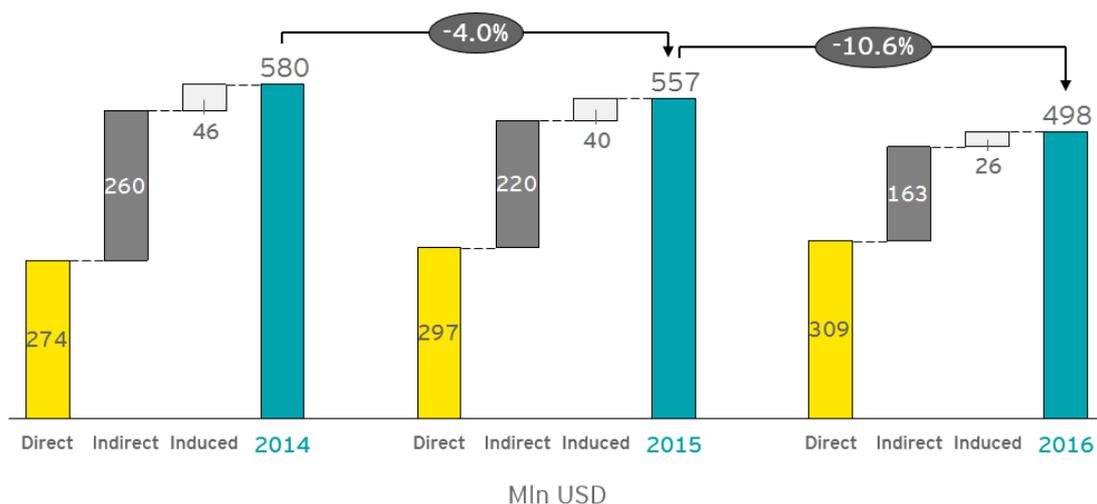
The next indicator to dwell on is contribution to GDP, or contribution to value added. By way of comparison, Australia's metal ore production industry generates a gross value added of 51 billion USD with as much as 74% attributable to iron ore production. In Kyrgyzstan, the gross value added of the studies non-ferrous metal sector amounts to approximately 309 million USD.

Table 6. Gross value added and output of metal ore production in Australia and Kyrgyzstan in 2015, millions USD<sup>40</sup>

|  | GVA<br>Australia* | Output<br>Australia* | GVA<br>Kyrgyzstan** | Output<br>Kyrgyzstan** |
|--|-------------------|----------------------|---------------------|------------------------|
| Iron ore production                              | 38,002            | 58,088               | No data available   | No data available      |
| Copper ore production                            | 1,672             | Not available        | No data available   | No data available      |
| Gold production                                  | 6,226             | 11,449               | No data available   | No data available      |
| Mineral sand production                          | 910               | Not available        | No data available   | No data available      |
| Silver, lead, and zinc production                | 1,789             | Not available        | No data available   | No data available      |
| Production of bauxites, nickel, and other metals | 2,448             | 6,607                | No data available   | No data available      |
| <b>Total metal ore output</b>                    | <b>51,048</b>     | <b>86,301</b>        | <b>309</b>          | <b>793</b>             |

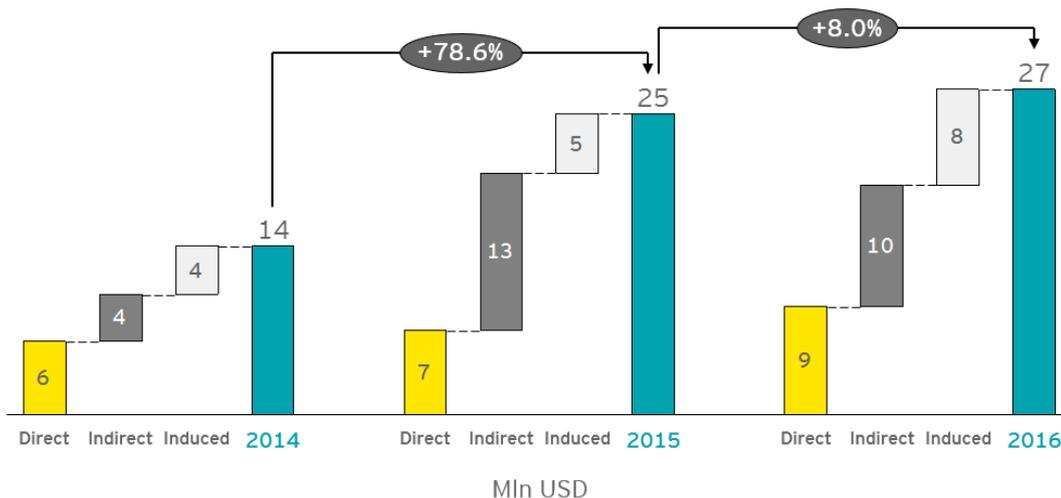
\*Data for Australia for the period from July 1, 2014 to July 1, 2015

\*\* Including the Kumtor project



(a) the KR non-ferrous metal sector including Kumtor

<sup>40</sup> Source: Australian Bureau of Statistics



(b) the KR non-ferrous metal sector not including Kumtor

Figure 27. Contribution to GDP of the non-ferrous metal sector, millions USD

To make the sector's importance to the economy more vivid, we compared its direct contribution to GDP and the country's total GDP with those of Australia and Kazakhstan (see Figure 28).

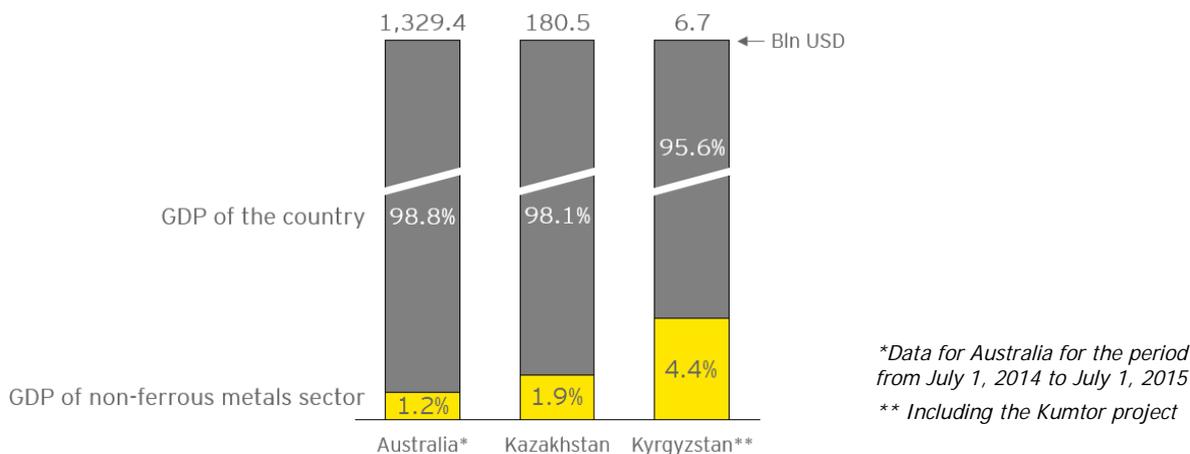


Figure 28. Direct contribution to GDP of the non-ferrous metal sector, 2015<sup>41</sup>

The non-ferrous metal sector (including Kumtor) has a large share of KR GDP, about 4.4% in 2015, while in Australia and Kazakhstan the precious and non-ferrous metal sectors makes 1% and 2% of national GDP respectively. This might mean that either the sector is of greater importance to KR economy to Australia or KR economy is less diversified.

<sup>41</sup> GDP of countries: World Bank

Of course Kumtor as the largest mining project in the Kyrgyz Republic influences the total contribution of the non-ferrous metal sector to the national economy most. For instance, the entire sector contributed 1,635 million USD to the country's GDP in 2014–2016, or 66 million USD excluding the Kumtor deposit. However, this figure is also significant for the economy. Without the Kumtor project, the above share of KR GDP generated by the sector (as adjusted for the countries' GDP amounts) would be similar to that of Australia, where the mining industry is well-developed and of great importance to export.

The precious and non-ferrous metal sector is important to Kyrgyzstan's economy.

It generates about 5% of the country's value added

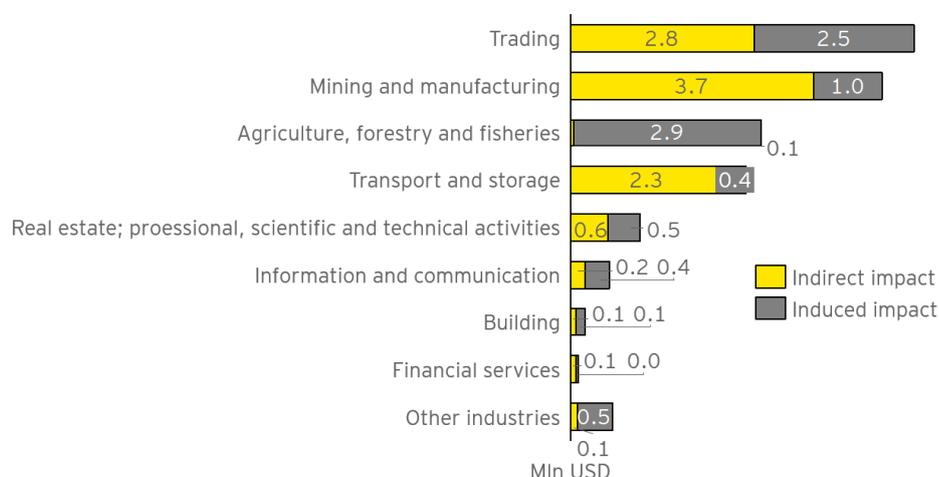


Figure 29. The sector's *indirect and mediated* contribution to GDP expressed as a percentage, industrial breakdown (excluding Kumtor), 2016

As the figure above (Figure 29) shows, the key industries receiving indirect contribution to GDP from the non-ferrous metal sector are agriculture and trade. By comparison, indirect contribution is mostly received by trade, industry, transport and warehousing. That is, the industrial breakdown of indirect and mediated contribution to GDP is similar to the industrial breakdown of contribution to output. This is only natural because GDP is part of output and the two economic indicators correlate significantly.

### 5.3 CONTRIBUTION TO EMPLOYMENT AND THE LABOR INCOME

From 2014 to 2016, operations in the non-ferrous metal sector (including Kumtor) helped maintain nearly 12,000 jobs in 2014, 14,000 in 2015, and over 17,000 in 2016 (Figure 30). Not more than 40% of those are created directly by businesses in the non-ferrous metal sector (as the number of workers employed by such businesses), while the rest are jobs indirectly created and maintained by the sector within KR economy. This also means that each job at a company in the non-ferrous metal sector is associated with 1.6 additional jobs in other industries of the country.

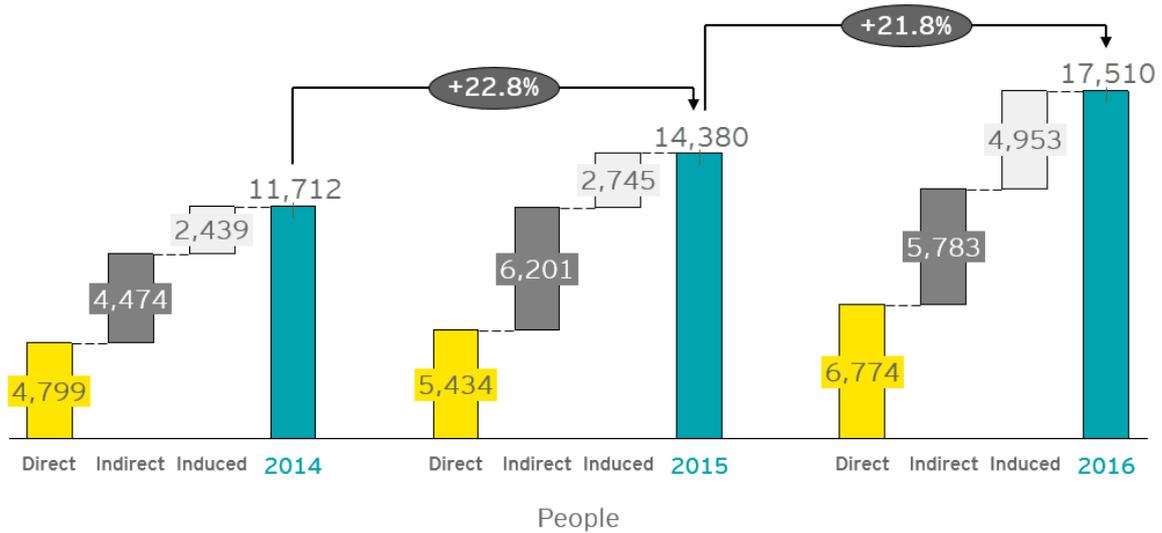


Figure 30. The sector's (including Kumtor) total contribution to KR employment

The amount of the labor income (both working for companies in the sector and in other industries where jobs were created due to the non-ferrous metal sector) varied from 165 million to 141 million USD annually over the above period, making a total 450 million USD over the three years (Figure 31).

The dynamic pattern of contribution to labor income depends on the currency (KGS or USD), like contribution to output and GDP. When measured in the national currency, it appears to have been growing continuously: 8.8 billion KGS in 2014, 9.3 billion KGS in 2015, and 9.8 billion KGS in 2016. The growth correlates with employment increasing year by year and, naturally, contribution to GDP as measures in the national currency. However, an analysis of contribution changes as measures in foreign currency reveals a decrease in labor income expressed in USD, which might indicate that, unfortunately, inflation and KGS to USD exchange rates grow faster than the labor income is adjusted.

over 17,000 jobs is created and maintained in Kyrgyzstan due to operations of the precious and non-ferrous metal sector

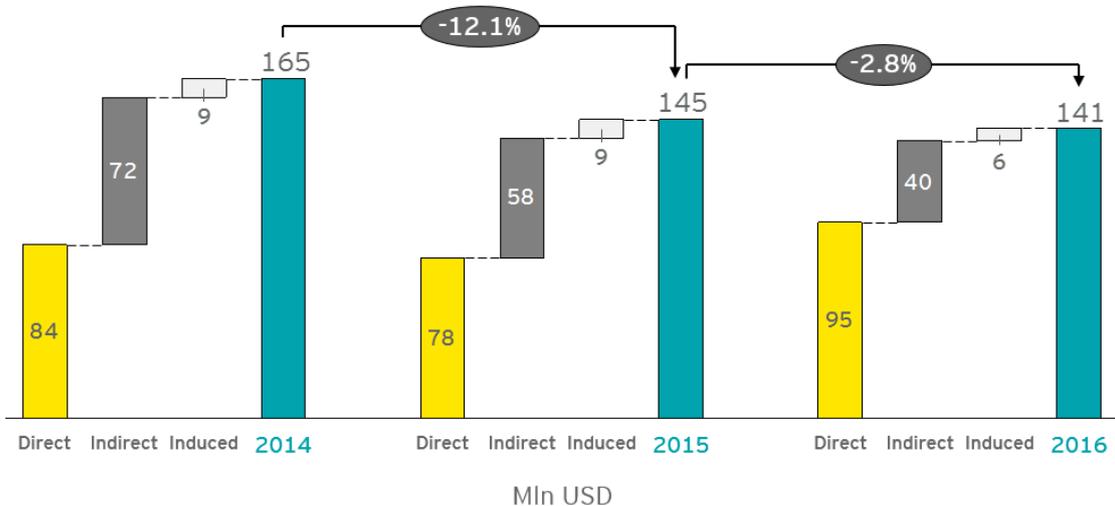


Figure 31. The sector's (including Kumtor) total contribution to the labor income

The contribution figures not including Kumtor (Figure 32 and Figure 33) show a significant growth over the period in question. In 2015, the sector's total contribution to employment and the labor income increased by 116% and 63%, respectively, as compared to 2014, and in 2016 the increase was 36% and 13% respectively. Yet, its contribution to employment including Kumtor data was marked by an increase of 23% in 2015, while the contribution to the labor income decreased by 12%, and in 2016 the contribution to employment increased by 22% with the contribution to the labor income decreasing by 3%. This is indicative of a significant potential for increasing the sector's contribution to strengthening the national economy, especially in view of the shutdown of the Kumtor deposit in the medium term.

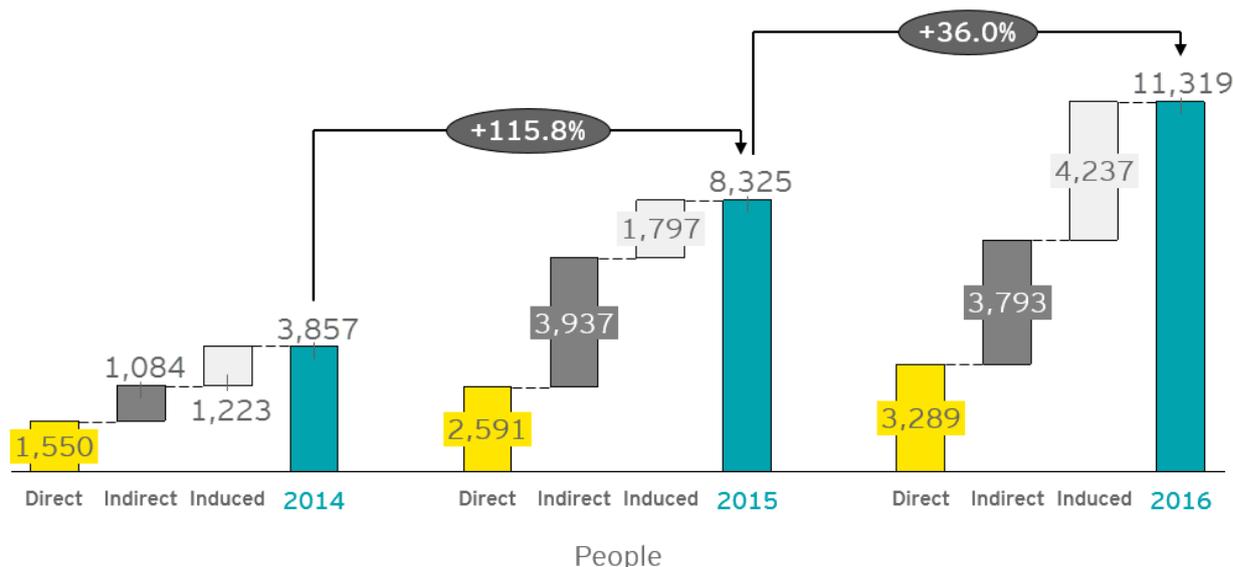


Figure 32. The sector's total contribution to employment (excluding Kumtor)

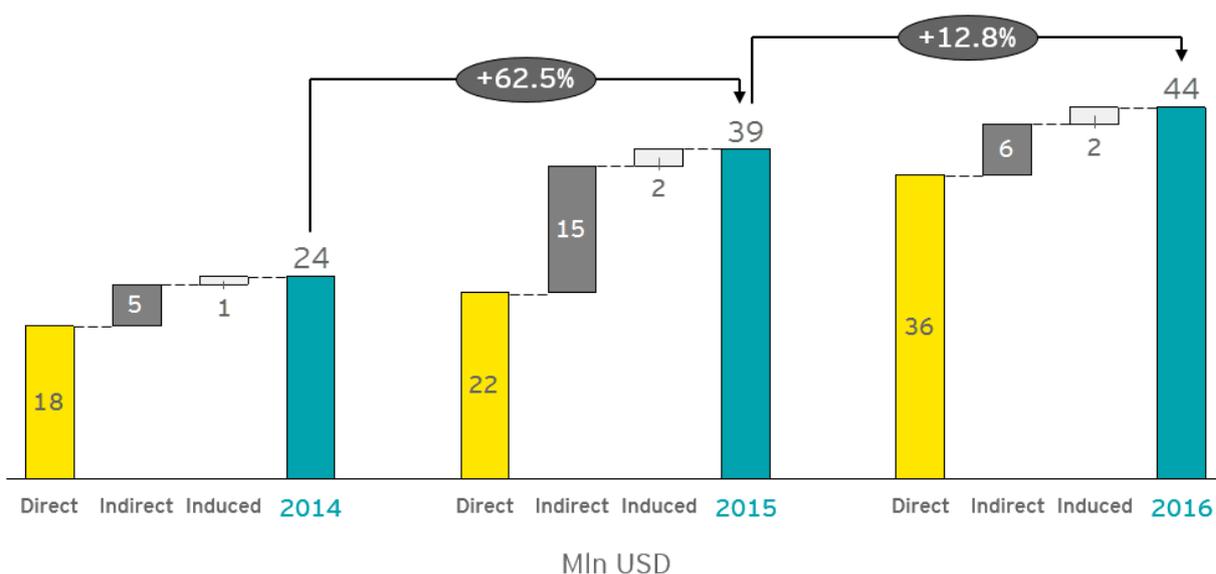


Figure 33. The sector's total contribution to the labor income (excluding Kumtor)

The non-ferrous metal sector employed a total of about 4,8 thousand people in 2014, 5.4 thousand people in 2015, and 6.8 thousand people in 2016 (including Kumtor), which made about 0.2%, 0.2%, and 0.3% of the total employment nationwide, respectively. Even though the sector's share of employment is

relatively small, it has been growing year by year: by 10% in 2015 as compared to 2014 and by 24% in 2016 as compared to 2015.

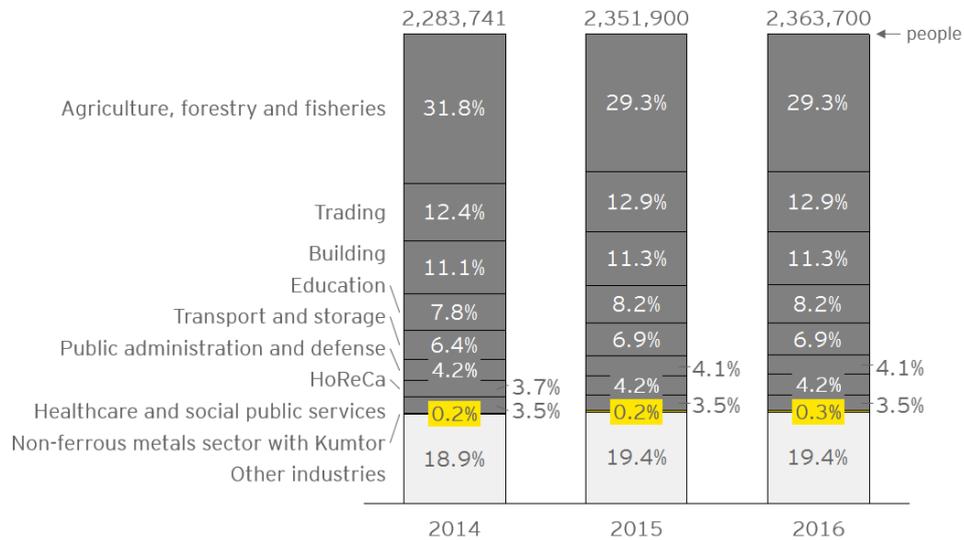


Figure 34. The share of the total employment nationwide attributable to the direct contribution of the non-ferrous metal sector (including Kumtor)

The contribution of the non-ferrous metal sector to the labor income (including Kumtor) makes a bigger share of labor income nationwide (Figure 35). The sector's total payroll (including Kumtor) amounted to about 4% of Kyrgyzstan's total payroll in 2014, also about 4% in 2015, and as much as nearly 7% in 2016.

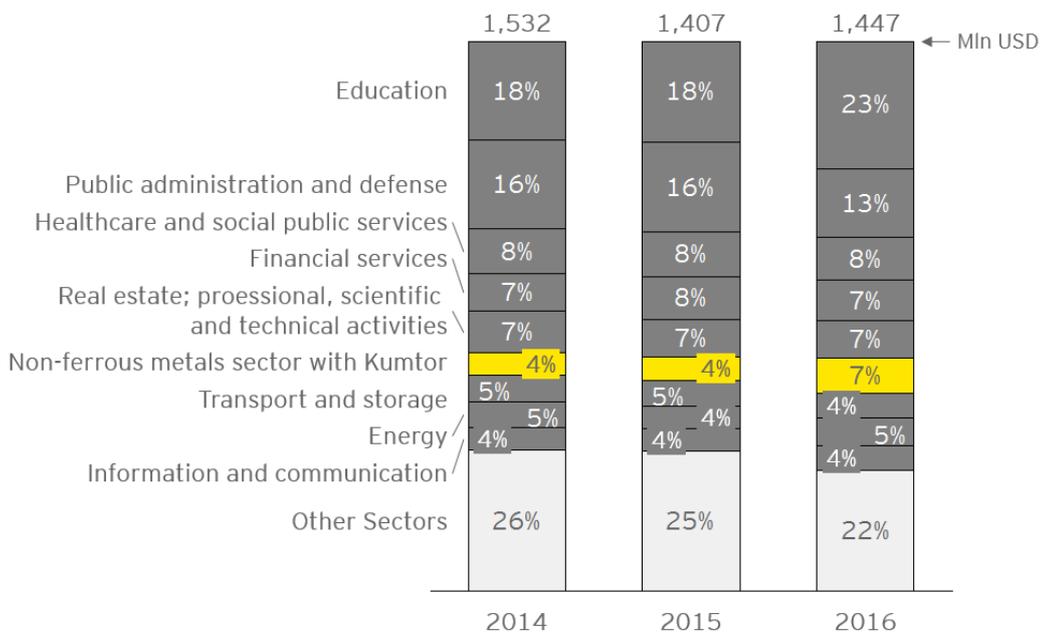


Figure 35. The share of the total labor income of the country's population attributable to the sector's direct contribution (including Kumtor) to the labor income

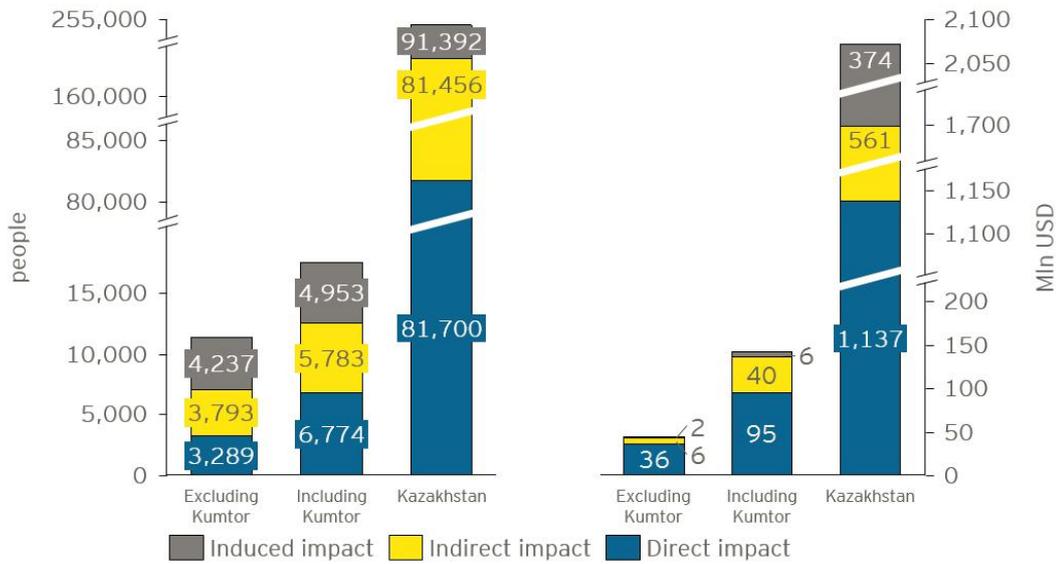


Figure 36. The sector's contribution to employment (left) and the labor income (right) in the KR as compared to that in Kazakhstan, 2016

Similarly to contributions to output and GDP, it is interesting to compare the total contribution of the non-ferrous metal sector to KR employment and labor income with that in Kazakhstan. The share of the sector's total contribution to employment in Kazakhstan is higher than in Kyrgyzstan, namely 3.1% and 0.7% (including Kumtor) respectively. This is primarily attributable to the scale effect: Kazakhstan's non-ferrous metal sector is several times bigger than that of Kyrgyzstan in absolute terms. However, the structure of total contribution in both countries is very similar, like that of output contribution.

If we compare the number of employees in mining across Kyrgyzstan with other countries, we will find out that the ratio of those employed in the industry to the total employee number is lower in the KR than it is in Australia, Kazakhstan, and Mongolia (Figure 37). The industry has a potential to grow because the non-ferrous metal sector within it is of great importance to KR economy.

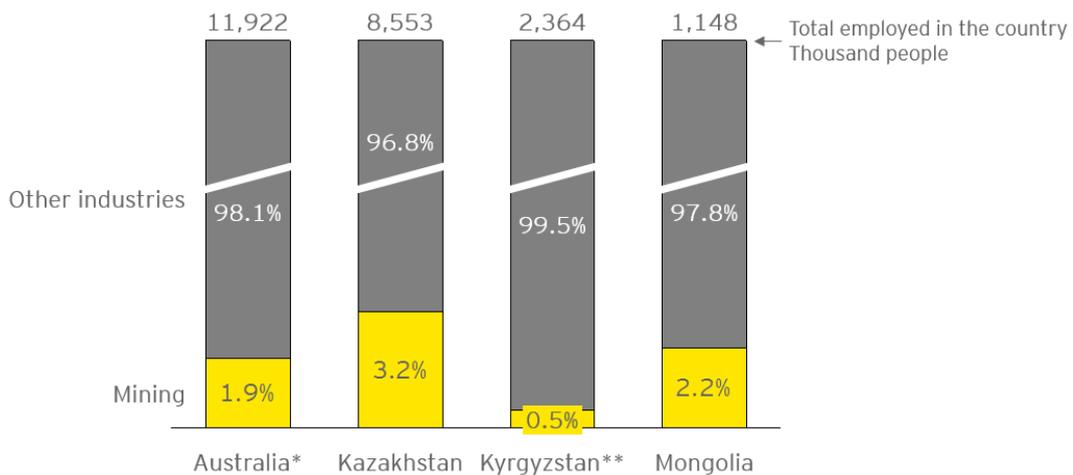


Figure 37. The total contribution of the mining industry in general to employment, 2016<sup>42</sup>

\* Data for Australia as of February 2016

\*\* Kyrgyzstan's mining industry includes Kumtor project data.

<sup>42</sup> Australian data: FairWork Commission. Statistical report—Annual Wage Review 20425–426 (20 May 20426), Australian government: department of industry and innovation and science

## 5.4 THE INFLUENCE OF THE SECTOR'S OPERATIONS ON INVESTMENT IN THE COUNTRY

The Law of Investment was adopted in the Kyrgyz Republic in 2003, establishing the fundamental principles of the governmental investment policy aimed at improving the country's investment climate and attracting domestic and foreign investment by ensuring a fair and equal legal treatment of investors and guaranteeing the security of their investment in the economy of the Kyrgyz Republic.

In particular, the Law provides for a stabilization regime, i.e. a favorable legal treatment of the investor and the investee in case any changes and amendments are introduced to legislative instruments of the Kyrgyz Republic that regulate tax and non-tax payments.

The stabilization regime was regulated by the Tax Code (Article 298) until February 2015, under which it provided for further imposition of subsoil use taxes (bonuses and royalties) on all payers of such taxes without any special conditions or need to sign a dedicated stabilization agreement.

In February 2015, the provision was removed from the Tax Code and included in the Law on Investment in the Kyrgyz Republic. In doing so the provision was amended to include requirements to investors engaged in mineral studying, exploration, and surveying: the investee's capital is to increase by at least 20 million USD within five years from the stabilization agreement date.

The right to stabilization treatment applies to taxes including value added tax but no other indirect taxes as well as to non-tax payments excluding those for services provided by governmental bodies. The current non-tax payments regulations (the KR Law on Non-Tax Payments) do not include customs payments in non-tax payments.

This means that if export customs duties are imposed on gold ore and concentrate, the above stabilization treatment will hardly protect investment from the increasing tax burden, which in particular includes export customs duties.

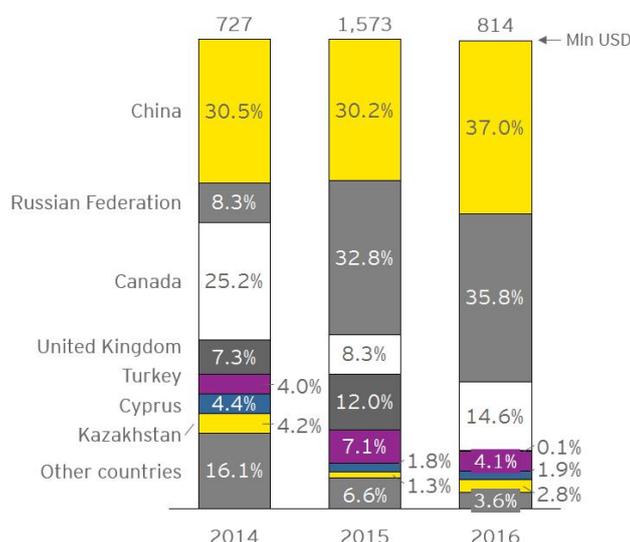


Figure 38. Inflow of foreign direct investment in Kyrgyzstan by source countries<sup>43</sup>

The total foreign direct investment in Kyrgyzstan's economy amounted to 727 million USD in 2014, 1,573 million USD in 2015 (116% more), and 814 million USD in 2016 (48% less). 2015 was marked by a significant increase of incoming foreign investment.

<sup>43</sup> National Statistical Committee of the Kyrgyz Republic

As the figure above (Figure 38) shows, the Russian Federation, Canada, China, the United Kingdom, Turkey, Cyprus, and Kazakhstan were the primary investors in Kyrgyz economy in 2014–2016. The countries' investment made 84% to 96% of the total direct investment in the Kyrgyz Republic in 2014–2016. FDI from the Russian Federation increased significantly in 2015: 515 million USD (32.8%) as compared to 60 million USD in 2014 (8.3%).

Foreign direct investment mostly funded the manufacturing industry in 2014–2016 (Figure 39). The investment in KR finance and insurance increased greatly from 2015, when it made 26% of the total foreign direct investment in the national economy. Changes in DFI in mineral production and processing (the data for the Kumtor project was moved from Manufacturing to Mineral Production and Processing) followed different patterns within the period in question. For instance, in 2015 the ratio of FD in the industry to the country's total FDI (relatively) decreased significantly. It should be noted, however, that the 2015 value is only 2 times smaller than that of 2015 in absolute terms. Moreover, the total amount of FDI in the country more than doubled compared to the previous period in 2015. In 2016, on the contrary, the industry's FDI value grew to make about 16% of the country's total.

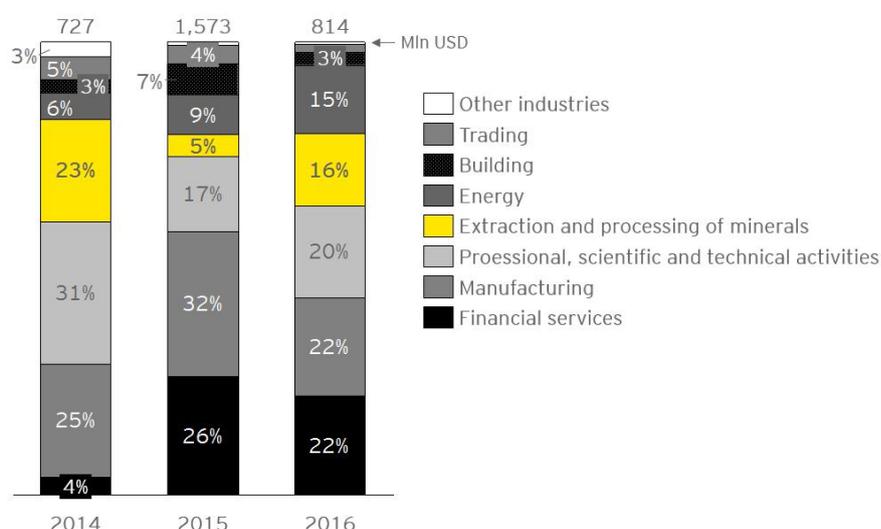


Figure 39. Incoming foreign direct investment in the KR by investees' economic activities<sup>44</sup>

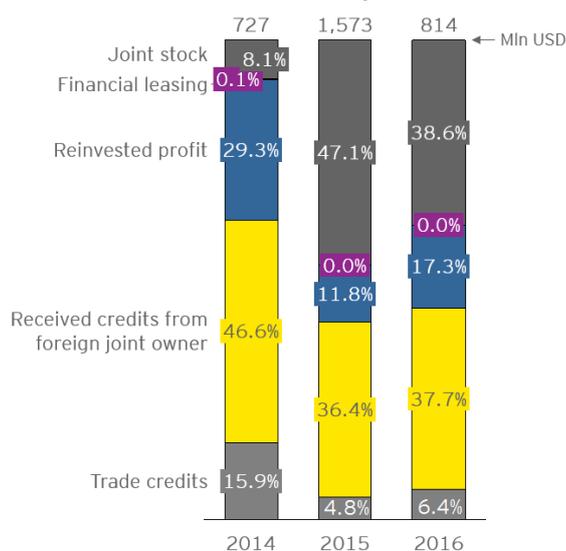


Figure 40. Incoming FDI in Kyrgyzstan by investment type<sup>45</sup>

<sup>44</sup> National Statistical Committee of the Kyrgyz Republic

<sup>45</sup> National Statistical Committee of the Kyrgyz Republic

An analysis of the structure of incoming foreign direct investment in Kyrgyzstan's economy (see Figure 40) shows that 2015 witnesses a significant rise in FDI, primarily due to share capital.

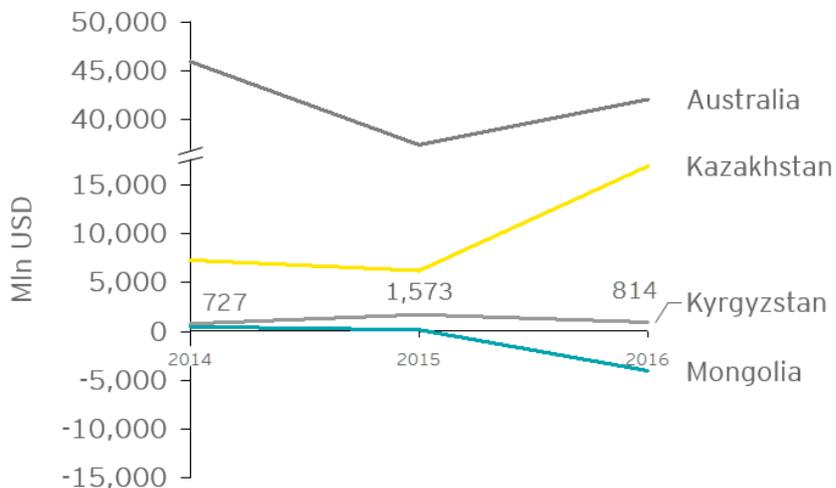


Figure 41. Foreign direct investment in the economies of Australia, Kazakhstan, Kyrgyzstan, and Mongolia<sup>46</sup>

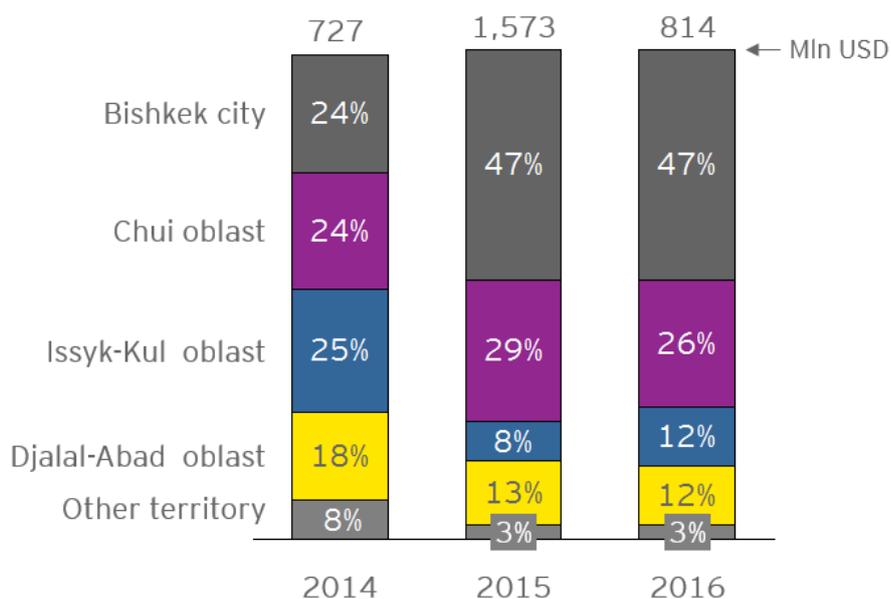


Figure 42. Incoming FDI in Kyrgyzstan by receiving region<sup>47</sup>

Foreign direct investment was mostly allocated to the city of Bishkek, Chui Region, Issyk-Kul Region, and Jalal-Abad Region (see Figure 42). The share of foreign direct investment in the city of Bishkek rose significantly in 2015, while that of Issyk-Kul Region decreased by nearly a factor of four.

<sup>46</sup> Data on Australia, Kazakhstan and Mongolia: World bank

<sup>47</sup> National Statistical Committee of the Kyrgyz Republic

## 5.5 CONTRIBUTION TO STATE REVENUE

The total tax contribution of the non-ferrous metal sector amount to 36 billion KGS (or 574 million USD) in 2014–2016, the Kumtor project included. In 2014 alone, the national budget received over 10 billion KGS, or 193 million USD, due to operations of the non-ferrous metal sector, which amounted to 12 billion KGS in 2015 (21% more than in 2014, though the amount in USD was essentially unchanged) and over 13 billion KGS in 2016 (6% more than in 2015).

Most of the total tax contribution (about 78% in 2016) is attributable to direct contribution, i.e. taxes paid by businesses in the non-ferrous metal sector. The situation is typical for extracting industries and is mainly due to the following two factors: a strong correlation between tax contribution and contribution to GDP and the fact that any extracting industry is characterized by a relatively small value added. For instance, the ratio of direct to total contribution for the oil and gas sector of the Republic of Kazakhstan reveals a share of direct tax contribution that is over 87%<sup>48</sup>.

However, direct and mediated tax contributions of the sector are also significant and make about one fourth of the total contribution. That is, the government received an additional income of 0.27 KGS from other industries per KGS of tax and other payments by businesses in the non-ferrous metal sector paid in 2016. This totaled to a significant amount of over 8.4 billion KGS over the three years.

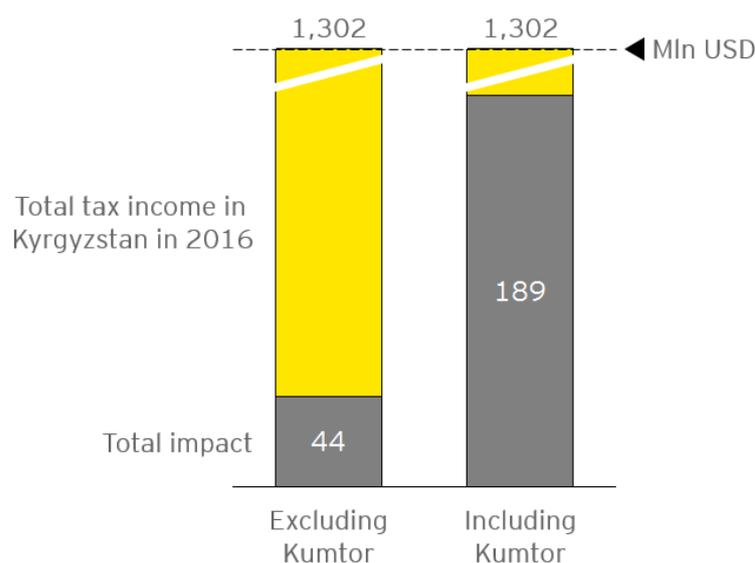


Figure 43. The total tax contribution of the non-ferrous metal sector as compared to total tax income and other payments to the state budget in 2016

In 2016, the total tax contribution of the non-ferrous metal sector not including and including the Kumtor project made 3.3% (3,045 million KGS) and 14.5% (13,208 million (3,045 million KGS) respectively of the total income from taxes and payments to the KR state budget (see Figure 43).

<sup>48</sup> According to the Kazenergy Association's Review "Social Responsibility in the Oil and Gas Sector of the Republic of Kazakhstan in 2012-2013"

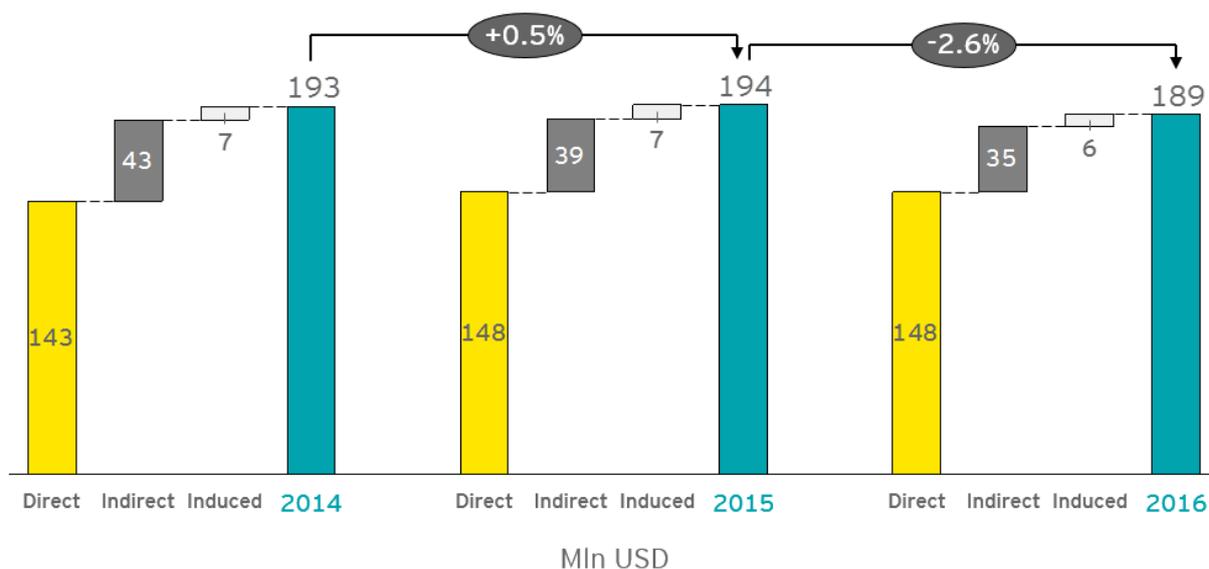


Figure 44. The total tax contribution of the non-ferrous metal sector including the Kumtor project

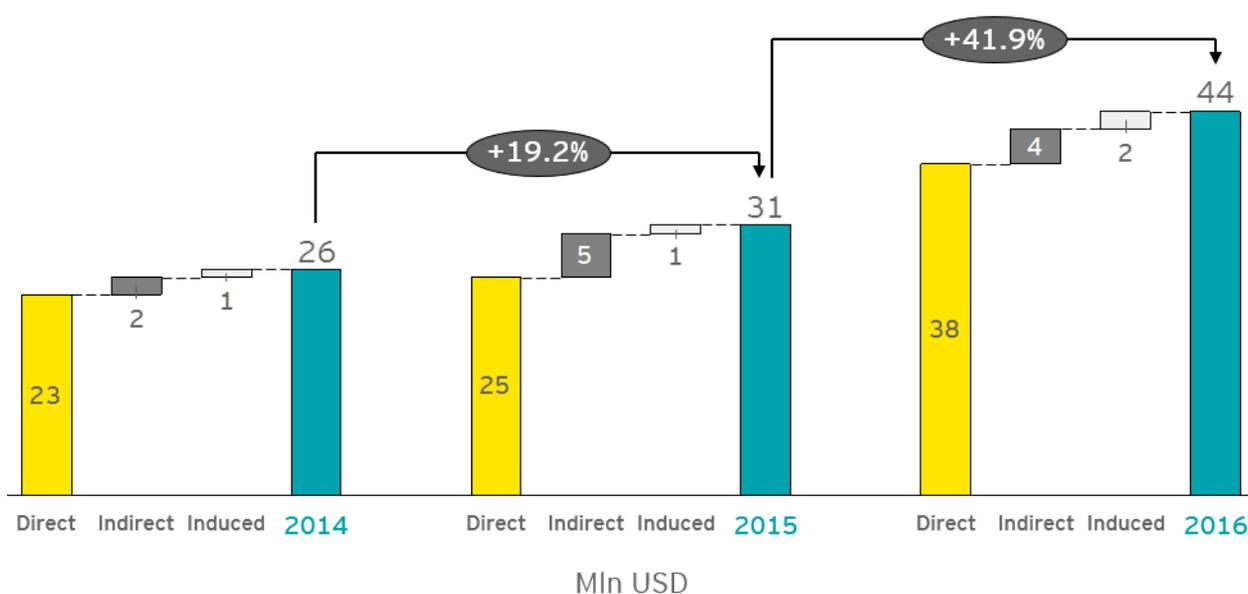


Figure 45. The total tax contribution of the non-ferrous metal sector excluding the Kumtor project

The sector's total tax contribution amounted to 6 billion KGS in 2014–2016: over 1 billion KGS in 2014, 2 billion KGS in 2015 (53% more than in 2014), and 3 billion in 2016 (48% more than in 2015). The figures do not include data for the Kumtor project. That is, the annual growth of the state's tax and non-tax revenue due to the non-ferrous metal sector excluding the depreciation effect was at least 40%.

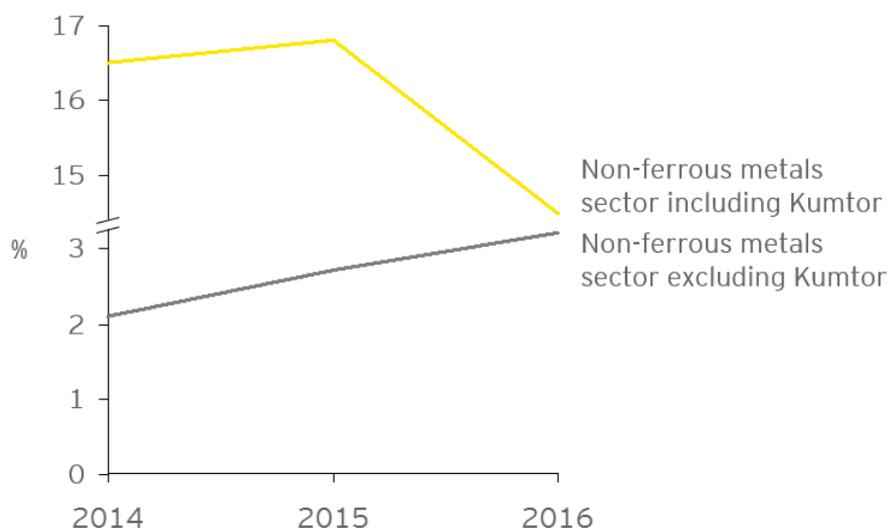


Figure 46. Changes in the sector's total tax contribution from 2014 to 2016

The share of Kyrgyzstan's total tax revenue and payments attributable to the non-ferrous metal sector decreased in 2016 as compared to 2015 (see Figure 46). This was caused not by decreased amount of tax revenue and payments to the state budget from businesses in the sector (in fact, they grew throughout the period) but by an increase in the total amount of taxes and payments received across the republic. Importantly, if we do not include any data for the Kumtor project, the non-ferrous metal sector had a stable annual growth of 0.5% to 0.6% from 2014 to 2016.

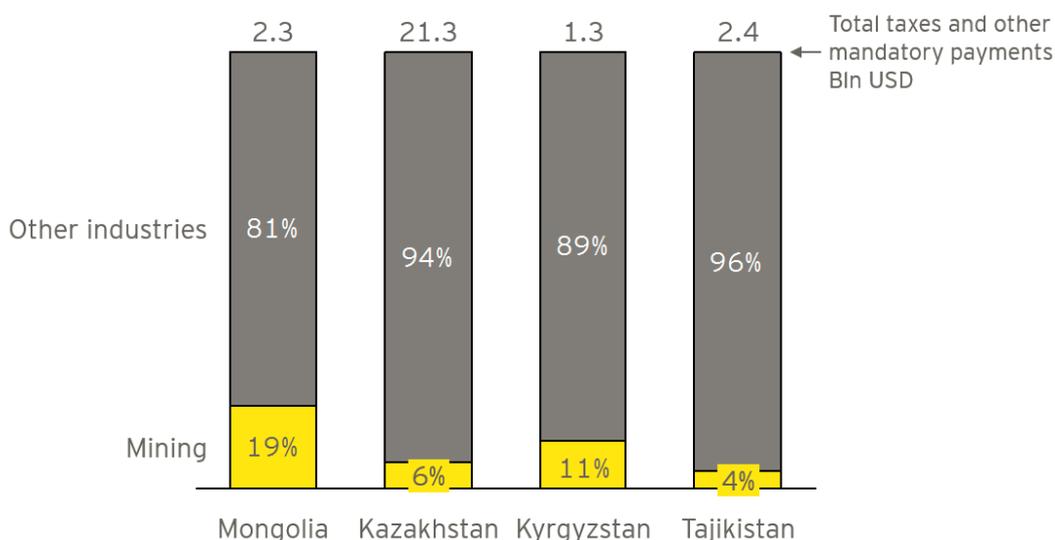


Figure 47. Taxes paid by all extraction industries (including oil and gas sector) as a percentage of the total amount of taxes paid in respective countries in 2016

As the figure above shows, Kyrgyzstan's extraction industry paid all tax payments (excluding PIT), amounting to 11% of the total income to the state budget in 2016, which is higher than in Kazakhstan and Tajikistan (6% and 4% respectively). It should be noted that in Mongolia this indicator equals to 19% that is more than in Kyrgyzstan.

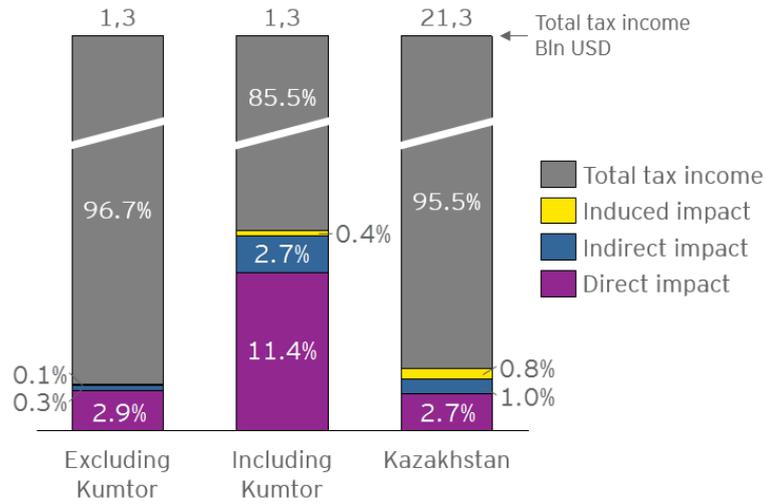


Figure 48. The tax contribution of the non-ferrous metal sector as a percentage of the total tax payments for 2016

The total contribution of Kazakhstan's non-ferrous metal sector amounted to 960 million USD in absolute terms in 2016. In Kyrgyzstan, it made 189 million USD including Kumtor and 44 million USD excluding Kumtor (see Figure 48).

## 6. MANAGEMENT OF THE SECTOR AND STATE REVENUE FROM IT

### 6.1 CURRENT TAXATION IN THE SECTOR

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#### 6.1.1 An overview of the tax system of the Kyrgyz Republic

The tax legislation of the Kyrgyz Republic is regulated under international agreements signed by the country, the KR Tax Code, regulations adopted under the KR Tax Code, as well as laws and by-laws on mandatory state social insurance. Provisions of the international agreements prevail over those of the KR Tax Code.

According to the KR law, insurance payments for state social insurance are not considered as taxes but are in fact viewed by taxpayers as obligatory payments to the budget that have similar to taxes characteristics.

Entrepreneurs are subjected to tax registration with bodies of the Tax Service and the Social Fund of the Kyrgyz Republic. VAT taxpayers or those willing to pay VAT are subjected to separated registration as VAT taxpayers. The current registration threshold for VAT is 8,000,000 KGS.

Two tax treatments exists in the Kyrgyz Republic, namely general and special tax treatments. Special tax treatments are mostly meant for small businesses with relatively small revenues (below the registration threshold for VAT), entities in Free Economic Zones, and individuals who carry out entrepreneurial activities without establishing a legal entity. The latter often use the special tax treatment as a voluntary patent based on a fixed amount of tax per month depending on their activities and additional parameters.

State social insurance in the Kyrgyz Republic includes the following taxes and obligatory payments:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>▶ employers' insurance payments;</li> <li>▶ employees' insurance payments;</li> <li>▶ income tax;</li> <li>▶ profit tax;</li> <li>▶ tax on revenue for taxpayers carrying out activities in the production and selling of gold ore, gold concentrate, gold alloys, and fine gold;</li> </ul> | <ul style="list-style-type: none"> <li>▶ value added tax, including commodity import VAT;</li> <li>▶ excise duty;</li> <li>▶ subsoil use tax (bonus and royalty);</li> <li>▶ sales tax;</li> <li>▶ property tax;</li> <li>▶ land tax;</li> <li>▶ taxes according to special tax treatments.</li> </ul> |
|---|--|

Apart from the above taxes, taxpayers as tax agents must deduct and pay to the budget taxes at source in the Kyrgyz Republic, such as the following:

- ▶ employee insurance payments;
- ▶ income tax;
- ▶ non-resident revenue tax;
- ▶ tax on interest.



### 6.1.2 Key taxes for extracting and processing mining businesses

In most cases, the general tax treatment applies to the operations of extracting and processing mining businesses, which includes paying taxes and tax accounting for both domestic and foreign-based businesses acting in the Kyrgyz Republic through a permanent establishment according to the tax legislation of the Kyrgyz Republic. Unlike other industries, extracting and processing mining businesses pay specific taxes such as royalties and bonuses. No special tax treatment applies to such businesses, the only exception is Kumtor project.

Below is a description of the key taxes, their rates and tax base.

| No. | Item   | Summary   |
|-----|--|---|
| 1   | Insurance payments for state social insurance                                      | <p>Companies pay insurance payments for the employer as well as for employee. Employer insurance payments are the company's costs, while those paid for employees are deductions from payments to the employer (like income tax). The tax base for insurance payments (both for employers and for employees) includes all payments in favor of employees.</p> <p>The general <i>employer</i> insurance payment rate is 17.25% and includes the following: 15% payments to the Pension Fund, 2% payment to the Mandatory Health Insurance Fund, and 0.25% to the Workers' Health Fund.</p> <p>The general <i>employee</i> insurance payment rate is 10% and includes the following: 8% payments to the Pension Fund, 2% payments to the State Accumulated Pension Fund. For payments in favor of non-residents staying in the Kyrgyz Republic or residing in another country but employed by a legal entity incorporated in the KR, insurance payments are 3% to the joint part of the Pension Fund.</p> |
| 2   | Revenue Tax for Foreign Organizations without Permanent Establishment <sup>a</sup> | <p>Tax on foreign organizations' revenue is imposed on the following types of income paid to non-residents who have no permanent establishment in the Kyrgyz Republic:</p> <ul style="list-style-type: none"> <li>▶ dividends and interest (at a rate of 10%),</li> <li>▶ insurance payments (at a rate of 5% and 10%),</li> <li>▶ royalties (at a rate of 10%),</li> <li>▶ income from works and services (at a rate of 10%),</li> <li>▶ telecommunication and transport services in international communication and transportation (at a rate of 5%).</li> </ul>  |
| 3   | Royalty  | <p>Royalties are imposed on the right to use the subsoil for the extraction of minerals from the subsoil. The tax base here is the revenue from selling minerals or products generated by mineral processing. The royalty rates vary from 1% to 5% for gold, silver, and platinum, 6% for gypsum, 12% for natural lining stones, 1% for black and brown coal, and 3% for other minerals.</p>  |



| No.                            | Item   | Summary  |                                |              |             |             |             |             |             |             |             |             |             |               |             |             |               |                    |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
|--------------------------------|--|--|--------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|---------------|--------------------|---|---|---|---|---|----|----|----|----|----|----|----|----|----|
| 4                              | VAT, including commodity import VAT  | <p>Taxable supplies and import are subject to VAT. The tax base is the taxable supply value.</p> <p>A credit scheme is in place that allows to reduce the tax by the amount of VAT paid or to be paid when the taxpayer purchases goods and services (including the amount of VAT paid at import).</p> <p>The VAT rate is 12%. A zero VAT rate applies to international transportation, services for through flights, and commodity export (except for metal ore, concentrate, alloy, and fine metal export). The Customs Code of the Eurasian Economic Union apply where EEU countries interact.</p>  |                                |              |             |             |             |             |             |             |             |             |             |               |             |             |               |                    |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| 5                              | Income Tax   | <p>The income tax is a withheld at source for employee income, where the employing company acts as the tax agent. The tax basis here is the difference between the amount of tax paid and the amount to be deducted in such cases (including insurance payments).</p> <p>The income tax rate is 10%.</p>   |                                |              |             |             |             |             |             |             |             |             |             |               |             |             |               |                    |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| 6                              | Tax on Revenue for Taxpayers Carrying out Activities in the Production and Selling of Gold Ore, Gold Concentrate, Gold Alloys, and Fine Gold | <table border="1"> <tr> <td>Gold price per troy ounce, USD</td> <td>1300 or less</td> <td>1301 – 1400</td> <td>1401 – 1500</td> <td>1501 – 1600</td> <td>1601 – 1700</td> <td>1701 – 1800</td> <td>1801 – 1900</td> <td>1901 – 2000</td> <td>2001 – 2100</td> <td>2101 – 2200</td> <td>2201 – 2300</td> <td>2301 – 2400</td> <td>2401 – 2500</td> <td>2501 and more</td> </tr> <tr> <td>Income tax rate, %</td> <td>1</td> <td>3</td> <td>5</td> <td>7</td> <td>9</td> <td>11</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> <td>19</td> <td>20</td> </tr> </table>  | Gold price per troy ounce, USD | 1300 or less | 1301 – 1400 | 1401 – 1500 | 1501 – 1600 | 1601 – 1700 | 1701 – 1800 | 1801 – 1900 | 1901 – 2000 | 2001 – 2100 | 2101 – 2200 | 2201 – 2300   | 2301 – 2400 | 2401 – 2500 | 2501 and more | Income tax rate, % | 1 | 3 | 5 | 7 | 9 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Gold price per troy ounce, USD | 1300 or less   | 1301 – 1400  | 1401 – 1500                    | 1501 – 1600  | 1601 – 1700 | 1701 – 1800 | 1801 – 1900 | 1901 – 2000 | 2001 – 2100 | 2101 – 2200 | 2201 – 2300 | 2301 – 2400 | 2401 – 2500 | 2501 and more |             |             |               |                    |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| Income tax rate, %             | 1  | 3  | 5                              | 7            | 9           | 11          | 13          | 14          | 15          | 16          | 17          | 18          | 19          | 20            |             |             |               |                    |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| 7                              | Bonus  | <p>The bonus is imposed on the right to use the subsoil to search and prospect for as well as develop minerals, in which case the tax base is the size of the licensed area (for surveying and prospecting) and the mineral reserve according to the State Register of Mineral Reserves of the Kyrgyz Republic (for mineral deposit development).</p> <p>The bonus rate is established by the Government depending on the mineral type and reserve (exploration degree, value, and scale of the deposits) to be developed as well as the size of the licensed area for search and exploration.</p> <p>For example, the bonus rate for metallic minerals is 25 USD per square meter of licensed area, while for gold and platinum group metals (placer type) it is 100 USD. As for mineral development, the bonus rate for vein gold and platinoids is 60,000 USD per ton (for proven deposits prepared for industrial development) and 1,000 USD per ton (for pre-evaluated deposits and occurrences).</p> |                                |              |             |             |             |             |             |             |             |             |             |               |             |             |               |                    |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| 8                              | Sales Tax  | <p>The sales tax is imposed on the sales of goods and services, and the tax base is mostly the sales revenue.</p>  |                                |              |             |             |             |             |             |             |             |             |             |               |             |             |               |                    |   |   |   |   |   |    |    |    |    |    |    |    |    |    |

| No. | Item                                    | Summary   |
|-----|---|---|
|     |   | <p>For taxpayers who convert ore or procure gold and silver for refining in order to sell them consequently, the following rules for tax base calculation apply: in the first case, the tax base shall be reduced by the cost of ore procured before processing, and in the second case, by the cost of gold and silver procured.</p> <p>The rate of the sales tax depends on the taxpayer's activities, whether the sales are subject to VAT, and how the sales are paid for (in cash or non-cash settlements). The following sales tax rates are provided for according to the existing tax regulations: 0%, 1%, 2%, 3%, and 5%</p>   |
| 9   | Land Tax and Property Tax               | <p>The land tax is imposed on ownership and leasehold of land plots (for agricultural and other uses).</p> <p>Land tax rates depend on the region and type of farmland or, for non-agriculturally used areas, on the region and its situation within the locality, the business activity, and the area of the land plot.</p> <p>The property tax is imposed on immovable property and vehicles privately owned by the taxpayer. Taxable property is divided into 4 groups.</p> <p>The first three groups are residential, non-residential, and provisional premises, while the fourth group includes vehicles. The tax base for premises is determined based on the assessed value per 1 square meter of the property adjusted by the following three coefficients: regional (reflecting the geographical situation of the property), zonal (reflecting how the property is situated with the locality), and industrial (reflecting the industry in which the taxpayer operates). The assessed value per 1 square meter of property depends on the material, condition, and life of the property.</p> <p>The tax base for vehicles depends on the vehicle type, useful life, and engine capacity.</p> |
| 10  | Profit Tax                              | <p>The taxpayer shall pay the profit tax for activities not connected with the production and sales of gold ore, gold concentrate, gold alloys, or fine gold. The tax base here is the difference between the total yearly income and the deductions provided under the Tax Codes. The profit tax rate is 10%.</p>  |
| 11  | Excise Tax, Including Import Excise Tax | <p>The excise tax is imposed on the production in the Kyrgyz Republic and import to the Kyrgyz Republic of excisable goods. The tax base for the excise tax is the physical quantity of the excisable goods, their selling price, or their customs value.</p> <p>The Tax Code specifies the base rates. The government can modify the rates within the established base rate.</p>   |
| 12  | Other Taxes                             | <p>Other taxes are part of special tax treatments. These include, but are not limited to, the patent-based tax and the single tax. Small enterprises can be subject to special tax treatments.</p>  |

### 6.1.3 Key non-tax payments, including customs payments, for mining companies

| No.                                | Item   | Summary   |
|------------------------------------|--|---|
| Non-tax payments                   |  |   |
| 1                                  | Deductions for the Development and Maintenance of the Local Infrastructure                               | Payers of the deduction for the development and maintenance of the local infrastructure are persons and entities who extract minerals from deposits (excluding certain types of minerals). The deductions amount to 2% of the mineral sales revenue. Part of the deductions is allocated to Regional Development Funds.   |
| 2                                  | Subsoil License Maintenance Fee  | Subsoil users entitled to search for, explore, or develop mineral deposits, shall pay a fee. The fee is imposed on actual use of a subsoil use license within the licensed area for certain types of minerals. The fee is calculated based on the licensed area size. The fee is calculated by the appropriate authorized governmental body responsible for the implementation of the governmental subsoil use policy. Part of the payments is allocated to Regional Development Funds. |
| 3                                  | Rent for Public and Municipal Property   | Tenants shall pay a rent for public or municipal property use, the amount of which shall be specified in the respective rental agreement  |
| 4                                  | Incorporation and Licensing Fee  | The payments shall be made for the registration and re-registration of the company's articles of association or regulation (100% and 50% of the specified rate) as well as for the issuance of any licenses (ten times the specified rate). The specified rate is currently 100 KGS.  |
| 5                                  | Public Roadway Toll for Cargo Vehicles and Buses Registered in the Kyrgyz Republic and in Foreign States | The toll is paid when cargo vehicles and buses use public roadways. According to the Law on Non-Tax Payments, the rate of the fee shall be established by the Government of the Kyrgyz Republic. The rate had not been specified by the KR Government at the time that this study was prepared.   |
| Customs and Other Non-Tax Payments |  |   |
| 6                                  | Import Customs Duties  | Import customs duties apply to goods that are imported to the Kyrgyz Republic.<br><br>Customs duties are calculated depending on the type of the goods and rates used based on the value of the goods or their physical property by volume. With some exceptions, the import customs rates according to the Common Customs Tariff of the Eurasian Economic Union are used for importing goods to the Kyrgyz Republic.   |

| No. | Item   | Summary   |
|-----|--|---|
| 7   | Export Customs Duties  | <p>According to the <a href="#">KR Law on the Customs Tariff of the Kyrgyz Republic</a>, export customs duties can apply to goods exported from the customs territory of the Kyrgyz Republic in some cases. The export customs duty rates and the list of goods to which the duties apply shall be specified by the Government of the Kyrgyz Republic.</p> <p>The KR Government has introduced no export customs duties for mining produce so far. The EEU territory is the customs territory of all member countries, and duties can only be introduced only with the agreement of the EEU Commission and for third countries.</p>   |
| 8   | Customs Fees   | <p>Customs fees shall be imposed for actions by customs bodies that are associated with release of goods, customs escort, or other actions.</p> <p>According to the <a href="#">KR Law on Customs Regulation in the Kyrgyz Republic</a>, customs fees for customs operations in the amount of 0.25% of the customs value and according to the specified rates shall be imposed for actions that re- associated with release of goods and vehicles entered as goods.</p>   |
| 9   | Environment Pollution Payment  | <p>The payment is provided for under the KR Law on Environment Protection. The payment is imposed for pollution wastes and emissions, waste disposal, and other types of pollution and damage to nature. The KR Government has established the following rates for the payment: 3.24 KGS per equated ton of pollutants for atmospheric emissions, 10.5 KGS per equated ton of pollutants for pollution discharge with waste water, and 3.24 KGS per equated ton of waste and dump.</p>  |
| 10  | Payment to Compensate for Losses and Lost Profit of Agricultural and Forestry Production | <p>Compensation for losses of agricultural and/or forestry production includes the amountes paid when land assigned to farming or forest land is transferred to another categorythat is not connected with agricultural or forestry production.</p> <p>The amount of losses and lost profit of agricultural and forestry production shall be paid before the document certifying the right to the land plot is issued. The procedure for determining the estimated value of land for loss and lost profit compensation is established by the Government and based on cadastral value estimate of the forest and/or farming land.</p> <p>The amount of the compensation for losses of agricultural production in case of farming land transfer (transformation) is calculated by the following formula: Land area transformed x Coefficient (49 or 99 depending on whether the land plots are to be used or owned) x (40 x Land tax base rate). The KR Government has approved a procedure for determining the estimated value (standard price) of forest land for compensating for losses of forestry production.</p> <p>The Government has also approved the Provisional Licensing Procedure for felling very valuable (nut and juniper) woods in the Kyrgyz Republic. Calculations for the compensation of damage to, including lost profit, and losses of forestry production are to be done by the authorized governmental body issuing the license to fell very valuable woods according to the above procedure.</p> |

| No. | Item   | Summary   |
|-----|--|---|
| 11  | Social Package   | The agreement between the subsoil user and the executive body on facilitation of the socio-economic development of the region where a subsoil use facility of national importance is located, prepared based on the program for the socio-economic development of the local community   |
| 12  | Fee for Certification and Other Authorization            | The fee includes the cost of government services in the preparation of land management files and issuance of title confirmations for a land plot as well as registration of rights to real property with the State Registration Service of the Kyrgyz Republic.<br>The procedure for determining the amount of the fee to be paid for such services is to be established by the KR Government.  |
| 13  | Concession Fee   | The concession fee is a fixed sum in a freely convertible or equivalent currency, the amount of which is determined on a tender basis as the assessed value of the concession property. It is usually a lump sum payment made after the incorporation of the concession business prior to the start of its operations unless otherwise provided for in the contract.  |
| 14  | Voluntary Payments                                       | According to the corporate responsibility policy, companies provide financial support to vulnerable social groups, non-profit and state-funded organizations on a voluntary basis.  |
| 15  | Allocation of Funds to the Land Plot Re-Cultivation Fund | The resources of the re-cultivation fund accumulate on special bank accounts (special-purpose re-cultivation account) to finance the re-cultivation of soils disturbed in the process of subsoil use. Monthly allocations to the fund are calculated on the bases of the total cost of the re-cultivation and abandonment work according to a re-cultivation project plan that has undergone expert appraisal. The total cost of re-cultivation is to be re-calculated every three years. |

#### 6.1.4 Special taxes and non-tax payments of the Kumtor project

| No. | Item             | Summary  |
|-----|------------------|--|
| 1   | Gross Income Tax | The Government of the Kyrgyz Republic, JSC "Kyrgyzaltyn", Cameco Corporation, Centerra Gold Inc., CJSC "Kumtor Gold Company", and CJSC "Kumtor Operating Company" have signed a framework agreement on new terms for the Kumtor project (hereinafter referred to as the Agreement). It reflects agreements between the parties concerning geological exploration and development of gold and silver stock as well as the manufacturing and sales of gold and silver produced at the Kumtor deposit.<br><br>The Agreement provides for special arrangements for tax and other payments in connection with the Kumtor projects. One of the tax payments is the gross revenue tax with a rate of 13%. It is to be calculated, denominated, and paid in US dollars. The tax basis is the gross revenue at the income of JSC "Kyrgyzaltyn" and the project vehicles mentioned in the Agreement. |



| No. | Item  | Summary  |
|-----|---|--|
| 2   | Issyk-Kul Fee   | Issyk-Kul Fee is a monthly payment of 1% of the gross revenue. The Government is to undertake any expenses associated with the fee at its own discretion provided that at least 50% of the Issyk-Kul fee is allocated to costs according to preliminary arrangements among parties to the Agreement on the New Terms for the Kumtor Project.   |
| 3   | Annual Amount for Mineral Development of the Kyrgyz Republic        | Amounts for mineral development are to be paid by project companies annually as 4% of their gross revenue in the expired calendar year. The amount of any documented investment and exploration costs shall be deducted from the annual amount (the Agreement on the New Terms for the Kumtor Project)   |
| 4   | Environment Pollution Payment                                       | Projects companies are paying a fixed amount of 310,000 USD for environment pollution on a yearly basis. In September 2017, agreements were reached on payments to the Fund for the Development of Nature in order to support the environmental and natural well-being of the Kyrgyz Republic in accordance with the terms of the Strategic Agreement on Environmental Protection and Investment Development dated September 11, 2017 (the "Agreement"). This Agreement provides for a lump sum payment of 50,000,000 USD and annual payments of 2,700,000 USD to the newly established Fund for the Development of Nature |
| 5   | Land and Access Fee   | Project companies are to pay a total quarterly land and access fee of 1,250,000 USD, against which any gross revenue tax and Issyk-Kul fees paid by the project vehicles in the previous quarter are fully offset provided that project companies pay at least 5,000,000 USD in any calendar year within the framework of the new tax treatment.   |
| 6   | Payments to the Trust Fund for the Reclamation of the "Kumtor" mine | This payment is carried out in accordance with the terms of the Strategic Agreement on Environmental Protection and Investment Development of September 11, 2017 in the amount of 6,000,000 USD on an annual basis until the amount of the last allocations reaches the total estimated cost of remediation of the Kumtor mine (reflects an independent assessment of the current cost of the remediation of the Kumtor mine), provided that the minimum amount of remediation is 69,000,000 USD.  |

## 6.2 TAX BURDEN ON THE SECTOR IN THE KR AND OTHER COUNTRIES

The amount of taxes paid by the mining industry varies from country to country depending on rates, mineral output and type, and the tax base chosen (by profit or output). Producers' costs vary depending on metal prices, too. Below are the industry's average values worldwide and their variation over the period from 2008 to 2015 for gold and copper as metals that largely form Kyrgyzstan's precious and non-ferrous metal sector.<sup>49</sup>

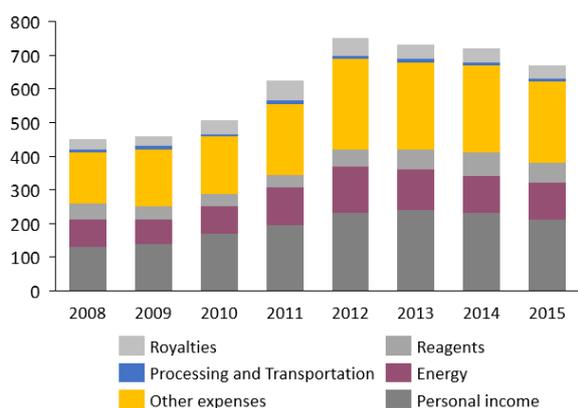


Figure 49. Gold production costs and royalties (USD per ounce)

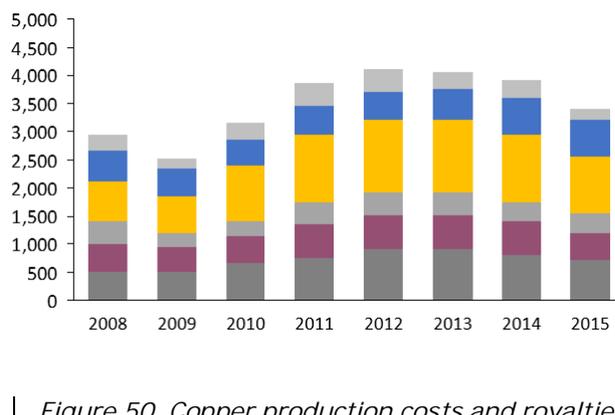


Figure 50. Copper production costs and royalties (USD per ton)

The trend of weighted average cost of copper production showed a major increase from 2002 to 2012, followed by a significant reduction. Total costs decreased from 4,066 USD per ton in 2012 to 3,512 USD per ton in 2015. This is 14% less than the decrease in iron price but still a relatively large decrease. It forms a contrast to the increase by over 37% that took place from 2008 to 2012. As the figure above (see Figure 50) shows, savings on the costs of copper production after 2012 were mainly due to reduced labor (nearly 173 USD per ton) and power costs (over 100 USD per ton). Besides, companies paid a royalty that was 135 USD per ton less than before.

Gold production costs vary greatly. For instance, while the average cost amounted to 670 USD per ounce in 2015, about one fourth of world's total gold was produced at a cost of under 500 USD per ounce, while other quarter's cost was more than 750 USD per ounce. Ten percent of gold was produced at a cost exceeding 1000 USD per ounce. When the costs peaked in 2012, a number of mines (in Australia, Canada, South Africa, West Africa, and Papua New Guinea) produced gold at a cost of over 1500 USD per ounce.

An ICMM study has shown that in low- and average-income countries production often accounts for biggest part of foreign direct investment (FDI) in the respective country. The industry's share of export, state revenue, national revenue, and employment then decreases progressively.

<sup>49</sup> ICMM report, pages 14-15, and 33, based on the data of 40 largest companies and 2,590 other companies in the SNL Mining database.

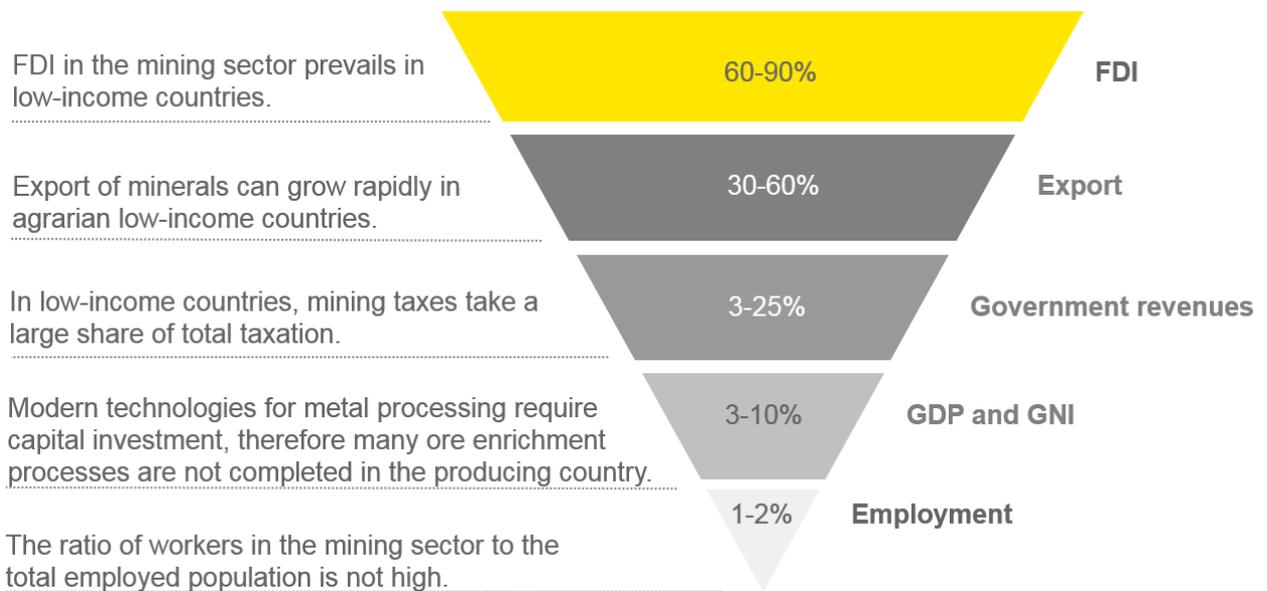


Figure 51. The average range of mining contribution

Values vary within the above ranges for the countries mentioned in this report. For example, in 2016 the mining industry made 20% of GDP in Mongolia and 6.9% in Australia.<sup>50</sup> It should be noted, however, that different countries and organizations can use different calculation data, which may cause different values for the same indicators.

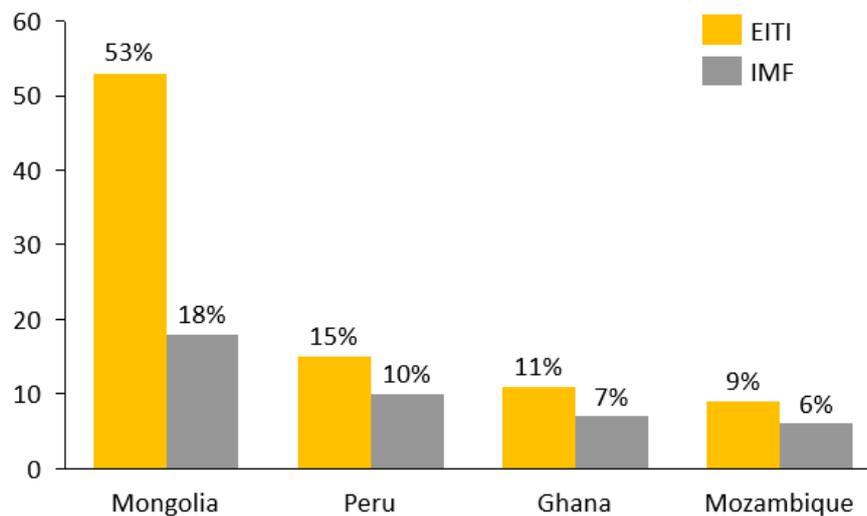


Figure 52. The average contribution of the mining industry to state revenue (2008–2013)

As the figure above shows, the EITI's values are higher than those provided by the IMF for indicators that have a significant influence on how the contribution of the mining industry to state revenue is presented. Taking into account the difference in prices and output, the average contribution of the industry from 2008 to 2013 was compared, which contribution was mostly due to CIT and the royalty. Probably, IMF's smaller values for the contribution that the mining industry makes to the state revenue do not include some

<sup>50</sup> EY calculations

additional taxes, like local taxes or the individual income tax on employees (not in all countries).). Therefore, the contribution of the mining industry according to the IMF can be significantly underestimated, which can be considered by some governments as a basis for increasing the state's revenues. Another interesting example is the tax burden coefficient in Kazakhstan's mining and smelting industry (see Table 7).

*Table 7. Tax Burden Coefficient in Kazakhstan's Mining and Smelting Industry<sup>51</sup>*

|      | TBC as calculated by the RK Ministry of Finance | TBC as calculated by the World Bank |
|------|---|-------------------------------------|
| 2014 | 12.48%  | 63.24%                              |
| 2015 | 11.34%  | 59.31%                              |
| 2016 | 12.93%  | 58.68%                              |

In this case the difference occurs because the RK Ministry of Finance uses coefficients based on total annual income. On the contrary, the World Bank relies on earnings before interest and taxes (EBIT). Hence, the government could calculate tax burden on the mining industry according to its own methods, but how truly it depicts the actual situation in the industry, may be found out only by covering all factors.

Only by assessing the full picture, it is possible to make a decision on changing the rates of certain taxes, given how this will affect the investment climate of the country and the motivation of companies to continue operations in the country.

For more details on the tax contribution of the Kyrgyz Republic's mining industry, see Section 5.5 "Contribution to state revenue".

### Gold and copper tax rates

Differences between economies and taxation levels play a role in the tax burden formation.

Many countries, including those in the table below (see Table 9) have a varying royalty rate. Despite the country's unstable revenue, it ensures high taxes when prices and demand for metals are high without putting pressure on companies during low-yield periods. Some countries (like Australia and Mongolia) also use various rates depending on the degree of ore enrichment, i.e. different rates apply to ore, concentrate, and products, which decrease accordingly. It motivates companies to deepen processing to some extent and helps to compensate the costs depending on the production output.

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<sup>51</sup> Editorial staff of the news agency LS Aqparat, web-site LSM.kz

Table 8. Key tax rates for subsoil users in the countries used for comparison

| Country                   | Mineral production taxes   | Export tax                              | Corporate Income Tax   | Other taxes  |
|---------------------------|--|---|--|--|
| Australia                 | Royalty: 2.5% to 7.5% (depending on the region and the form, i.e. concentrate/metal/ore)   | N/A                                     | 30% (27.5% for small businesses)   | Not applicable to gold and silver                                  |
| Mongolia                  | Royalty: 5% royalty and 0 to 5% progressive royalty (2.5% for gold when sold to the Bank of Mongolia or authorized banks, up to 30% for copper depending on the form.) | N/A (royalty to be paid at exportation) | 10% and 25% (with an income of over 3 billion MNT)                       | Not applicable to gold and silver                                  |
| Kazakhstan*               | Gold: 5%<br>Copper: 5.7%   | N/A                                     | 20%  | Bonus (signature, commercial discovery)                            |
| Uzbekistan                | Gold: 5%<br>Copper: 8.1%   | no data is publicly available           | 7.5%   | Bonus (signature, commercial discovery: 0.1%)                      |
| Tajikistan: <sup>52</sup> | Royalty: 6% for non-ferrous and noble metals.<br>1–13% profit tax  | no data available                       | 12% dividend tax, or 25% on non-residents' income from sources in the RT | Bonus (signature, commercial discovery: 0.1%) and production bonus |
| Kyrgyzstan                | 1 to 5% (for gold, silver, and platinum) and 3% (for copper) royalty.<br>1 to 20% revenue tax (gold)   | 2% sales tax on gold export             | 10%  | Bonus  |

\* The rates for Kazakhstan are according to the KR Tax Code that was in effect until 2018. The commercial discovery bonus was abolished in 2019 and also new alternative subsoil use tax is introduced.

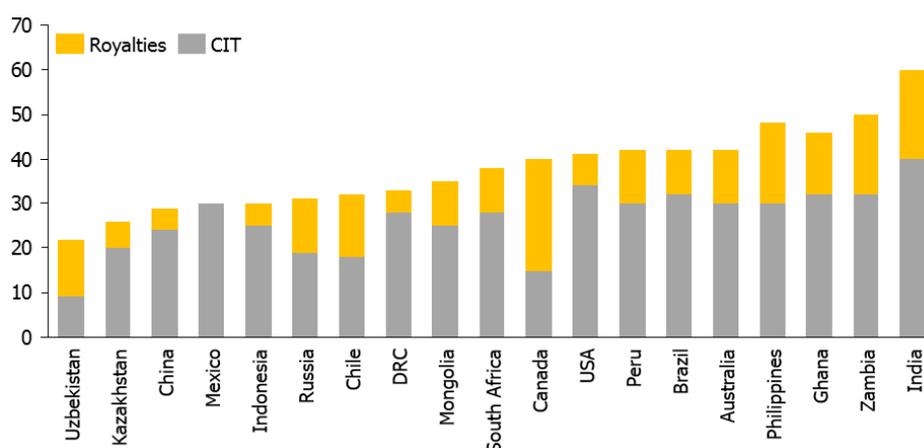


Figure 53. Key taxes on mining companies, 2013

<sup>52</sup> The Extractive Industries Transparency Initiative

Table 9. Corporate income tax, royalty and rent tax for mining, countrywise, 2016<sup>53</sup>

|  | Australia   | Brazil   | Canada  | Chile  | Columbia  | Peru  | SAR  | USA  | Zambia  |
|--|---|--|---|--|---|---|--|--|---|
| Corporate Income Tax (CIT)   | 30%   | 34%, including the basic CIT (15%), an additional fee (10%), and a social allocation on net revenue minus the nominal equity value                                   | 26% to 30%, including the federal tax (15%) and province-specific CIT rates (11% to 14%) (the average province rate being 11.7%).                                     | 24%, in which revenue is to be adjusted to inflation.  | 34 to .45%, including the 25% CIT, the 9% equality CIT, and a 6% additional fee associated with the "equality CIT".                                       | 28% but to be further reduced to 26% in 2019.   | 28% except for gold production, for which the CIT rate is to be calculated as follows: $34-170/x$ , $x$ being the ratio of taxable to gross revenue (multiplied by 100).             | 35% to 41%, including the federal tax (35%) and deductible state CIT rates as shows below:<br>Alaska: 0-9,4%<br>Arizona: 6.5%<br>Minnesota: 2.45% for production (vs. 9.8% in general)<br>Nevada: No CIT<br>Utah: 5% | 30% or more for revenue on mineral production, to be calculated as follows: $30% + [a-(ab/c)]$ , where $a=15%$ , $b=8%$ , and $c$ =the ratio of rateable revenue to gross sales; 30% if $c \leq 8%$ . |
| Exploration  | Fully taxable   | Depreciated within the useful life of the deposit  | Fully taxable with an additional tax deduction in British Columbia (20%) and Quebec (12%).  | Taxable  | To be written off within at least five years, but unsuccessful exploration costs are allowed.   | Depreciated within 3 years.   | Total expenditures.  | 70% of the expenditures; the remaining 30% is to be capitalized and depreciated within 60 months.  | All costs   |
| Deposit development  | Depreciated within the life of the deposit  | Depreciated within the useful life of the deposit  | An annual depreciation limit of 30% is used but is to be paid in full in Quebec.  | Depreciated as fixed assets (see below)  | Depreciated within at least five years.   | Depreciated within 3 years.   | Total expenditures.  | 70% of the expenditures; the remaining 30% is to be capitalized and depreciated within 60 months.  | 25% of SL   |
| Depreciation: (Y=years of official useful service; SL=straight line; DB=declining balance) | Buildings: 2.5%; machines and equipment: 5%, but payers can estimate the useful like by asset type, and some mining capital assets can be written off with a 200% DB rate | Buildings: 4% of SL; machines and equipment: 10% of SL, but the normal rate can be increased to 50% for two-shift operations and doubled for three-shift operations. | It is limited to 25% per annum for all mining assets with accelerated depreciation according to the terms of up to 100%, which is to take place stagewise after 2020. | Buildings: 2% of SL; machines and equipment: 11.1% of SL, but can be tripled for new or imported machines and equipment; motor vehicles: 14.29% of SL. | Buildings: 20 years, machines and equipment: 10 years with additional 25% per eight-hour shift; motor vehicles and computers: 5 years; SL and DB allowed. | Buildings: 5% of SL; machines and equipment: up to 20% of SL (including motor vehicles) but not more than presented in financial reports. | Any components of capital costs for any mines can be deducted from the production revenue. Other depreciable assets (i.e. workers' accommodation) are to be depreciated in 10 years. | 14.3% for depreciable mining assets except for buildings, which are to be depreciated at 2.6%.   | Buildings: 10% initial deduction and annual deductions of 5% of SL; machines and equipment: annual deductions of 25% of SL.   |

<sup>53</sup> Effective tax rates on Australian mining and an evaluation of proposed increases in taxation of iron ore (September 2016)



Management of the Sector and State Revenue from It

|   | Australia  | Brazil  | Canada   | Chile   | Columbia   | Peru   | SAR  | USA   | Zambia   |
|---|--|---|--|---|--|--|--|---|--|
| Accounting for inventory<br>(FIFO=first-in-first-out;<br>LIFO= last-in-first-out) | Can be measured at cost, market value, or replacement price, but LIFO is not acceptable.   | Only FIFO and average cost accounting are allowed.  | FIFO   | With adjustment to inflation; FIFO and weighted average cost accounting are allowed.  | All standard methods including FIFO and LIFO are allowed.  | All standard methods are allowed.  | Inventory is to be measured at the lowest cost or net realizable value; LIFO is not acceptable.  | Optional  | Inventory is to be measured at a lower cost rate or net realizable value.  |
| Royalty, or subsoil use tax   | The ad valorem royalty on metallurgical products is imposed by states and varies depending on the product from 2.5% to 7.5%.<br><br>The royalty rate for the same mineral type depends on the enrichment costs: higher rates apply to unenriched (raw) materials, and lower ones apply to enriched forms, mostly assessed at 10% of the mine value.<br><br>An iron ore fee of 0.25 dollar per ton is imposed in Western Australia when the service life of the mine exceeds 15 years. The fee is not part of the general royalty treatment but is often included in governmental agreements between the government and extracting companies. | The "federal" royalty is imposed on revenue from mineral sales net of taxes, insurance, and freight costs. Royalty amount depends on the product:<br><br>Gold: 1%;<br><br>Copper: 2%;<br><br>Iron ore: 2%;<br><br>To be deducted for CIT. | The mineral tax varies from 10% to 17%, except for Quebec, where a 3-level system of progressive rates is used (16% to 22%). The tax base is mostly the rent including all capital costs, except for Newfoundland and Labrador, where a lower limit applies to deposit development costs and depreciable assets. | Debt financing fee, sealed: 0.5%, and an equity-based municipal licensing fee: 0.25% to 0.5% to be paid annually (but limited to 8.000 UTM (Unidad Tributaria Mensual). | Royalty base: revenue from the mine.<br><br>The rate depends on the product:<br><br>Nickel: 12%;<br><br>Gold: 4%;<br><br>Iron/copper: 5%;<br><br>Deduct for CIT          | Three categories based on "operating revenue":<br><br>1. the royalty to be paid by everyone: 1% to 2% (at least 1% of the revenue);<br><br>2. a special metal ore production tax: 2% to 8,4%;<br><br>3. an additional mining fee to be paid by metal ore producers under the Tax Stability Agreement: 4% to 13,2%. | The royalty rate varies depending on the mining product and enrichment stage:<br><br>Copper: 0%;<br><br>Gold: 0.5%—5%;<br><br>Iron ore: 0,5%–7%. | Production tax:<br><br>Alaska: 3-level progressive rate on net revenue: 3%/5%/7% (\$100,000 +)<br><br>Arizona: 2.5% to 50% of net revenue;<br><br>Minnesota: a tax on iron ore produced for sale of 2.60 USD per ton (2015), indexed to the GDP deflator;<br><br>Nevada: 5% of the net revenue, the same as the CIT base;<br><br>Utah: 2.6% of the taxable value, which makes gross value minus an annual deduction of 50,000 USD per mine and multiplied by 80%. | The ad valorem rate is 3% for underground mining and 6% for open cast mining, previously 6% and 9% respectively. |
| Further taxes (other than property taxes)   | The national transfer tax is 5.6% of the value of the real property including land, buildings and structures.  | A transfer tax on immovable property of 4%.   | Sales taxes in British Columbia (7%), Saskatchewan (5%), and Manitoba (8%). A transfer tax on immovable property of 1.5%.  |   | A progressive tax on equity where net value exceeds 1 billion peso, a yearly rate on net value exceeding 5 billion peso (2.5 million USD) of 1% in 2016 (1.15% in 2015). |  | A 0.25% security transfer tax and a sealed security transfer fee.  | State sales tax:<br><br>Alaska: 1.76%;<br><br>Arizona: 8.17%;<br><br>Minnesota: 7.2%;<br><br>Nevada: 7.94%;<br><br>Utah: 6.68%.   | 10% transfer tax on property for the transfer of stock, land, buildings and structures, and production licenses. |

Table 10. Royalty rate for copper depending on the type of product sold according to the Mining Act of Australia<sup>54</sup>

| Copper type            | Royalty rate (%)                               |
|------------------------|--|
| Concentrate            | 5.0  |
| Metal form             | 2.5  |
| Nickel as a by-product | 2.5% of the copper content of the product sold |

 Table 11. Gold royalty rates in Australian states<sup>55</sup>

|                | WA*  | NSW*   | Victoria                      | Queensland   | SA*  | Tasmania  | ACT* | NT*                                     |
|----------------|--|--|-------------------------------|--|--|---|------|---|
| Royalty rate   | Rate for concentrate:<br>5.0%<br>Metal form:<br>2.5% | 4.0% of the finished mine value (value minus appropriate deductions) | 2.75% of the net market value | Floating rate (between 2.5% and 5.0%) depending on the average metal price | 3.5% of the net market value if in metal form, 5.0% for concentrates | 1.9% of the net sales amount plus a profit royalty of 5.35% of the net sales amount | n/a  | 20.0% of the total mine production cost |
| Royalty system | Ad valorem   | Ad valorem   | Ad valorem                    | Ad valorem   | Ad - valorem   | Hybrid  |      | Profit-based                            |

\* WA=Western Australia; NSW=New South Wales; SA=South Australia; ACT=Australian Capital Territory; NT=Northern Territory.

 Table 12. Additional royalty rates for copper and gold in Mongolia depending on enrichment degree<sup>56</sup>

| Mineral type | Unit   | Product in question    | Potential market price (USD) | Additional royalty rates in % based on enrichment degree |             |         |
|--------------|--------|------------------------|------------------------------|--|-------------|---------|
|              |        |                        |                              | Ore  | Concentrate | Product |
| Copper       | Tons   | Copper (pure metal)    | 0–5000                       | 0.00   | 0.00        | 0.00    |
|              |        |                        | 5000–6000                    | 22.00  | 11.00       | 1.00    |
|              |        |                        | 6000–7000                    | 24.00  | 12.00       | 2.00    |
|              |        |                        | 7000–8000                    | 26.00  | 13.00       | 3.00    |
|              |        |                        | 8000–9000                    | 28.00  | 14.00       | 4.00    |
|              |        |                        | 9000 and more                | 30.00  | 15.00       | 5.00    |
| Gold         | Ounces | Gold (chemically pure) | 0–900                        |  |             | 0.00    |
|              |        |                        | 900–1000                     |  |             | 1.00    |
|              |        |                        | 1000–1100                    |  |             | 2.00    |
|              |        |                        | 1100–1200                    |  |             | 3.00    |
|              |        |                        | 1200–1300                    |  |             | 4.00    |
|              |        |                        | 1300 and more                |  |             | 5.00    |

<sup>54</sup> Overview of State Taxes and Royalties 2016-17 (November 2016)

<sup>55</sup> Same

<sup>56</sup> Annual Bulletin Of Mining And Geology (Mongolia 2016)

### 6.2.1 Tax burden in the non-ferrous metals sector of Kyrgyzstan

Tax burden is one of the economic parameters that characterize the country's taxation system. It is the industry's total tax payments as related to the value added generated by it (direct contribution to GDP) or to the industry's revenue (the method varies depending on the country).

The improvement of tax regulations and administration is part of the fiscal policy of any state. Each country wants to optimize tax burden, which is characterized primarily by a balance of the government's interests and those of taxpayers.

Companies producing non-ferrous metals in the KR paid a total of 148.2 million USD as tax and non-tax payments to the budget (including the Social Fund) in 2016. Ten largest ten companies paid to the government 142 million USD as taxes and fees in 2016, 80% of which amount were from Kumtor Gold Company.<sup>57</sup> The study analyzed the data on payments from 281 companies licensed to produce non-ferrous metals in the Kyrgyz Republic.

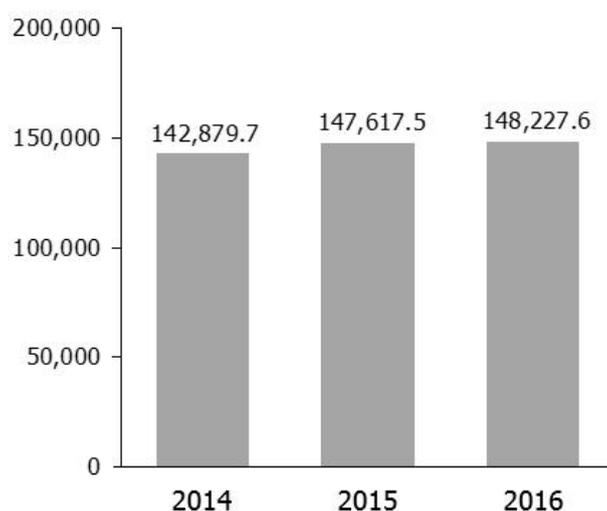
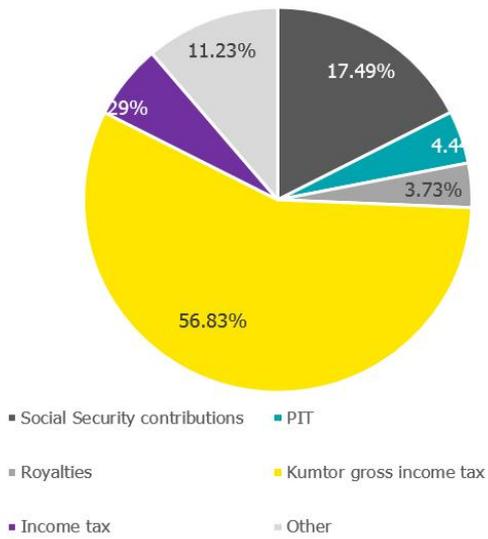
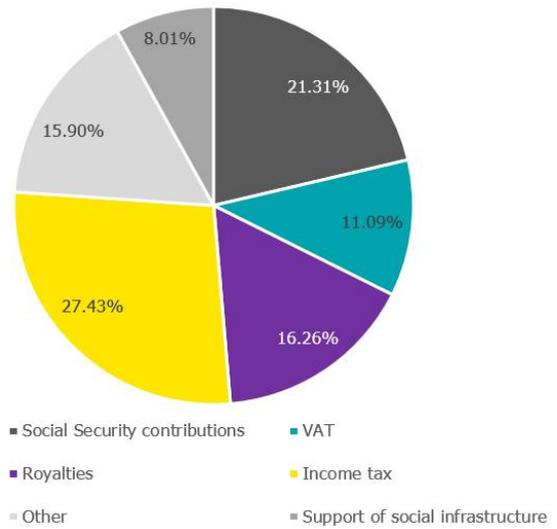


Figure 54. Tax and non-tax payments from Kyrgyzstan's non-ferrous metal sector (thousands USD)

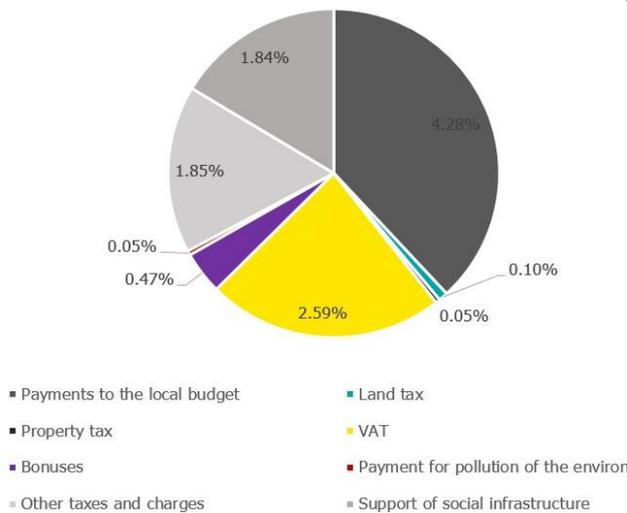
<sup>57</sup> Calculations by EY, data by the World Bank



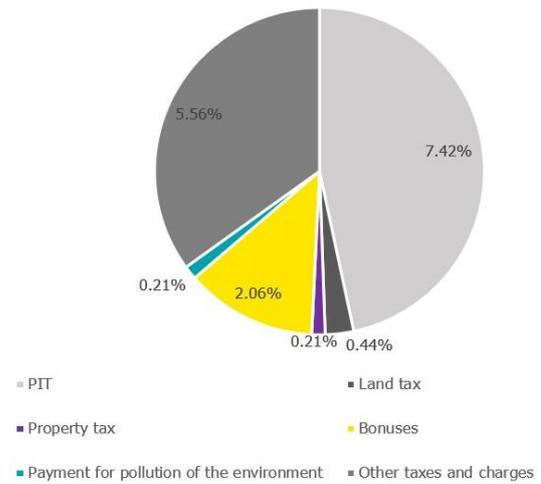
(a) including Kumtor<sup>58</sup>



(b) excluding Kumtor<sup>59</sup>



(c) breakdown of the Others including Kumtor



(d) breakdown of the Others excluding Kumtor

Figure 55. Tax and non-tax revenue of the Kyrgyz Republic from non-ferrous metal sector in 2016

<sup>58</sup> EY calculations, data from companies in the sector

<sup>59</sup> EY calculations, data from companies in the sector

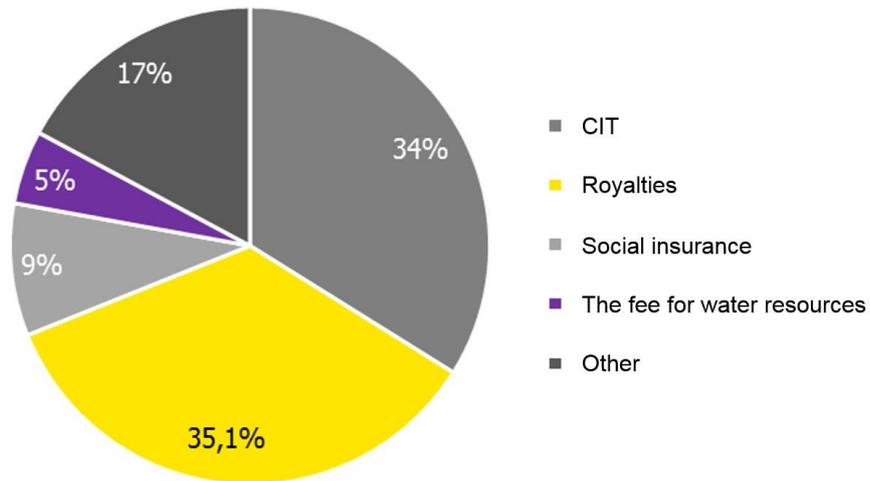


Figure 56. Mongolia's tax and non-tax revenue from the mining industry\* in 2016<sup>60</sup>

Others: Property tax, Atmospheric pollution fee, Land tax, PIT, personal property tax, and VAT.

\*the industry's payments are 65% due to copper, 6.3% due to gold, 4.6% due to zinc, and 17.9% due to coal; the difference between tax shares in the diagram for the industry and the precious and non-ferrous metal sector is marginally low.

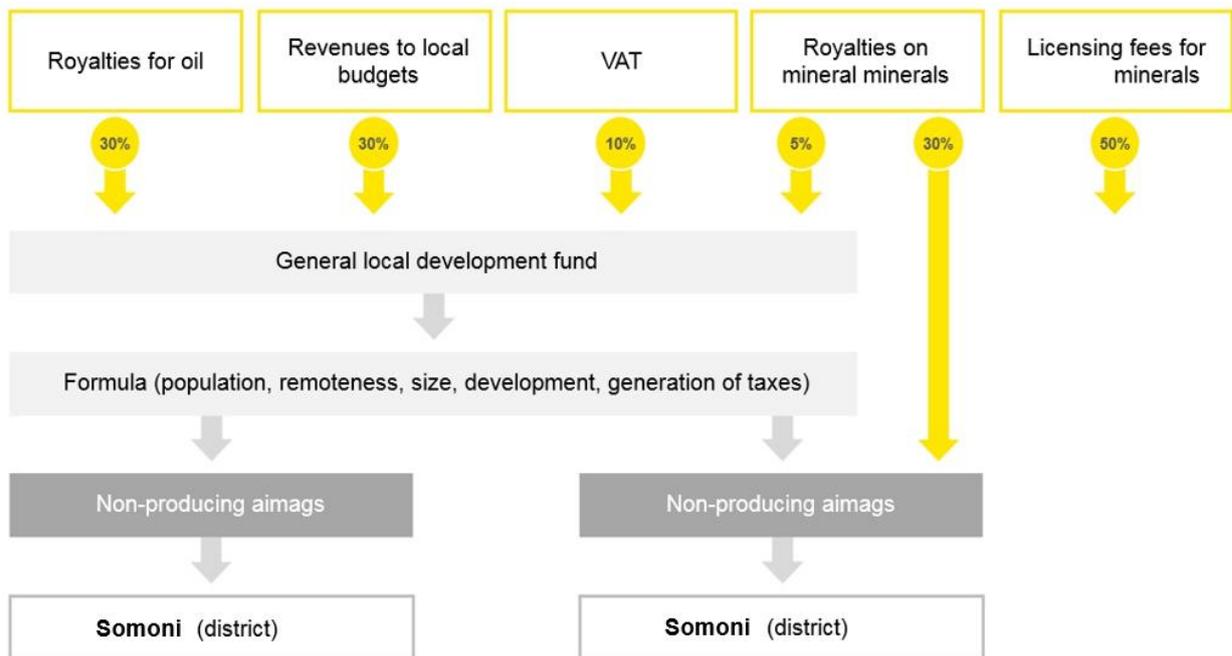


Figure 57. Distribution of state revenue from the mining industry in Mongolia

<sup>60</sup> Mineral Resources And Petroleum Authority Of Mongolia. The Annual Report 2016

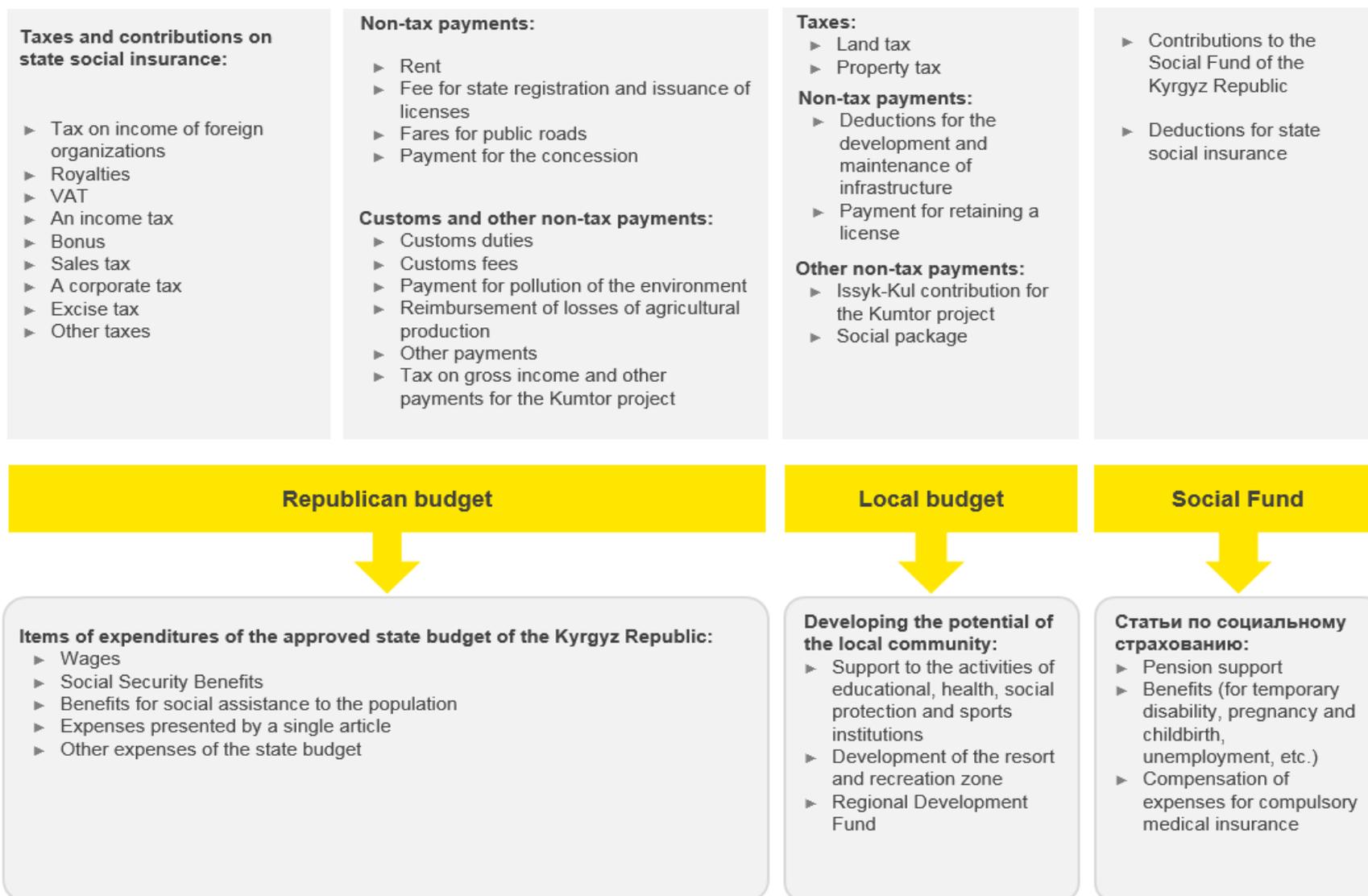


Figure 58. Distribution of state revenue from non-ferrous metal sector in the KR

Below is the calculation of tax burden in Kyrgyzstan's mining industry and precious and non-ferrous metal sector using two methods:

- a) the ratio of the taxes paid by the industry / sector to the value added created by it;
- b) the ratio of taxes paid by the industry/sector to the industry's/sector's revenue.

The calculation includes mandatory tax payments in the industry/sector, including social deductions but excluding PIT. The estimated tax burden values were compared with those in Kyrgyzstan's neighbor countries that are rich in mineral resources, and also with Australia. In particular:

- 1) *Mongolia and Kazakhstan* as countries whose natural resources are similar to those of the Kyrgyz Republic and have an experience of successful development of the industry.
- 2) *Tajikistan* as the country that on the one hand had situation similar situation with Kyrgyzstan following independence and on the other hand has gold deposits while having a negative experience of regulating the industry and its investment climate.
- 3) *Australia* (based on a single example due to lack of more detailed publicly available statistics) as a world leader in mining development.

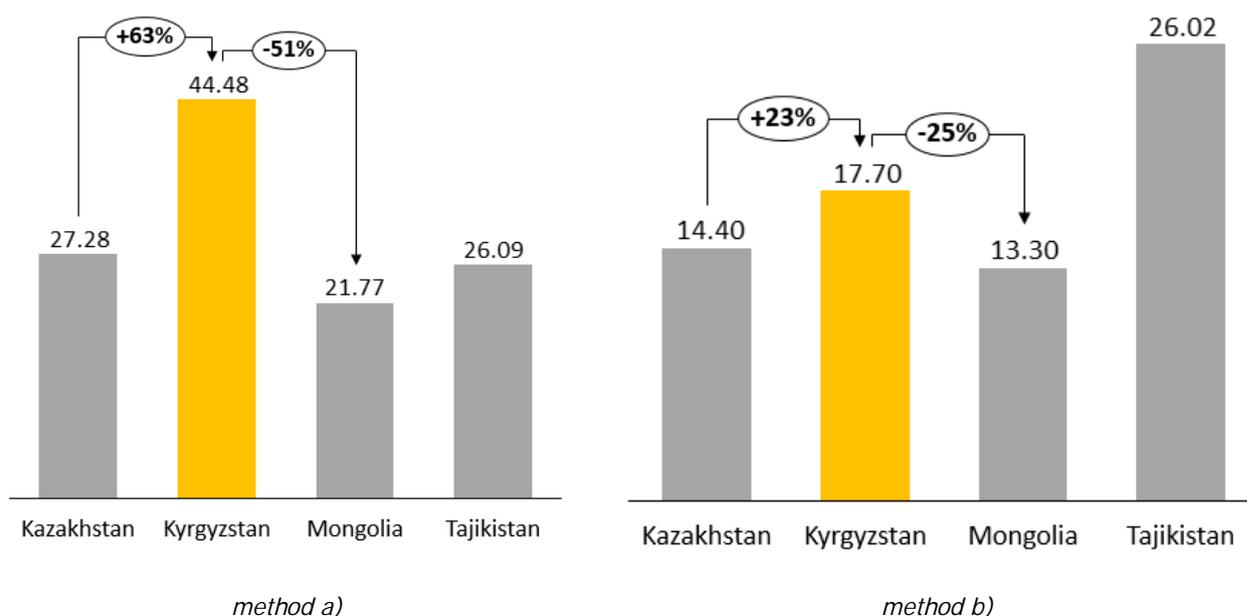


Figure 59. Tax burden in mining industries in Kyrgyzstan and its neighbor countries (%), 2016 Tax payments, social deductions included; personal income tax excluded

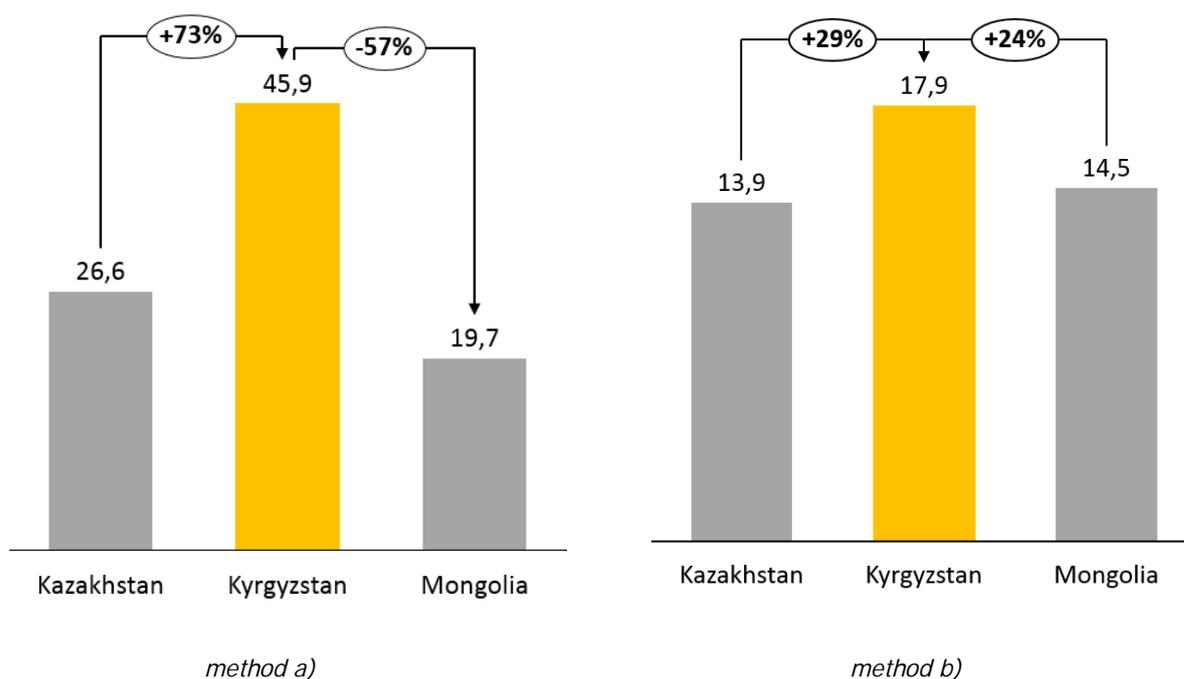


Figure 60. Tax burden in the non-ferrous metal sector (%), 2016. Tax payments, social deductions included; personal income tax excluded

So, in Kyrgyzstan, the tax burden of the mining industry, calculated according to the method a) is quite high. It is 63% higher than in Kazakhstan. Such a large difference is due primarily to the fact that many of the Kyrgyz Republic's production facilities are still under construction or commissioning and yet do not generate a large added value, while still paying taxes. While the indicator of the tax burden in the Kyrgyz Republic, calculated by method b) is generally comparable, but still slightly higher than in Kazakhstan and Mongolia, however, it is significantly lower than the figure for Tajikistan<sup>61</sup> (almost 1.5 times).

The ratio of taxes to the revenue of the mining industry in the Kyrgyz Republic is 23% higher than that in Kazakhstan and 25% than in Mongolia

A clarification should be made regarding the possibility of comparing the data on the tax burden in the mining industry in Australia. So, according to most open sources, the tax burden in the mining industry of Australia is actually very high and is 51%<sup>62</sup> in 2016. This significant difference from the value shown in the figure below for Australia is explained by the difference in approaches to calculating the tax burden.

In Australia, for example, the tax burden in the industry is generally calculated as the ratio of the CIT amount and royalty to the industry profit before tax and royalty (CIT + royalty / EBITDA + royalty). The addition of the royalty value to profit before tax in the denominator is carried out with the purpose of correctly calculating the tax burden, without overstating the results.

<sup>61</sup> Data from the national EITI report for the Republic of Tajikistan for 2015-2016 and the Agency for Statistics under the President of the Republic of Tajikistan was used to calculate the tax burden ratios. According to data from these sources, the output and GDP figures for the mining industry differ very little, which is extremely untypical for this industry. With a high degree of probability, there may be inaccuracy in the initial statistical data, but in the absence of other official statistical information, the calculations of the tax burden for Tajikistan were based precisely on these input data.

<sup>62</sup> Minerals industry tax survey 2017, Minerals Council of Australia

However, as part of this study, we did not have the opportunity to carry out such a calculation for Kyrgyzstan and its neighboring countries. This is due to the absence of equally detailed statistical information in these countries that is in the public domain.

Therefore, for the purposes of comparability with Australia, it was decided to calculate the tax burden of the industry also separately by royalty and CIT: as the ratio of the amount of royalties and CIT paid by industry enterprises to the industry's GDP (method a) or industry revenues (method b)).

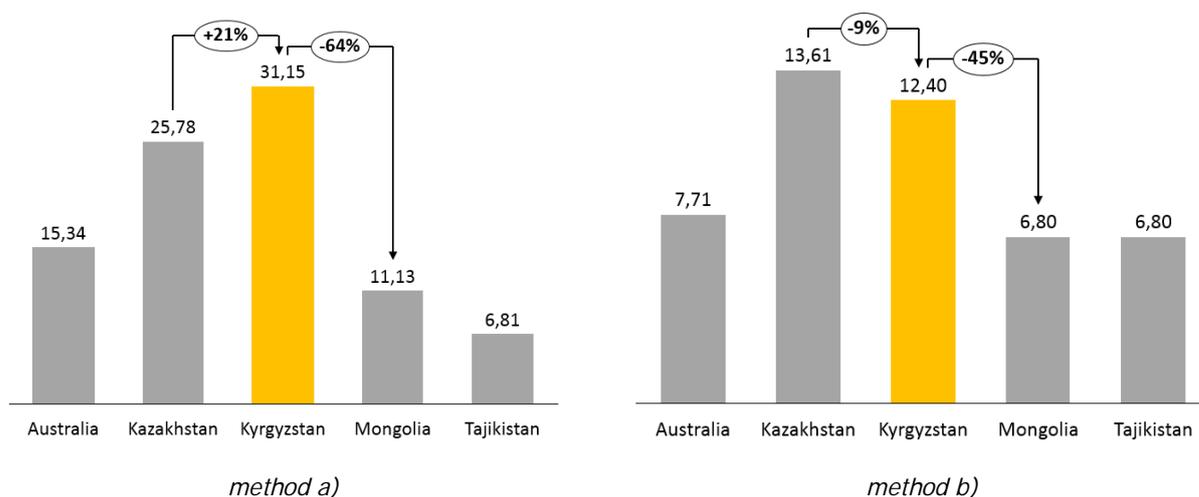


Figure 61. Tax burden in the mining industry of certain countries (%), 2016. Only royalty and CIT payments included<sup>63</sup>

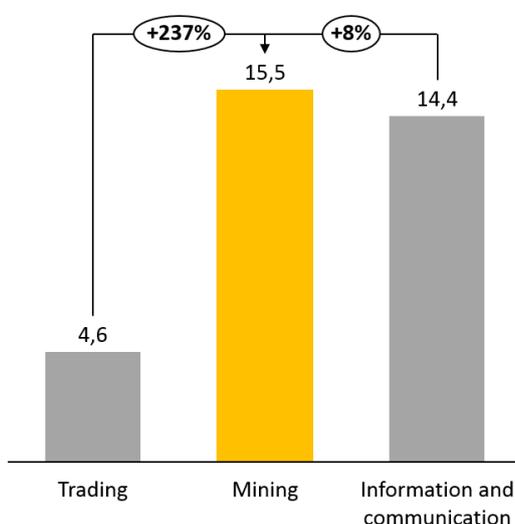


Figure 62. Tax burden in some other industries in Kyrgyzstan, 2016, method (b) Not including social deductions

<sup>63</sup> The figure for the KR includes the tax on the gross income of the operator of the Kumtor deposit, as well as the income tax for gold mining companies.

The general trend remains the same for the KR mining industry in general as well as for non-ferrous metal sector: tax burden on the sector in Kyrgyzstan is slightly higher than that in Kazakhstan and Mongolia although it is not the highest in comparison with neighboring countries (for example, in Tajikistan it is higher). Thus, the ratio of taxes to sector revenue in the is more than a quarter greater than that in Kazakhstan and 24% in Mongolia.

However, attention is drawn to the fact that the tax burden in the mining industry is one of the highest among other sectors of the economy of Kyrgyzstan. However, this situation is not unique for countries with developed extractive industries. For example, in Kazakhstan, the tax burden on the extractive industry is also one of the highest in the country.

Trying to replenish the state budget by increasing tax burden can only ensure additional income for a very short period but is likely to have the opposite effect afterwards.

### Payment for retaining a license (PRL)

At the moment, the re-raising of PRL rates by the Government of the Kyrgyz Republic is being considered. Similar measures has already been carried out in 2015, and caused the contradictions from the mining companies side. Nevertheless, the Government of the Kyrgyz Republic in 2015 adopted a Regulation on the procedure for payment and calculation of payment for the retention of licenses on the right to use subsoil.<sup>64</sup> The rates approved in 2015 are:

Table 13. Payment rate for holding licenses on subsoil during research, Kyrgyzstan

| Types of minerals   | 1 <sup>st</sup> year<br>PRL, for 1<br>sq.km MCI | 2 <sup>nd</sup> year<br>PRL, for 1<br>sq.km MCI | 3 <sup>rd</sup> year<br>PRL, for 1<br>sq.km MCI | 4 <sup>th</sup> year<br>PRL, for 1<br>sq.km MCI | 5 <sup>th</sup> year<br>PRL, for 1<br>sq.km MCI | For year 6 and each<br>subsequent, PRL<br>increases by 50% |
|---|---|---|---|---|---|--|
| Noble metals (gold, silver, platinum)                                       | 1   | 1   | 5   | 10  | 20  | 30   |
| Non-ferrous metals (aluminum, rubidium, copper, nickel, cobalt, lead, zinc) | 0.5   | 1   | 2.5   | 5   | 10  | 15   |
| Placer deposits (gold)  | 5   | 5   | 10  | 20  | 30  | 45   |

Table 14. Payment rate for holding licenses on subsoil during exploration, PRL per ha in MCI, Kyrgyzstan

| Types of minerals   | 1st<br>year | 2nd<br>year | 3rd<br>year | 4th<br>year | 5th<br>year | 6th<br>year | 7th<br>year | 8th<br>year | 9th<br>year | 10th and<br>subsequent<br>years |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------------|
| Noble metals (gold, silver, platinum)                                       | 0.5         | 1           | 2           | 3           | 5           | 8           | 9           | 10          | 11          | 12                              |
| Non-ferrous metals (aluminum, rubidium, copper, nickel, cobalt, lead, zinc) | 0.25        | 0.5         | 1           | 1.5         | 2.5         | 4           | 4.5         | 5           | 5.5         | 6                               |
| Placer deposits (gold)  | 1           | 1           | 2           | 4           | 6           | 8           | 15          | 20          | 25          | 30                              |

<sup>64</sup> Resolution of the Government of the Kyrgyz Republic No. 760

Table 15. Payment rate for holding licenses on subsoil during minerals production, PRL per ha in MCI, Kyrgyzstan

| Types of minerals   | 1st year | 2nd year | 3rd year | 4th year | 5th year | 6th year | 7th year | 8th year | 9th year | 10th and subsequent years |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------------------------|
| Noble metals (gold, silver, platinum)                                       | 0.5      | 1        | 2        | 3        | 5        | 8        | 9        | 10       | 11       | 12                        |
| non-ferrous metals (aluminum, rubidium, copper, nickel, cobalt, lead, zinc) | 0.25     | 0.5      | 1        | 1.5      | 2.5      | 4        | 4.5      | 5        | 5.5      | 6                         |
| Placer deposits (gold)  | 1        | 1        | 2        | 4        | 6        | 8        | 15       | 20       | 25       | 30                        |

The reviews on regulations draft were rather ambiguous: the changes were welcomed due to imperfection of the existing mechanisms for the calculation and payment of PRL (introduced in 2012), while the proposed increase in the fee for retaining the license by 5 or more times was considered unacceptable and groundless. Companies expressed opinion that increase in rates was quite untimeliness against the situation of decline in the flow of investment. Companies could not increase the budget for additional payments, which would have an impact on reducing workload. Based on past experience, the attitude to the planned innovations will not be favorable.

PRL was originally designed to reduce the speculation of private companies, while its increase sets a certain barrier to investments, and reduces the advantages of the country in comparison with countries competitors. If we compare with reforms carried out in Kazakhstan aimed on attracting investments, made through abolishing the commercial discovery bonus from 2019, and changes in the subscription bonus, as well as other simplifications, then raising any tax rates will affect competitiveness. Let's compare the payments for PRL in Kyrgyzstan and neighboring Kazakhstan. So, analogue of PRL in Kazakhstan is a payment for the use of land plots (lease payment). Payment rates are shown in the table below:

Table 16. Rates of lease payments payment, Kazakhstan<sup>65</sup>

| Nº | Period  | Payment rate (MEI) |
|----|---|--------------------|
| 1  | from 1 to 36 months of the license for exploration, for 1 block *           | 15                 |
| 2  | from 37 to 60 months of the license for exploration, for 1 block            | 23                 |
| 3  | from 61 to 84 months of the license for exploration, for 1 block            | 32                 |
| 4  | from the 85th month of the license for exploration and further, for 1 block | 60                 |
| 5  | from 1 <sup>st</sup> month of production license and further, for 1 sq.km   | 450                |

\*Block its a territory for which, in accordance with the legislation of the Republic of Kazakhstan on subsurface and subsoil use, a license for the exploration or extraction of solid minerals has been issued. Each block has identifying coordinates and an individual code assigned to it by the authorized body for the research and use of subsoil (about 2 sq.km<sup>66</sup>, which is equivalent to 200 ha).

At the exploration stage, calculations made for a 10-year period, the total amount of PRL in Kyrgyzstan (rates from Table 14) is on average 7 times more than the same amount for 10 years in Kazakhstan. However, at the production stage, the average annual payment for PRL in Kazakhstan exceeds the payment for PRL in the Kyrgyz Republic by 2 times (with a maximum rate of 12 MCI used). Moreover, it should be noted that the amount of payment for PRL in the RK at the exploration stage is significantly lower than at the extraction stage, for the purpose of stimulating geological exploration work. For more information on the reforms in the RK, see Chapter 7.2

<sup>65</sup> Article 563 of the Tax Code of the Republic of Kazakhstan

<sup>66</sup> Internet-source, website "Kazakhstanskaya Pravda"

### Bonuses, paid by mining companies

Subsoil users also pay one-off payments when they receive the right to use the subsoil. In Kyrgyzstan, this is a bonus that is paid upon obtaining a license, in Kazakhstan - a subscription bonus.

Table 17. Subscription bonus in Kazakhstan, for exploration contracts, obtained via auctions\*

| Mineral type     | Rate    | Amount in USD |
|------------------|---------|---------------|
| Minerals         | 280 MCI | 2,059         |
| General minerals | 40 MCI  | 294           |

\* rates are indicated for a territory on which there are no approved mineral reserves. For the territories on which such reserves are approved, the formula specified in clause 2 of the table below is used to calculate the rate (Table 18).

Source: the procedure for calculating - the Code on the Subsoil of the Republic of Kazakhstan – part 4, the Tax Code of the Republic of Kazakhstan - Article 726, paragraph 6; rates - the Tax Code of the Republic of Kazakhstan, Article 726.

Table 18. Subscription bonus in Kazakhstan for production licenses, combined exploration and production, obtained through auctions \*\*

| Solid minerals, prospecting      | Rate   | Amount in USD |
|----------------------------------|--|---------------|
| If the reserves are not approved | 500 MCI  | 3,677         |
| If the reserves are approved     | $(C \times 0,01\%) + (C_n \times 0,005\%)$ , but not less than 500 MCI | Min 3,677     |

C - the value of aggregate mineral reserves in industrial categories A, B, C1, approved by the State Commission on Mineral Reserves of the Republic of Kazakhstan;

C<sub>n</sub> - the total value of the preliminary estimated reserves of mineral raw materials of category C2, approved by the State Commission on Reserves of Mineral Resources of the Republic of Kazakhstan and (or) taken into account by conclusion of this commission for the rapid calculation of the reserves of a potentially commercial object and forecast resources;

\*\* - valid for contracts on less than 300 ha of territory, if territory exceeds 30 ha, additional fee will be included

It is interesting to compare the amounts of bonuses paid by companies in Kyrgyzstan and Kazakhstan. For comparison, we took the following criteria and conditions:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>▶ for comparability, the amount is calculated per 2 tons of gold;</li> <li>▶ MCI in Kazakhstan for 2018 year - 2,405 KZT<sup>67</sup>;</li> <li>▶ 1 USD = 327 KZT<sup>68</sup>;</li> <li>▶ 1 ton of gold – 32,150.7 ounces;</li> <li>▶ 1 ounce – 1,358 USD.<sup>69</sup></li> </ul> | <ul style="list-style-type: none"> <li>▶ C1 category reserves, explored and production started, the production license was obtained as a result of the auction. Hence, in order to calculate the size of the bonus in Kazakhstan, the formula from table 18 is used</li> </ul> |
|--|--|

| Mineral type | Quantity | Subscription bonus, in the Republic of Kazakhstan | Bonus on obtaining a license in the Kyrgyz Republic <sup>70</sup> |                |
|--------------|----------|---|---|----------------|
|              |          |   | placer  | hard-rock gold |
| Gold         | 2 tonn   | 8,732\$   | 80,000 \$   | 120,000 \$     |

<sup>67</sup> Website Online.zakon.kz. MSI, MCI and subsistence minimum (for 1995 - 2018)

<sup>68</sup> Nat. Bank of the RK, Official exchange rates for foreign currencies in 2018, January

<sup>69</sup> The graph of the price of gold for US dollars in the spot market, quotations in real time

<sup>70</sup> Resolution of the Government of the Kyrgyz Republic No.410

Thus, when obtaining the right to extract minerals, the bonus paid for a license in Kyrgyzstan is greater than the subscription bonus payable in Kazakhstan: 9.1 times for alluvial gold and 13.7 times for indigenous gold. The bonus payable in the Kyrgyz Republic is greater than the subscription bonus paid in Kazakhstan, by 9.16 times for placer gold, 13.74 times for hard-rock gold.

## 6.3 GOVERNMENTAL FISCAL INITIATIVES IN THE SECTOR

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The initiative of increasing the rate of duty for exporting ore and concentrates containing precious metals has often been on the agenda of the Kyrgyz Republic more than once over the recent years. One of the main arguments to justify the initiative was that no value added is associated with raw material export, that is, the government misses its profit both in terms of tax income as well as job creation and socio-economic development of certain areas.

The initiators believe that inadequate regulation of raw material and unprocessed product export taking into account the trend of increasing export of raw materials in the form of precious metal ore and concentrate (the export has multiplied over the recent 4 years) brings about the possible risk of increased corruption. According to the explanatory note, the primary purpose of the proposed amendments to the Law "On the Customs Tariff of the Kyrgyz Republic" is to stimulate companies to build ore processing plants in Kazakhstan as well as to prevent potential corrupt practices in exporting gold ore and precious metals from the Kyrgyz Republic. At the same time, the bill provides for a significant increase of export duty rates and income taxes, which the bill initiators believe will help increase state budget revenues.

Though the above fiscal initiatives have been much-discussed by all parties concerned, no final decision has been arrived at yet.

Below is the background including about modifications of regulations on export customs duties for gold ore and concentrate as well as taxes on mining revenue and royalties.

### 6.3.1 Export customs duties

#### 2012

The initiative of the KR Ministry of Economy to introduce export customs duties (with a progressive rate from 5% in 2012 to 30% in 2017) on precious metal ore and concentrate was first brought up for discussion. The KR Ministry of Justice presented a number of reasons why to adopt the draft regulation would be inexpedient to the Supreme Council.

The business community has more than once criticized the draft regulation and filed to specialized committees of the Supreme Council as well as its Chairman petitions explaining its view in detail. Besides, representatives of the business community have expressed their opinion at a press conference.

However, the KR Government proposed the draft regulation to the Parliament for consideration.

At a meeting of the Committee for the Fuel and Energy Sector and Subsoil Use of the Supreme Council taking place at the end of the year, representatives of the business community were able to prove that to adopt the draft regulation would be unreasonable, after which the Committee decided on further revision and recommended the Government to address the issue of introducing export customs duties while setting the stage for processing plant construction.

#### 2013

The business community referred the matter to the Council for Business Development and Investment under the Government of the Kyrgyz Republic. Following the discussion at its meeting, the Council recommended establishing a working group representing all parties concerned for the following:

- ▶ a comprehensive estimate of the potential effect of the customs duties on precious metal ore and concentrate export and the country's economic, environmental, and social situation;
- ▶ an estimate of any economic opportunities and environmental risks associated with the construction of metallurgic plants in the Republic;
- ▶ discussing the possibility of reviewing and proposing alternative ways for the KR Government to introduce the customs duties.

#### 2014

Having received information from the Ministry of Economy and in view of the negative opinion of the Ministry of Justice, the Committee for the Fuel and Energy Sector and Subsoil Use of the Supreme Council resolved to reject the above draft regulation and instruct the Government to address the issue of introducing the customs duties after the gold extraction plant had been built.

#### 2015

The Supreme Council of the Kyrgyz Republic adopted the Law of the Kyrgyz Republic on the Introduction of Export Customs Duties for Goods Exported from the Kyrgyz Republic, under which progressive rates from 15% in 2015 to 30% in 2017 of export customs duties applied to ores and concentrates of FEACN 2616 precious metals.

However, taking into account the arguments provided by the Government and other KR governmental bodies as well as the business community, the President of the Kyrgyz Republic relegated the above Law to the Supreme Council in order to agree on a final version.

#### 2016

At the instruction of the Supreme Council, the Ministry of Economy held a number of meetings with the business community to discuss the development of the draft governmental resolution to introduce export customs duties for precious metal ore and concentrate. The agenda included the suggestion of the business community that a method should be developed for calculating export customs duty rates as well as the need for a comprehensive estimate of the potential effect that the duties would have of the country's economic, environmental, and social situation. Besides, the business community petitioned the KR President and Supreme Council proving that to introduce export customs duties was unreasonable.

#### 2017

In January 2017, a bill was proposed for public discussion under which a customs duty of at least 25% of customs value was to be introduced. According to the Draft Law on Changes to the KR Law on the Customs Tariff of the Kyrgyz Republic, the rates of export customs duties for precious metal ore and concentrate classified as 2616 according to the FEACN were to be set by the Government of the Kyrgyz Republic at a level of at least 25% (twenty five percent) of the customs value of the goods, and exporting goods in the form of ore and concentrate containing FEACN 2616 precious metals was allowed provided that the transaction price under the foreign trade agreement (contract) was not lower than the market value of the precious metals.

The current revision of the KR Law on Subsoil (Article 35) stipulates that the license to use subsoil for mineral deposit development entitles the licensee exclusively, among other rights, to sell, in particular export minerals and their derivatives.

### 6.3.2 Gold concentrate sales tax

In execution of the Prime Minister's official instruction, the Ministry of Economy presented to the business community and other parties concerned two versions to agree on a draft regulation introducing an additional tax for exporting precious metal ore and concentrate from the Kyrgyz Republic. The first version provided for a revision of the royalty tax base definition (the tax base was defined as the value of chemically pure metal in the metal or or concentrate), while the second version included increasing the revenue tax rate by a coefficient of 3.

In the second half of 2017, the State Committee for Industry, Power, and Subsoil Use of the Kyrgyz Republic (hereinafter referred to as the KR SCIPUS) addressed the issue of increasing the rate of revenue tax on sales of gold concentrate by mining companies.

According to Article 221 of the KR Tax Code, any taxpayer engaged in gold ore, gold concentrate, gold alloys, or fine gold production and sales must pay a revenue tax. The revenue tax is imposed on operations in the production and sales of gold ore, gold concentrate, gold alloys, and fine gold with the following tax base: 1) revenue net of VAT and sales tax from gold alloy and/or fine gold sales; 2) the value of gold in the gold ore or gold concentrate calculated based on world prices according to the procedure established by the Government of the Kyrgyz Republic.

That is, the KR SCIPUS suggested that the revenue tax rate should vary depending on the product type, i.e. gold alloys and fine gold / gold ore and gold concentrate. The tax rate for gold alloys and fine gold were to remain unchanged, while that for gold ore and gold concentrate were to increase by 3%.

The bill initiated by the KR SCIPUS suggested an amendment to Article 221-1 "Taxation of Mineral Extracting and/or Processing Companies" and the following revenue tax rates for old ore and gold concentrate (see Table 19).

Table 19. Suggested revenue tax rates depending on the price of gold<sup>71</sup>

| Gold price per troy ounce, USD USD | 1300 or less | 1301–1400 | 1401–1500 | 1501–1600 | 1601–1700 | 1701–1800 | 1801–1900 | 1901–2000 | 2001–2100 | 2101–2200 | 2201–2300 | 2301–2400 | 2401–2500 | 2501 and more |
|------------------------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| Income tax rate, %                 | 4            | 6         | 8         | 10        | 12        | 14        | 16        | 17        | 18        | 19        | 20        | 21        | 22        | 23            |

### 6.3.3 Tax base for royalty calculation for metal ores and concentrates of exchange-traded metals

The same bill by KR SCIPUS suggested a modification to the tax base for royalty calculation for metal ores and concentrates of exchange-traded metals. Exchange-traded metals are metals the prices of which are quoted on the London Metal Exchange.

According to the current version of the Tax Code, the royalty tax base is to be calculated as revenue from mineral sales. According to the version suggested, the royalty tax base for metal ores and concentrates of stock-exchanged metals was the value of chemically pure metal contained in the metal ore or concentrate sold over the tax period.

The value of chemically pure metal is determined based on the price of the metal as the average of the daily average price quotation for the metals on the days of the tax period when price quotations were published on the London Metal Exchange and the number of days in the tax period when price quotations for the metals were published.

The procedure for determining the value of stock-exchanged metal and that of stock-exchanged metal in metal ore or concentrate as well as the procedure for determining accurate metal content in primary commodities and the content of chemically pure metal in metal ore or concentrate is to be set by the Government of the Kyrgyz Republic. In case the actual sales value of metal ores and concentrates is higher than the value of chemically pure metal as determined based on average exchange prices, the actual selling price shall apply.

<sup>71</sup> State Committee of Industry, Energy and Subsoil Use of the Kyrgyz Republic

### 6.3.4 An analysis of potential effects of the fiscal initiatives

The possible implementation of the fiscal initiative can lead to a number of consequences for both the non-ferrous metal<sup>72</sup> sector and the general economy of the Kyrgyz Republic. This chapter studies several potential outcome<sup>73</sup> scenarios. The table below describes the three scenarios studied in this section; the results for each scenario are presented below. The following potential changes apply to each scenario:

*Table 20. A brief description of the scenarios used to analyze the potential effects of the fiscal modifications*

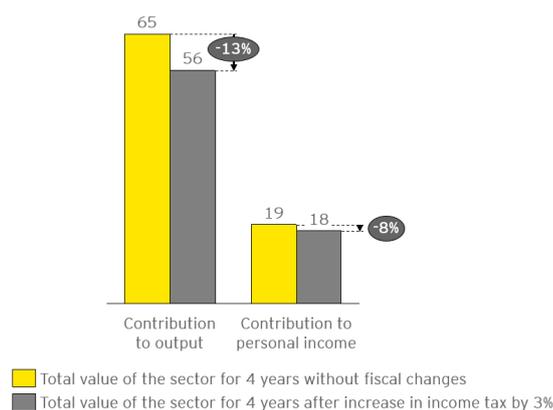
|            |   |
|------------|---|
| Scenario 1 | The revenue tax rate by increasing 3% of the existing rates   |
| Scenario 2 | Export customs duty of 25% of the customs value of the exported products being introduced                     |
| Scenario 3 | The revenue tax rate being increased by 3% and the export customs duty of 25% being introduced simultaneously |

For each of the scenarios described above, the following assumptions are made:

- ▶ Non-ferrous metals companies accept fiscal changes and conscientiously pay higher taxes and payments without applying questionable schemes of tax optimization, and even more so without resorting to schemes of illegal tax evasion.
- ▶ In the case when the effect on the full contribution for one year is analyzed, the data of the non-ferrous metals companies for 2016 are used as the base year for calculations.
- ▶ In the case when the forecast of the future contribution of enterprises of the sector is made, the data from their long-term plans and development strategies for 2018-2022 are taken.

#### Scenario 1

In case the income tax rate is increased by 3% of the existing rates only, the profitability of businesses in the non-ferrous metal sector might dwindle by a factor of more than 3 at once. The data shows that companies can "stay afloat" and continue their activities. However, it should be noted that such an initiative will result in the maximum reduction by companies of investments in their future development, reduction of social activities and charity expenses, as well as all other costs that are not critical for current activities.



*Figure 63. The estimated potential effect of a 3% increase in the revenue tax on the sector's total contribution to output and labor income in 2018–2022, billions KGS*

<sup>72</sup> Figures for the precious and non-ferrous metal sector in this chapter do not include the Kumtor project because the fiscal initiatives will not apply to the company operating this project.

<sup>73</sup> All quantitative values in this chapter are based on financial data of companies accounting for over 85% of the non-ferrous metal sector excluding the Kumtor deposit operator. The rest was calculated.

If the forecasted impact of the initiative on the full contribution<sup>74</sup> is considered, it can be seen that the reduction in the total contribution to output is 13%, and in the wages fund - about 8%, compared to the projected contribution of the sector without raising the income tax rate by 3% (Figure 63).

### Scenario 2

In case an export customs duty with a rate of up to 25% of the customs cost of the commodities is introduced only, businesses in the non-ferrous metal sector will in total lose over 1.35 billion KGS, which is more than twice as much as their's direct contribution to the GDP for 2016 (the Kumtor project not included). It appears quite obvious that this scenario would prevent companies in this sector from maintaining their operations and investments, probably causing most of them to go bankrupt and, in which case the sector would cease to exist.

Therefore, to stay afloat and continue its activities, companies in the non-ferrous metal sector will have to cut their costs to a much greater extent than in the first scenario. Furthermore, a level of cost reduction of companies was considered, so they can break even, i.e. make no profit but no losses either.

Since it is not possible to reduce manufacturing costs significantly, because their non-manufacturing costs to maintain a certain level of output and its safety have to be reduced: by social responsibility, charity, investments, financial expenses, and, most importantly, staff costs.

Let us study some cost saving possibilities and the effect it would have on the sector and its contribution to KR economy:

1. Companies would suffer no serious economic loss if corporate social responsibility and charity costs decreased. Yet, the enterprises and, in turn, the government might suffer significant reputational damage, potentially causing them to lose more investment attractiveness in the mining industry. Besides, that could cause social unrest in regions where companies of the sector operate.
2. Just like in the first case, if companies cut down of investment costs that would be rather unlikely to cause direct economic loss in the short term. However, the decision can have disastrous effects on the sector in the mid- and long-term perspective. In particular,
  - lack of investment in upgrading property, plant and equipment might bring about wear and obsolescence of manufacturing equipment and, consequently, a decrease in output and production safety;
  - if no funds are invested and no new deposits are developed, the industry will be challenged immensely. Deposits that are currently in operation are petering out, and the development of mineral resources requires large-scale investment.
3. It is also possible that companies will be unable to handle their long-term loan liabilities. This could cause most companies in the sector to go bankrupt, affecting the country's financial system as well as the KR's sovereign credit rating.
4. Finally, companies would have to cut down on personal expenses as well as reduce employee count. This item is further considered in more detail, as having the greatest risks to society.

Below is an estimate of the reduction in jobs and labor income in the sector depending on the export customs duty rate (Figure 64 and Figure 65). An increment of 5% was adopted for convenience. As the figures show, the introduction of customs duties even at a rate of 5% can cause the employee count to decrease by 1.7% and people's labor income by 1.72%. A 10% rate could cause as many as 500 employees to be laid off, i.e. 16.5% of the 2016 employment in the sector. If a 25% rate is introduced, nearly two

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<sup>74</sup> It was assumed that non-ferrous metals enterprises are trying to maintain the current level of profitability, reducing any of their non-production costs as described further in Scenario 2. To calculate the contribution to the release, the Oaken law was applied, also described in Scenario 2 below.

thirds of employees in the sector would probably be made redundant, bringing about a decrease in labor income of over 1.5 billion KGS.

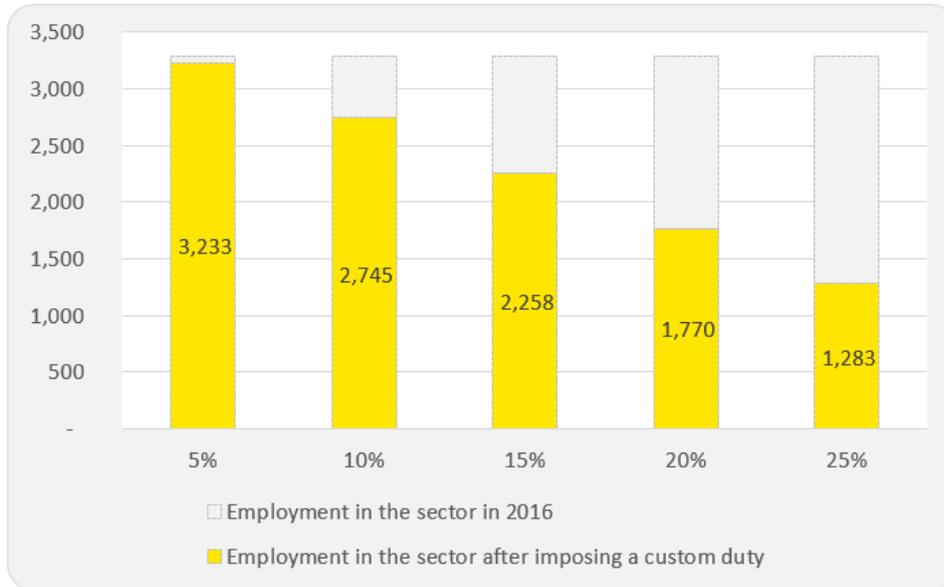


Figure 64. Decrease in the sector's employment, people, depending on the export customs duty rate

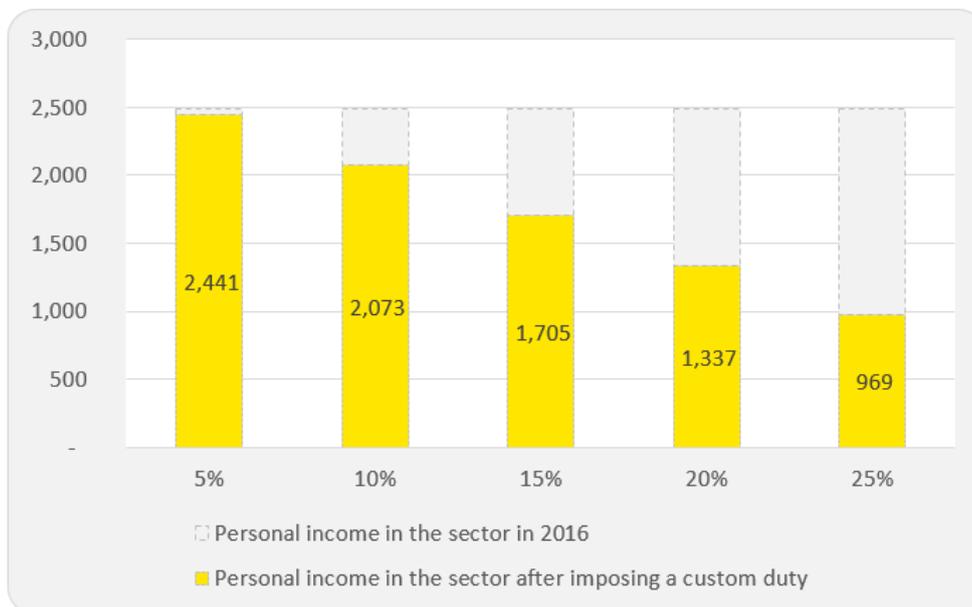


Figure 65. Decrease in the sector's labor income, millions KGS, depending on the export customs duty rate

Such a large number of unemployed people along with the decrease in the labor income is obviously a serious problem for the government. For instance, the decrease in labor income is sure to reduce purchasing power in the country, causing domestic output to shrink in many industries, primarily agriculture, service industry, trade, and food and beverage manufacturing.

If unemployment increases, the KR Government is mostly likely to face with the following problems:

- ▶ First and foremost, it is the loss of profit that the government could make if the employees of the sector who are made redundant continued to contribute to the sector's production of non-ferrous metals.
- ▶ Another factor is budgetary expenditures for unemployment benefits and retraining. While to estimate the cost of unemployment benefits is rather difficult because we do not know how long each redundant person will stay unemployed, the expenditures associated with retraining are relatively easy to quantify. The average cost of retraining per employee in the non-ferrous metal in Kyrgyzstan is about 32.6 thousand KGS<sup>75</sup>. That is, if the highest duty rate of 25% is introduced, the cost of retraining redundant employees can exceed 65 billion KGS.
- ▶ There is one more subject that should be mentioned. It is typical for employees in mining to be the sole breadwinners for their families. A number of studies show that there are 2 to 4 people per such worker who live off the his income. That is, if employees in the sector are made redundant, the number of unemployed people seeking governmental help might be 2 to 4 times higher.

Even though we assume the output and production costs of companies in the sector to be unchanged for the scenario, it would be wrong to expect personnel lay off to not affect the company's output. Okun's law, which is mostly used in theoretical economics, can be used to estimate the effect of personnel reduction on GDP and product output.

Okun's law is the assumption accepted by economists and advanced by US economist Arthur Okun that there is a relationship between the unemployment rate and GDP increase in the respective state. Namely, each percent by which the unemployment rate exceeds its natural level brings about a GDP decrease from the level that would be possible with a natural unemployment rate. A 2% decrease of GDP growth rate generally causes unemployment to rise by 1% and vice versa. As a statistical observation, Okun's law is an axiom or dogma. However, it can be used for rough estimates of consequences.

Applying the relations described above from the law of Okun concerning the growth of unemployment and decrease in GDP, the contribution of the non-ferrous metal sector was estimated for various export customs duty rates like that to employment and the labor income (Table 21).

Table 21. Decrease in GDP and output depending on the duty rate

| Duty rate variants                                       | 5%    | 10%    | 15%    | 20%    | 25%    |
|--|-------|--------|--------|--------|--------|
| Sector GDP, KGS millions                                 | 618   | 480    | 393    | 332    | 288    |
| Sector output  | 7,088 | 5,507  | 4,505  | 3,810  | 3,302  |
| Sector GDP decrease as compared to 2016, KGS millions    | -21   | -159   | -246   | -307   | -351   |
| Sector output decrease as compared to 2016, KGS millions | -241  | -1,822 | -2,824 | -3,519 | -4,027 |
| Sector GDP decrease as compared to 2016, %               | -3    | -33    | -63    | -92    | -122   |
| Sector output decrease as compared to 2016, %            | -3    | -25    | -39    | -48    | -55    |

Finally, the cumulative effect of imposing a customs duty at a rate of 25% on the future total contribution of the sector is considered (Figure 66). The graph below shows that the introduction of a duty with such a rate will reduce the future full contribution to output and the payroll fund by almost 2 times.

<sup>75</sup> According to the research of the company "EI Consulting Group", conducted within the framework of this project.

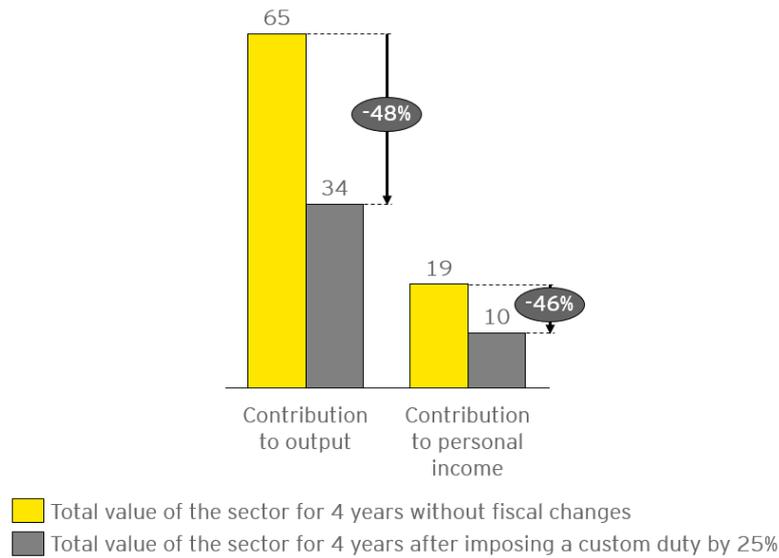


Figure 66. The estimated potential effect of a 25% customs duty on the sector's total contribution to output and labor income in 2018–2022, billions KGS

### Scenario 3

In case the income tax rate is increased by 3% and an export customs duty with a rate of up to 25% is introduced at the same time, the total losses of businesses in the non-ferrous metal sector might amount to nearly 1.7 billion KGS, which equals one fifth of the sector's total output in 2016, the Kumtor project not included. Therefore, companies in the precious and non-ferrous metal sector will not be able to maintain operating and will find start to suffer great losses straightaway with no opportunities for further operations, not to mention investment in future development. Expected consequences here are similar to those described in Scenario 2: all businesses might shut down and go bankrupt, causing the non-ferrous metal sector to collapse. This is provided that the companies will not cut costs.

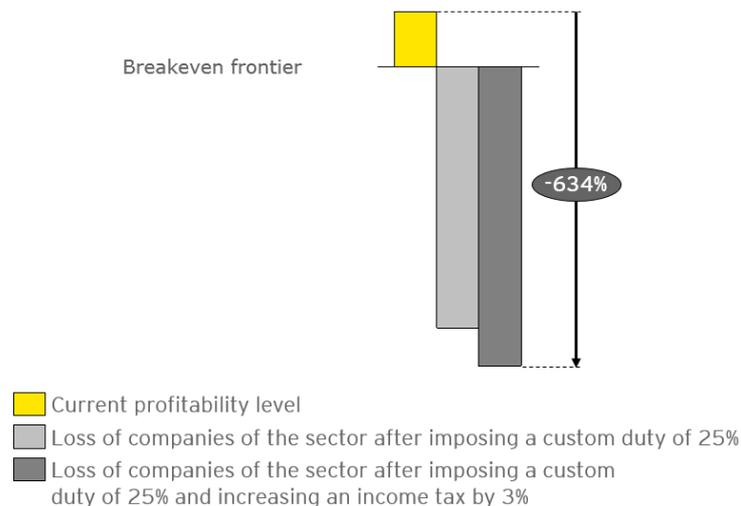


Figure 67. An illustration of the potential losses of companies in the precious and non-ferrous metals sector if the fiscal modifications are introduced

The above scenario of maintaining costs is of course hypothetical since it is unlikely that businesses in the sector will do nothing to adjust to the to new fiscal initiatives, "cutting" their plans. Yet, it suggests a very important inference: if no cost reduction measures are taken when the fiscal initiatives are implemented,

the non-ferrous metal sector and thus most of Kyrgyzstan's mining industry might cease to exist because further operations will be economically unprofitable to the businesses.

Therefore, it is important to consider at the possible consequences if we assume that, as in Scenario 2, the companies of the sector will cut all possible investments and costs in order to stay afloat while break even. There is no point in repeating and considering the potential changes of various indicators (output, GDP, employment, and payroll) as the rates of the customs duty and revenue tax increase. After all these will be similar to the Scenario 2. However, we can analyze how much the total contribution of the non-ferrous metal sector to the Kyrgyz Republic's economy would decrease (Figure 68).

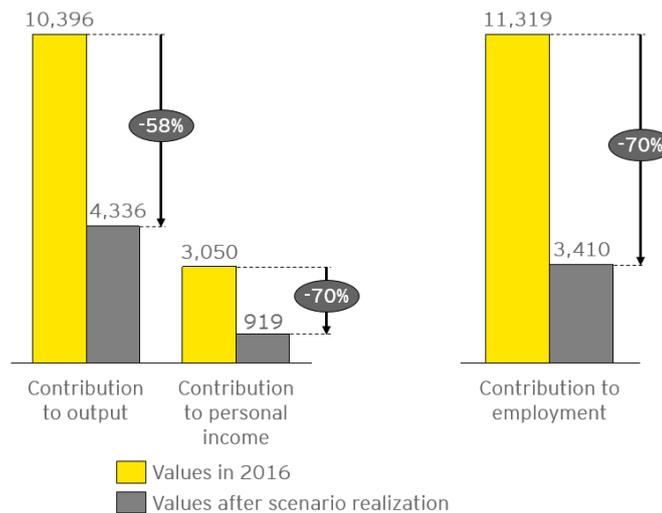


Figure 68. The potential effect on the sector's total contribution to output, the payroll (millions KGS), and employment (number of jobs) of introducing a 25% customs duty and increasing the revenue tax by 3%.

As the figure above shows, the sector's total contribution to KR economy will shrink by nearly 60% (output), and that to GDP and employment by about 70% if the scenario takes place. The potential decrease in the sector's total contribution to output is nearly as high as an industry's contribution (e.g. textile manufacturing with an output of 6,609 million KGS in 2016). That is to say, the decrease in the sector's total contribution to output according to the above scenario would be as dramatic as if a whole KR industry disappeared.

In conclusion, the projected impact of both initiatives on the future contribution is considered (Figure 69).

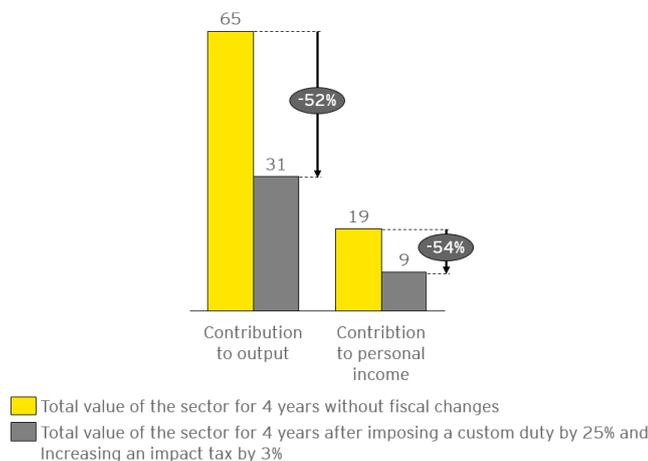


Figure 69. The estimated potential effect of the introduction of a 25% customs duty simultaneously with a 3% increase in the revenue tax on the sector's total contribution to output and labor income in 2018–2022, billions KGS.

Of course, the above variants and scenarios are not free of errors, inaccuracies, and uncertainties. Those are mostly due to estimate input used to calculate for the scenarios, a number of assumptions made to estimate the scenario, etc. However, the scenario analysis is helpful in terms of quantifying the potential outcome of the above modifications of the taxation system.

As the above diagrams show, the fiscal initiatives for the non-ferrous metal sector can have a dramatic effect on the sector's potential contribution to the economy.

The intention to replenish the state budget by increasing the tax burden and not by the expansion of the tax base can bring additional revenues only for a very short period, but in the future it will most likely cause the opposite effect. For example bonuses and POOLs for search and exploration companies, which, not having receipts from production, still have to incur large costs, primarily for payments to the state. Therefore, companies are trying to reduce other types of costs: personnel, social assistance and, most importantly, investments in prospecting and exploration of deposits / expansion of reserves. It is important that in this case the enterprises try to switch to richer deposits that are simple for extraction. However, other fields remain under-invested or unclaimed, where production could well be carried out, benefiting the country and local residents.

The fiscal initiatives could cause a major decrease in the potential contribution of the non-ferrous and precious metal sector to the national economy.

It is therefore not only the short-term benefits of the initiative that should be analyzed when deciding on the aforementioned changes to the tax law but the whole range of consequences that might affect the sustainable long-term development of mining as well as the economy of the Kyrgyz Republic in general.

## 7. REFORMING OF MINING: INTERNATIONAL EXPERIENCE

The mining industry is characterized by certain cycles, which also apply to investment in the exploration and development of deposits. The ultimate purpose of any governmental system for mining taxation is to ensure the highest benefit for the population possible while attracting investment in the industry. This requires a realistic view and a precise balance between the purposes of businesses and governments as the two key stakeholders. For companies total tax burden, including royalties, is important in terms of investment-related decisions. Higher taxation is more likely to discourage investment and, in extreme cases, might affect further operation of deposits as well as mining and processing plants. The time frame for tax collection also influences the investment structure. Increased tax rates can bring about increased governmental income in the short run, but if the increase is too large, it will restrict further exploration/production, entailing decreased tax income from the industry over the long term.

Various taxes influence the investment climate of the industry and the governmental management of it. For example, taxes based on output regardless of profit can cause economic inefficiency by decreasing the output of ore with lower metal content and the life of some deposits. On the contrary, taxes imposed on corporate revenue can factor in fluctuations of world metal prices as well as difficulties caused by geopolitical, technical, financial, and political influences throughout the life of the deposit. Besides, taxation based on corporate revenue usually offers the advantage of more uniform distribution of risks between companies and the government. Despite the potential economic benefits, the approach is disadvantageous as it involves the whole system, which might be a limitation for developing countries with limited administrative capacities for tax administration. Besides, the complexity of this system encourages corruption and various tax schemes.

In making investment-related decisions, businesses estimate not only the expected profitability (or cost efficiency) but the associated risks of the new project. The perceived stability over time of the tax treatment is an importance risk factor. It is crucial for governments in terms of revenue, since when businesses view projects in a certain country as high-risk ones, they are likely to insist on a higher profitability, thus decreasing the government's revenue. Taxation systems are therefore of importance for government as they influence the relative investment attractiveness of the jurisdiction.<sup>76</sup> The mining industry is difficult to manage at the governmental level, and the approach to it largely depends on the country's economic situation. There is no standard approach, so countries amend the existing laws according to the cycles in the industry. The Kyrgyz Republic is also in a situation when reforms are necessitated by the economic situation as well as industry-specific trends. Below is the analysis of several countries' reform practices that might be of use in Kazakhstan.

The crisis of 2008 to 2009 weakened the global economy, traditionally causing the price of gold to grow, increasing from 908.4 USD per ounce in early 2009 to 1821.8 USD per ounce in August 2011. A fall to a corridor of 1100 to 1300 USD per ounce followed from 2014 as the economy revived<sup>77</sup>. The situation was similar on the copper market: a high price in 2011 (over 10,000 USD per ton), reaching 4,300 USD per ton by January 2016, mostly due to slackened demand from China.<sup>78</sup> Copper prices are currently stabilizing with the year-average price for 2017 estimated at 5,750 USD per ton.<sup>79</sup>

Manufacturers' production costs have not decreased, while the extractive industries of certain countries witnessed a strengthening of legal requirements during the crisis period. In particular, the KR introduced the revenue tax, deductions for the development and maintenance of the local infrastructure, license retention payments, and bonuses as the prices for gold rose, also increasing and extending the pollution fee, etc. A decrease in extracting companies' revenue causes a decrease in output, thus creating a shortage on the market followed by a price increase. A number of countries took measures to improve their investment climates and lower tax burden on extracting companies when gold and copper prices sank. This

<sup>76</sup> Taxation and Investment Issues In Mining

<sup>77</sup> World Gold Council, gold price

<sup>78</sup> CNBC U.S.

<sup>79</sup> The statistics portal - Statista, Business Insider – Markets Insider

section provides an overview of the key reforms in certain countries rich in mineral resources and a summary of their mining reforms that might be of interest for the Kyrgyz Republic. The countries are as follows:

- 4) *Mongolia* as a country whose natural resources are similar to those of the Kyrgyz Republic and have an experience of successful development of the industry.
- 5) *Chile* as a leading country in copper ore production.
- 6) *Peru* as the world's 2nd largest copper ore manufacturer and 6th gold ore manufacturer.<sup>80</sup>
- 7) *Tajikistan* as the country that had a similar situation following independence and has gold deposits while also having a negative experience of regulating the industry and its investment climate.

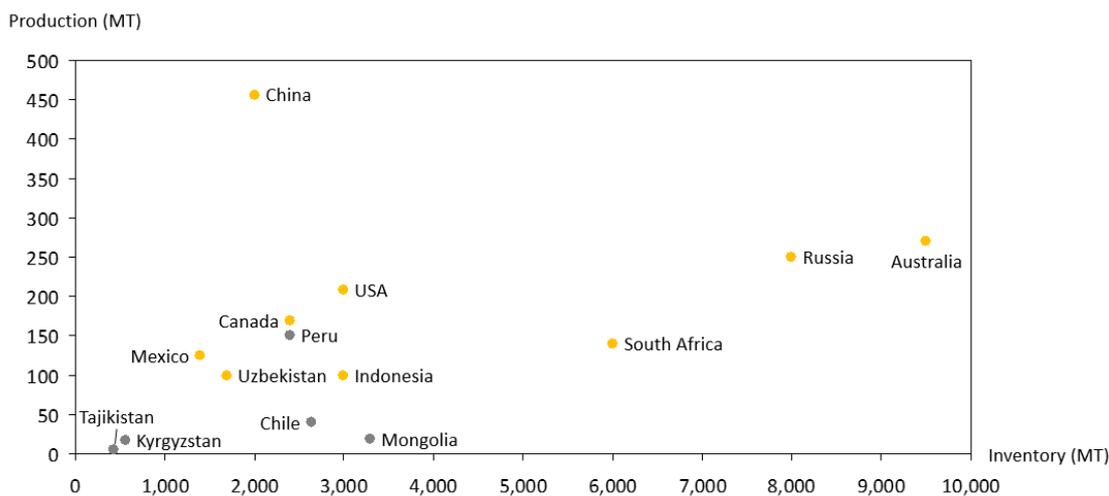


Figure 70. Gold reserve and output, 2016<sup>81</sup>

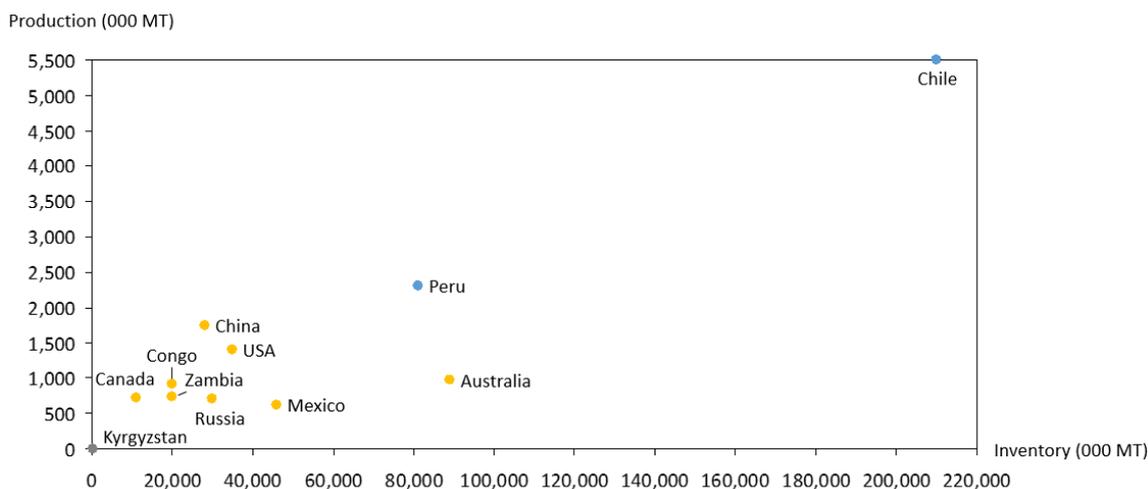


Figure 71. Gold and copper production<sup>82</sup>

<sup>80</sup> Investing News Network (INN) daily

<sup>81</sup> Focus Economics: Economic Forecasts from the World's Leading Economists

<sup>82</sup> Mineral Commodity summaries 2017

Mongolia makes an interesting example as a country where tax reforms were coordinated by the IMF<sup>83</sup> and carried out with due regard to international practices as well as the local situation. Apart from it, the example of the Republic of Tajikistan is of certain interest. The EITI's 2016<sup>84</sup> report on the validation of Tajikistan showed the country's taxation system to lack transparency. A comparison of the countries can be indicative of the different outcomes of reforms carried out without taking into account international experience and trends and those implemented in a circumspect manner as scheduled from the long-term perspective.

## 7.1 MONGOLIA

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The extractive sector is one of the economic sectors that make the greatest contribution to gross domestic product (GDP) growth in Mongolia, making an average of 7.8% yearly from 2000 to 2008. The mining industry accounted for about 60% of private investment from 2003 to 2009, amounting to an average of 335 million USD annually, which is as much as 10% of the GDP. The sector also generated 30% to 40% of the state revenue from 2005 to 2009. In 2009, the mining industry's direct contribution made about 22% of the GDP, 70% of the export, and 30.6% of the state revenue.<sup>85</sup> Mineral export increased dramatically again in the first three months of 2010 to make over 90% of the total export, mainly owing to increased demand from China. Following a rapid economic growth in 2006–2008 that was caused by an upsurge in copper and gold prices, the price for copper dwindled and that for gold became highly unstable in late 2008, causing the real GDP to decrease in 2009.<sup>86</sup> The 2008 crisis was a heavy blow to the economy, dropping the price for copper from 7,000 USD per ton to almost 5,100 USD per ton between 2008 and 2009. That affected the economy directly, and it shrank by 1.6% in 2009. This is partly due to lowered state expenditures, which decreased by 5.7% in nominal terms because of an 8.6% fall of state revenue.<sup>87</sup> However, Mongolia was able to become one of the world's most rapidly growing economies by 2011 with a growth rate of 17.5%<sup>88</sup> that it owed primarily to the mining boom. The year-on-year growth nevertheless decreased to stand at only 4% according to the IMF by 2015. As the world prices of coal and copper decreased, Mongolia's revenue also dropped. Disputes on licensing between the government and businesses affected international investment in mining as well, making companies insecure and causing international investment to dwindle by 54% in 2013 as compared to the previous year.<sup>89</sup> What measures did the Mongolian Government take to ensure economic stability?

The opportunities and challenges associated with the extracting sector emphasize the need for thorough planning and a solid legislative framework to support sustainable economic development. The government of Mongolia took a number of important measures in this respect. In 2010, the Parliament adopted a number of fiscal regulations within the framework of the Law on Financial Stability restricting the growth of expenditures, the structural budgetary deficit, and the national debt share. In 2017, the government established a new sovereign wealth fund, known as the Future Heritage Fund, in order to accumulate part of the revenue from natural resources for the generations to come.<sup>90</sup>

### 7.1.1 Amendments to the Minerals Act. Decrease in the gold royalty rate

The amendments to the Minerals Act approved by the Parliament on January 24, 2014 introduced a reduced royalty rate for gold produced in Mongolia that is to apply until January 1, 2019 in order to encourage operators to sell gold to the Bank of Mongolia or Mongolian licensed commercial banks (those authorized by the Bank of Mongolia). Before the amendments, the applicable gold royalty rate included a basic royalty

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<sup>83</sup> International Monetary fund

<sup>84</sup> EITI International Secretariat. The global standard for the good governance of oil, gas and mineral resources.

<sup>85</sup> The World Bank's Evolutionary Approach to Mining Industry Reform (October 2010), page 25

<sup>86</sup> International Monetary Fund, Fiscal Affairs Department, Mongolia (June 22, 2010)

<sup>87</sup> Impact Of Fiscal Stability Law, Mongolian fiscal stability law, CGE modelling

<sup>88</sup> Trading Economics

<sup>89</sup> Mining Technology

<sup>90</sup> National Resource Governance Institute. Mongolia Macro-Fiscal Model (February 2017)

rate of 5% and an additional progressive royalty rate of up to 5% depending on the price of gold. This resulted in an effective royalty rate of up to 10% of the price of gold was more than 1,300 USD per ounce. The amendments mean that gold miners who prefer to sell gold to the Bank of Mongolia or its authorized commercial banks (in fact at the market price) enjoy a lower royalty rate of 2.5%.<sup>91</sup>

The decrease in gold mining royalty rates is a long-awaited benefit, largely due to the recent difficulties that the sector had been witnessing from 2012. Major regulatory and fiscal changes worsened the dropping gold prices and investment significantly (for instance, the profit tax amounted to 68% in 2006 and was not abolished until five years later in 2011, and a law was adopted prohibiting mineral exploration and production in certain protected areas).

The increase in the portion of Mongolian land open for mining and exploration increased from 8% to 20%, the enablement of licensing in 2010, in which the exploration period was increased to 12 years, the reduction of royalties that miners pay to the Central Bank of Mongolia or other commercial banks from the effective 10% rate to 2.5% were all aimed at encouraging gold mining and restricting illegal mineral extraction. Gold export increased over the period as well, reaching 324 million USD by October 2014 with a growth rate of 9.4% a year.<sup>92</sup>

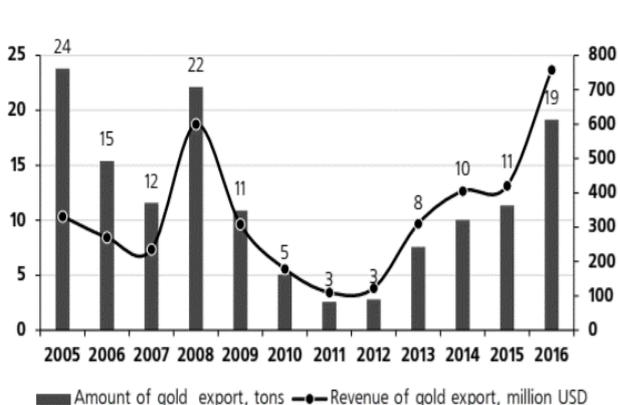


Figure 72. Gold export

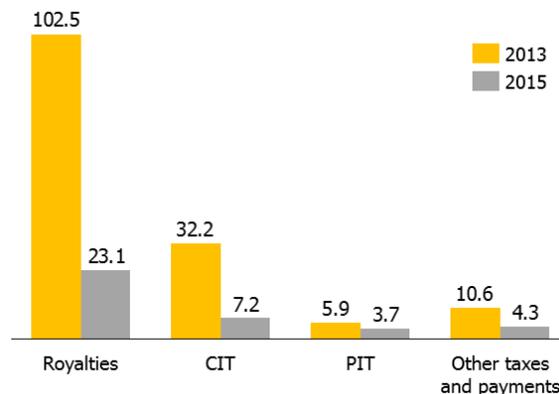


Figure 73. Payments by mining companies, millions MNT

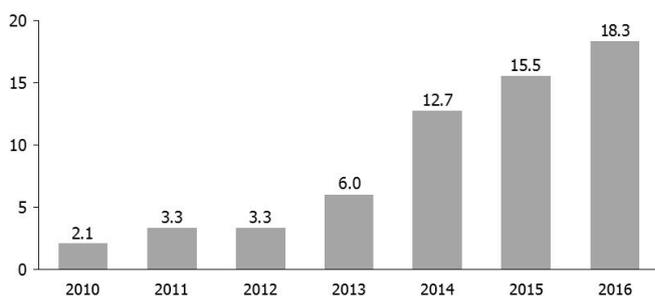


Figure 74. Gold procured by the Bank of Mongolia, tons<sup>93</sup>

<sup>91</sup> Globe Business Media Group, Lexology

<sup>92</sup> Euromoney Institutional Investor PLC. Booming Gold Production in Mongolia After Tax Decrease

<sup>93</sup> Report: Gold Market Study, Ulaanbaatar (March 2017)

### 7.1.2 Amendments to the Minerals Act. The licensing procedure

The second series of amendments to the Minerals Act came into force on July 1, 2014. Simultaneously with the amendment, the Mongolian Parliament adopted the long-awaited Law of Mongolia Repealing *the Law on Prohibition of Granting Exploration Licenses* (the Prohibition Repealing Law). The Law on Prohibition of Granting Exploration Licenses (the Prohibition Law) came into force on January 12, 2012, put a moratorium on the granting of exploration licenses. The Prohibition Law was the last of a long series of temporary moratoriums that the Mongolian Government had adopted from June 17, 2010. The Prohibition Repealing Law was a sign to the business community that the government of Mongolia was taking advanced measures in order to use the country's natural resources to revive its challenged economy.<sup>94</sup>

#### Key Changes

##### Exploration Licenses

- ▶ The maximum exploration period was increased from 9 to 12 years, while it became possible to extend the license for a third and final period of 3 years. Preliminary agreements, which had been used to delay the demand to proceed to production for up to 3 years, were prevented.
- ▶ Annual license fees of 5 USD per hectare apply from Year 10 to Year 12 with the lowest expenditure level set at 10 USD per hectare.
- ▶ The largest exploration license area was reduced from 400,000 hectare to 150,000 hectare.

##### Production Licenses

The following additional responsibilities were imposed on holders of mineral production licenses:

- ▶ to supply the products, manufactured products, and partly processed products to plants operating in Mongolia at market prices, and
- ▶ to employ workers for cooperation with the *Mineral Resources and Petroleum Authority of Mongolia (MRPAM)* in terms of environmental restoration and mining site closure.

##### Benefits for Mongol Employees, Suppliers, and Customers

- ▶ 90% of workers employed by holders of mineral production licences must be Mongolian citizens. The same applies to the workplace of any subcontractor working at their mine.

Holders of mineral production licences must primarily:

- ▶ procure goods and services and employ subcontractors from companies registered and paying taxes in Mongolia;
- ▶ supply partly processed/enriched products or those produced in the production license area to processing plants that operate in Mongolia at the prevailing market prices.

The previous iterations of the amendments stipulated that most suppliers must be Mongolian rather than registered and paying taxes in Mongolia. The amendments were criticized as being inconsistent with the Investment Law (2013) aimed at ensuring equal treatment of foreign and local investors.

##### Feasibility, Work Plans, and Reporting

A feasibility study must be provided within 1 year from the date of the production license and must:

- ▶ specify clearly how mineral products will be transported and how the necessary infrastructure will be built, and
- ▶ demonstrate that the capital required to re-cultivate the deposit territory is available.

The time frames for preparing work plans and reports were modified:

- ▶ yearly exploration plans must be provided before April 15 of the current year;
- ▶ an exploration report must be provided before February 15 of each year; and

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<sup>94</sup> Globe Business Media Group, Lexology

- ▶ a production plan specifying the expected performance in the following year must be provided before December 1 of each year.

License Withdrawal

The amendments introduced a grace period of 30 days before license withdrawal for delayed license fee payments. A fine of 0.3% of the yearly license fee is imposed per day during this period.

If a license is withdrawn, it must be re-issued by tendering unless the reason for withdrawal is the holder's failure to pay the license fee or make the minimum expenses, in a timely manner.

If the court cancels the withdrawal of a license, the license remains valid.

Similarly, if the status of a special-purpose or reserved territory expires and the territory is returned to the license holder, the license remains valid.

The Government, Ministries, and Agencies

The amendments stipulate that the Government has the power to do, without limitation, the following:

- ▶ establish the National Geological Agency;
- ▶ approve contracts to be signed between license holders and local administrative authorities (i.e. cooperation agreements);
- ▶ determine the coordinates of areas available for production licensing;
- ▶ delimitate strategic deposits; and
- ▶ grant a new license for a new site as a compensation where the government withdraws a license for the purposes of national security or large-scale project implementation.

7.1.3 The results of the reforms

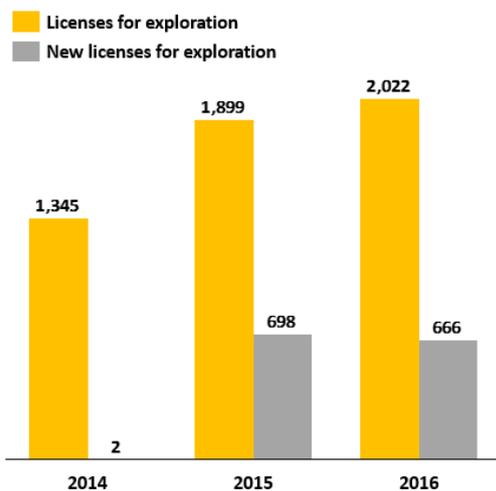


Figure 75. The number of exploration licenses

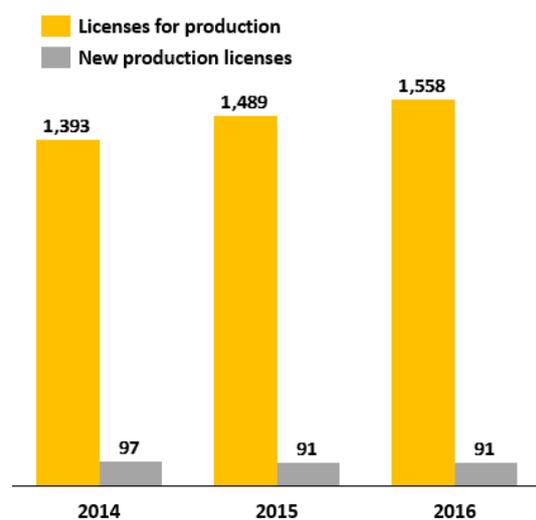


Figure 76. The number of production licenses

The MRPAM was able to collect 42.8 billion Mongolian tugriks (MNT) in 2014, 39.4 billion MNT in 2015, and 34.3 billion MNT in 2016 for the state and local budgets from licensing fees and services. The Cadastral Department of the MRPAM started issuing mineral production licenses under the amendments to the Minerals Act in 2014 based on applications of January 26, 2015 according to the following procedure (see Figure 77).

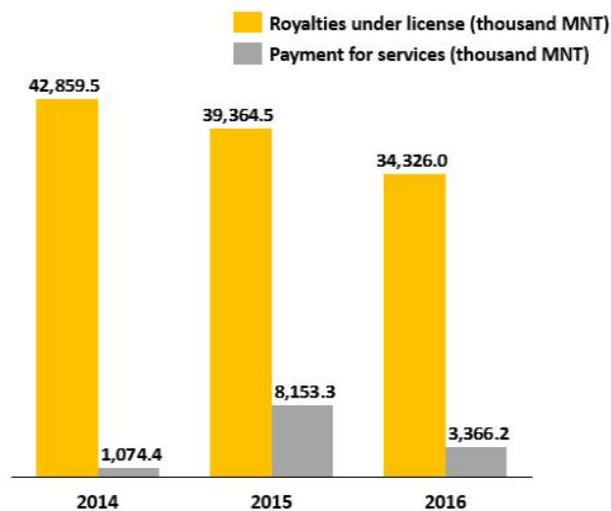


Figure 77. Licensing and service payments collected by the MRPAM

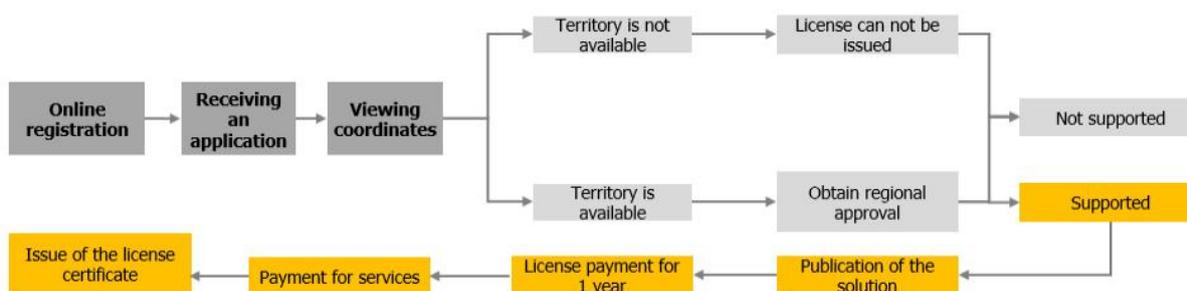


Figure 78. Online issuance of production licensing

The total area available for new production licenses was about 13.26 million ha, or 63.5% of the 20.9 million ha of state-owned Mongolian land. The Cadastral Department received 3.915 online applications for production licenses, of which 1,580 were rejected as delayed. Feedback was provided for the remaining 2,235 requests, which were further processed.<sup>95</sup>

### 7.1.4 The Investment Law. Stabilization certificates

The Investment Law of Mongolia was adopted by the Parliament on October 3, 2013 and came into force on November 1, 2013. The Investment Law replaced the previous Foreign Investment Law of Mongolia, adopted in 1993, and the Strategic Foreign Investment Law (SFI Law) of 2012.

The purpose of the 2013 Investment Law is to establish the legal rights and responsibilities of investors in Mongolia, stabilize the taxation system, ensure benefits to encourage investment, and determine the powers and duties of the regulatory authority for investment. The difference between a foreign investor and a local investor according to the 2013 Investment Law is not the investor's nationality but the investor's place of incorporation/residence. That is, a foreign investor residing in Mongolia is to be viewed as a domestic one, while a Mongolian investor residing abroad is to be regarded as a foreign investor.<sup>96</sup>

<sup>95</sup> Mineral Resources And Petroleum Authority Of Mongolia. The Annual Report 2016

<sup>96</sup> Mongolia Extractive Industries Transparency Initiative. Mongolia Ninth Eiti Reconciliation Report 2014 (December 2015)

Essentially, the Investment Law:

- ▶ applies to both foreign and domestic direct investment.
  - ▶ Consolidates the registration process for the establishment of subsidiaries, in which private investment from foreign sources are to be registered with the Legal Entities Registration Office (LERO) only.
  - ▶ Cancels some requirements concerning the approval of foreign private investment (the Parliament has been excluded from the approval process).
  - ▶ Increases the minimum equity requirements for foreign-owned companies in Mongolia that have two or more foreign shareholders, obliging each foreign shareholder to contribute 100,000 USD if the foreign investor (shareholders) has an interest of 25% or more.
  - ▶ Defines a foreign state-owned entity (FSOE) as an "entity where a foreign state owns, whether directly or indirectly, over 50% of the company's issued stock."
  - ▶ Eliminates the classification of strategic economic sectors for foreign private investment while maintaining the requirements that certain equity investment by FSOE in sectors defined as having strategic importance under the SFI Law must be approved.
  - ▶ Appoints the Ministry of Economic Development the authorized body to approve the above FSOE investment.
  - ▶ Establishes a special committee authorized to decide on applications for stabilization certificates issued under the Investment Law.
  - ▶ Has given rise to Invest Mongolia.
  - ▶ Provides legal guarantees for the protection of investment in Mongolia as well as tax and non-tax encouragement to attract investment in Mongolia.
- Offers tax stabilization options such as Stabilization Certificates and Investment Agreements.

For more details on some of them, see below.

### Tax Privileges

The following tax privileges can be offered to investors:

- (a) exemption of certain taxes;
- (b) a preferential tax treatment;
- (c) accelerated depreciation deducted from taxable income; (d) carry-forward of losses; and
- (d) deduction of employee training costs from taxable income.

Moreover, an exemption of import duties and a reduced value added tax (VAT) rate (up to 0%) can be granted for equipment and technology imported for the following purposes at the construction stage:

- (a) plants for processing construction materials, oil, or agricultural produce, or export-oriented plants;
- (b) construction of nano-, bio-, or innovation technology plants; and
- (c) power plant or railroad construction.<sup>97</sup>

### Stabilization Certificates

According to the implementation procedure, the tax privileges apply not only to new products but those sold within 5 years before the Investment Law was adopted provided that they meets the requirements of the Investment Law. The investment amount is to be verified using audited financial reports. Besides, investors who have already signed investment or tax stabilization agreements with the Government are

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<sup>97</sup> Hogan Lovells. Mongolia revises its regulatory framework for foreign and domestic investment (October 2013)

not entitled to apply for a Stabilization Certificates. Tax rate stabilization means that the organization can use a fixed or, should a reduction take place, reduced rate for the taxes listed below throughout the validity period of the certificate;

The rates of the following taxes, charges, and duties can be stabilized under stabilization certificates for the respective validity periods:

- ▶ corporate income tax;
- ▶ customs duty;
- ▶ value added tax;
- ▶ mining royalty.

The regulatory authority for investment shall decide on an application for a certificate within 30 (thirty) days from its receipt date. Certificates can have a validity period for up to 27 years.<sup>98</sup>

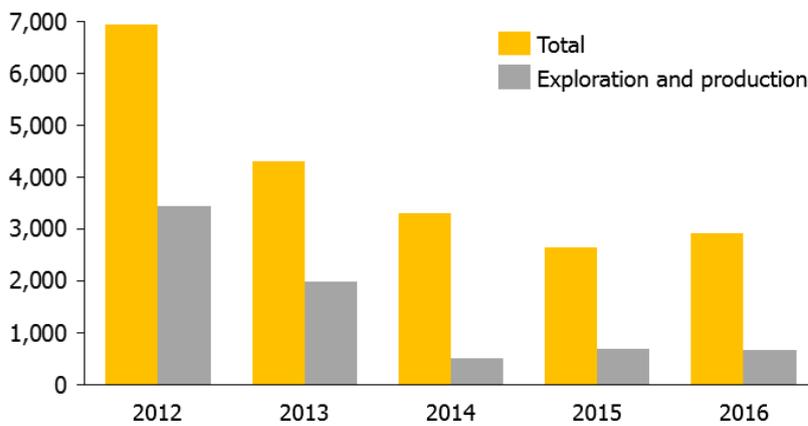


Figure 79. Investments in Mongolian economy in 2012–2016, millions USD

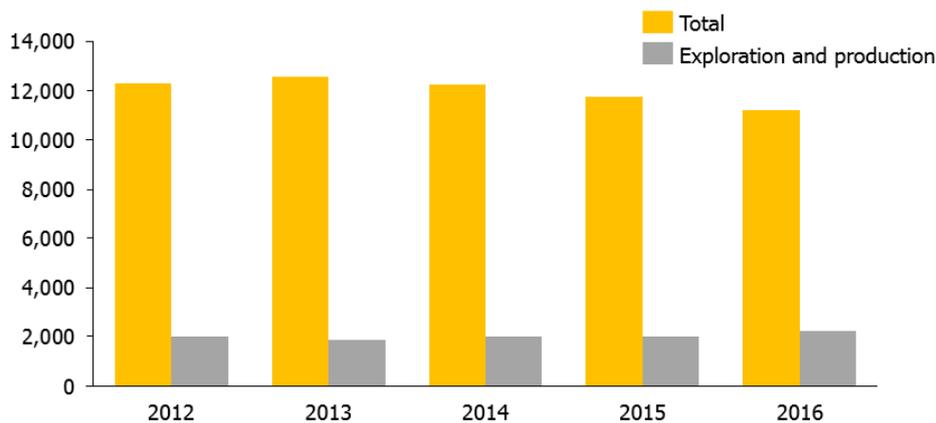


Figure 80. Mongolia's GDP in 2012–2016, USD millions<sup>99</sup>

<sup>98</sup> Mongolian Law On Investment, Ulaanbaatar City (October 2013)

<sup>99</sup> Mongolian Statistical Information Service

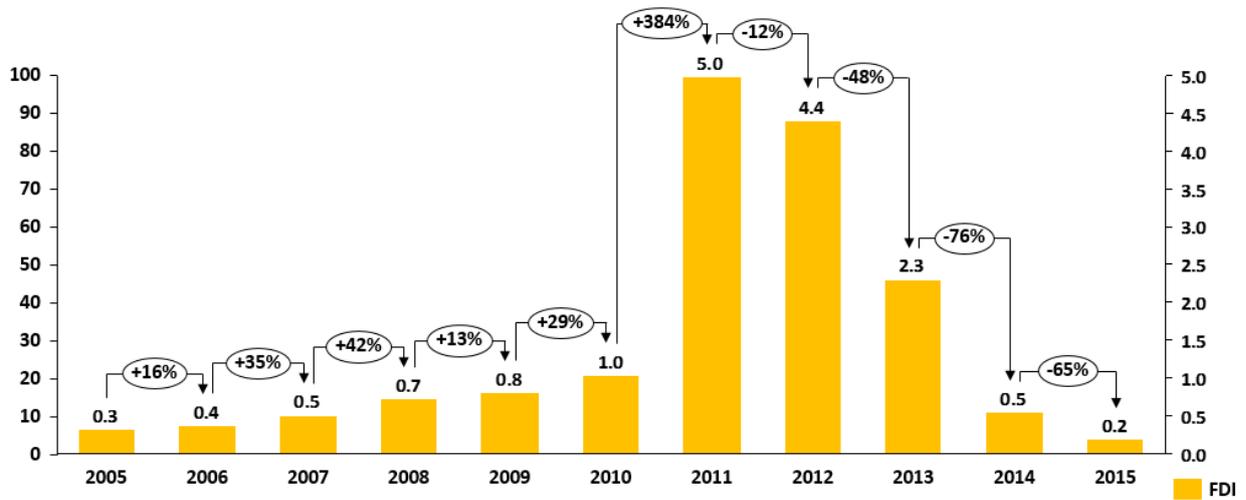


Figure 81. Foreign direct investment, billions USD <sup>100</sup>

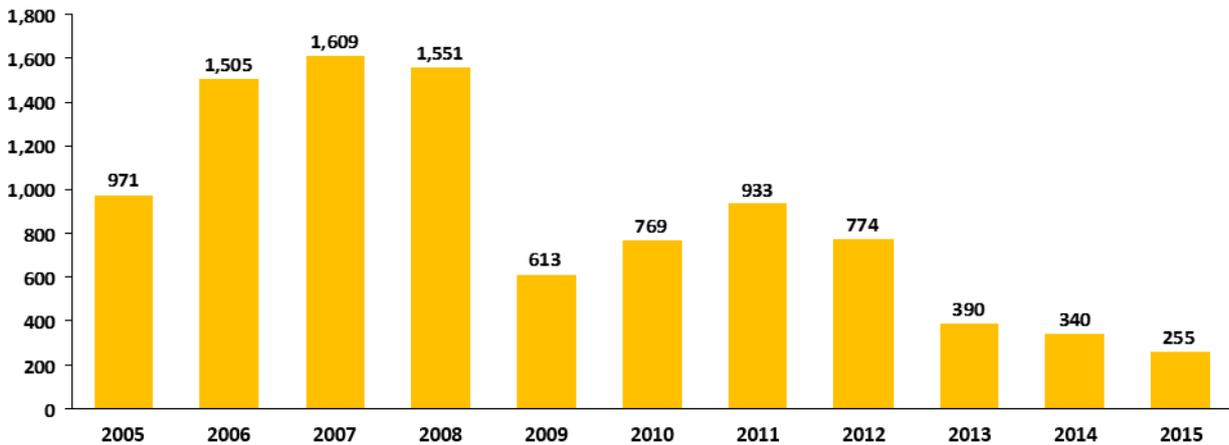


Figure 82. The number of foreign-owned companies

The increase in FDI in 2011 was largely due to the attractiveness of the non-ferrous metal sector due to a rise in gold and copper prices, investment in Oyu Tolgoi, and the global mining boom. The FDI drop in 2013 was caused by the suspension of the 2nd phase of the Oyu Tolgoi deposit and decreased prices for primary commodities.<sup>101</sup>

### The FSL

In 2010, during the period of high prices for primary commodities and rapid economic growth, the Mongolian Parliament adopted the Financial Stability Law. The law entered into force in 2013, aimed at ensuring sustainable development of Mongolia's economy and protecting it against volatility of the primary

<sup>100</sup> Your Guide To Invest In Mongolia 2016, Ulaanbaatar (2016)

<sup>101</sup> Report on the Transition Process for 2015: Restore Equilibrium in Finance

commodity market as well as an inflow and outflow of foreign direct investment (FDI) by establishing the Financial Stability Fund (FSF).<sup>102</sup>

The FSL adopted three complementary rules to ensure fiscal discipline:

- ▶ limiting structural deficit at 2% of the GDP (implemented since 2013);
- ▶ limiting expenditure growth depending on GDP growth rate not including the contribution of extractive businesses (implemented since 2013); and
- ▶ limiting the national debt at 40% of the nominal GDP (net present value, NPV, implemented since 2014).<sup>103</sup>

In February 2015, the Government adopted a series of amendments to the FSL and the new Law on Debt Management: (1) temporarily raising the threshold of structural fiscal deficit (5% of the GDP in 2015, 4% of the GDP in 2016, and 3% of the GDP in 2017), fixed at 2% of the GDP for 2018 and the subsequent period;

(2) including non-commercial expenditures of the DBM (Development Bank of Mongolia) on the budget as part of the structural budget deficit; (3) temporarily raising the debt threshold (58.3% in 2015, 55% in 2016, and 50% in 2017), fixed at 40% for 2018 and the subsequent period; and (4) narrowing the definition of debt from public to common national debt (the new definition excluding the debt of state-owned enterprises and state guaranties fully assured with government securities).<sup>104</sup>

### The VAT

The Mongolian Parliament adopted the new VAT Law in July 2015; it entered into force on January 1, 2016. Key changes to the policy included an increased target VAT revenue, enabled through the prohibition of deducting any incoming credit or compensation for capital costs, mineral exploration and production; a raised VAT registration threshold for VAT exemption for small business owners and minimization of tax collection costs; the law also introduced a new mechanism to support business-client relations and fight shadow economy through VAT refund for end users.

*The VAT rate remained at 10%* according to the VAT regime; a VAT registration threshold had of 10 million MNT of yearly turnover had been previously established. The threshold had not increased since 2007, while the Mongolian currency had been depreciating for years. The new law raised the threshold to 50 million MNT (25,000 USD in 2015) to exempt small business owners of VAT liability.

Entities can use the new registration rules on a voluntary basis provided that the value of their taxable turnover is at least 20% of the threshold of MNT 50 million. According to the previous law, at least 80% of the threshold value was required for voluntary requests, or an investment of USD 2 million in Mongolia. Neither applies at present.

The law was meant to ensure high VAT revenue for the state budget by prohibiting the deduction of incoming credits or compensations due to an increased budgetary deficit. In this respect any incoming amount spent for the business' capital costs cannot be deducted as incoming credits or compensations. This means that any incoming VAT paid when purchasing, acquiring, or developing "fixed assets" is not subject to compensation regardless of whether the entity is a VAT payer. Another, more significant restriction of incoming credit is that incoming VAT on mineral prospecting and exploration is not subject to compensation according to the new regulations.<sup>105</sup>

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<sup>102</sup> Fiscal Sustainability in Mongolia (August 2017)

<sup>103</sup> Mongolia: 2013 Article IV Consultation-Staff Report; Press Release and Statement by the Executive Director for Mongolia (March 2014)

<sup>104</sup> Fiscal Rules at a Glance, International Monetary Fund (March 2017), page 53

<sup>105</sup> Mongolia adopts new VAT law, EY (September 2015)

## 7.2 REPUBLIC OF KAZAKHSTAN

In 2016, Kazakhstan's mining and metallurgy made about 28% of the country's total industrial output, of which mining accounted for 10% and metallurgy for 18%. According to the 2016 statistics, extractive industries excluding oil and gas made 11.5% of the GDP of the Republic of Kazakhstan.<sup>106</sup>

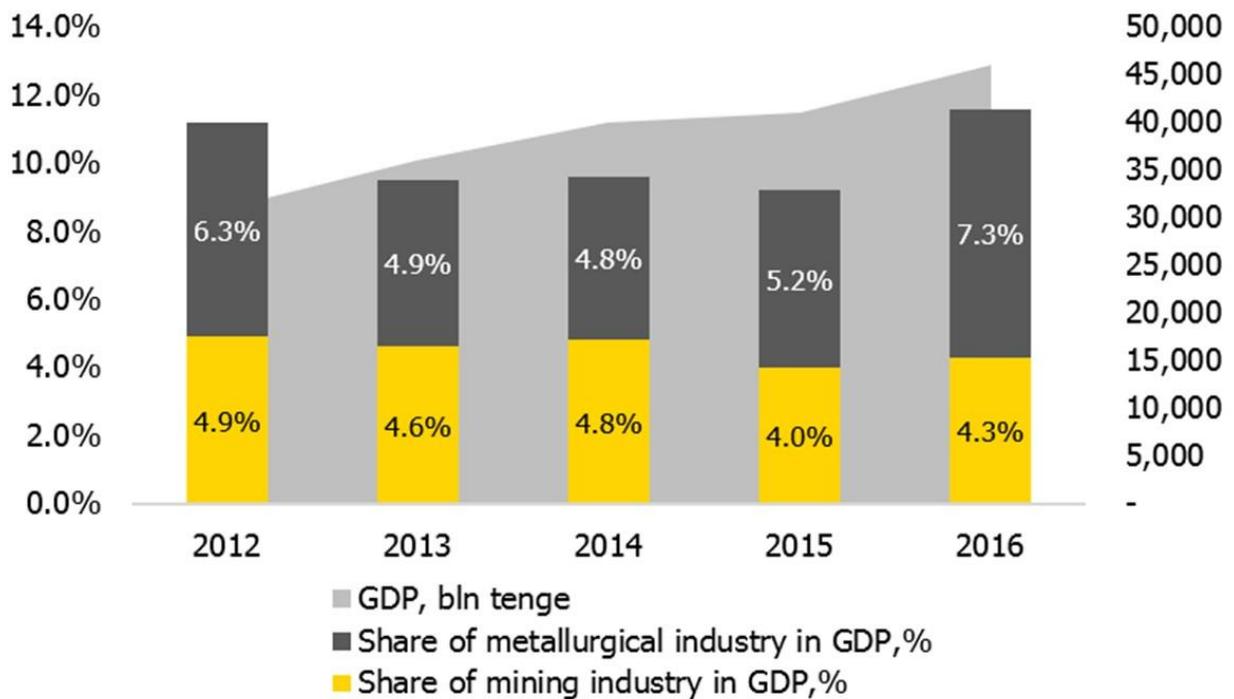


Figure 83. Changes in the share of national GDP represented by Kazakhstan's mining and industry, 2012 to 2016

### 7.2.1 The new Law on Subsoil and Subsoil Use

The first Kazakh Code on Subsoil and Mineral Resources Processing was adopted in 1992 to be later divided into two laws to reflect the structure of the oil and gas sector: the Oil Law and the Law on Subsoil and Subsoil Use. In 2010, the laws were merged in the Law on Subsoil and Subsoil Use without taking into account the specific structure of the mining and oil industries, causing certain difficulties in the development of mining as new deposits were discovered.

The new Code Subsoil and Subsoil Use, adopted in 2017, reflects the conditions of the spheres and the international practices of subsoil use regulation. In order to stimulate and develop the junior company market, the draft Code provided for availability of geological data, transition to licensed subsoil operations, and authorization to subsoil use on a first-application basis, in which the right to use subsoil was to be granted within days. It also provided for a transition from total governmental control to economic mechanisms encouraging quick exploration.

As the RK First Vice-Minister for Investment and Development mentioned in his 2017 speech, the current regime could be maintained for existing contracts in order to keep budgetary revenue and ensure stable conditions of subsoil use while providing for a transition to the license-based regime on a voluntary basis.

<sup>106</sup> RFCA Ratings. Mining and metallurgy industry of the Republic of Kazakhstan: results of 2016 and operational data for 2017 (August 2017)

A requirement for reporting mineral resources and reserve using a CRIRSC was introduced. Environmental and industrial safety were to be enhanced and a modern practice of recovery for subsoil use was to be implemented. Besides, the Code introduced the concept of prospecting for the development of placer deposits of precious metals.

It also mentioned that the Australian model of licensing for subsoil use was to be adopted for production. The production period was specified to be 25 years with an option of renewal. It provided for responsibilities associated with subsoil use such as a fixed minimum amount of expenditures, fixed rental payments, employee training and research and development (R&D) costs. A new instrument was to be implemented to encourage solid mineral processing, namely processing agreements for solid mineral processing projects with investment of at least 700,000,000 times the MCI from the subsoil users.<sup>107</sup>

### 7.2.2 The new Tax Code

Changes to the RK Tax Code that involve subsoil users in solid mineral production include the following:<sup>108</sup>

1. The excess profit tax abolished for solid minerals and the rent tax rate increased for coal.
2. The commercial discovery bonus abolished.
3. Rental payments for solid minerals.
4. Past costs payments abolished.
5. A decreased mineral production tax (MPT) rate for tin.

In addition, it should be noted that to increase the number of operating mining assets, a tax deduction for unprofitable exploration costs was introduced. Therefore, if no commercial reserves of mineral resources are discovered by geological prospecting, the costs incurred by the company can be deducted from contract revenues from other production contracts, if any.<sup>109</sup>

#### The Excess Profit Tax Abolished for Solid Minerals

Excess profit taxes (EPT) are not typical for mining in international practice, often impeding investment in the industry where it is present. In Kazakhstan it had been paid mostly by coal producers (in solid minerals). Article 753 of the new Tax Code exempts the super-profit tax for solid minerals.

Therefore, the tax burden of the EPT is to be transferred to the rent export tax for coal production: according to Article 716, the rate has been increased from 2.1% to 4.7%.<sup>110</sup>

#### The Commercial Discovery Bonus Abolished

This is meant to prevent the so-called punishment for success by abolishing the commercial discovery bonus for all contracts, new and existing. The government expects to thus encourage exploration in the country.

#### Rental Payments for Solid Minerals

A progressive rate of rental payments shall apply to new contracts (licenses) for subsoil use in solid minerals at the exploration stage, and a uniform rate is to be introduced for production. The purpose is to encourage accelerated exploration. According to the subsoil plot granted on the basis of a license for the exploration or extraction of solid minerals, the payment rates are determined based on the size of the MRP established by the law on the republican budget and valid for the 1st day of the tax period and amounted<sup>111</sup>:

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<sup>107</sup> Capital - the center of business information. The new Subsoil Code was developed taking into account the requirements of the WTO (September 2017)

<sup>108</sup> Official Internet Resource: Ministry of National Economy of the Republic of Kazakhstan, Taxation of subsoil users in the new Tax Code of the Republic of Kazakhstan

<sup>109</sup> Kursiv. New in Taxation of Mining (January 2018)

<sup>110</sup> Uchet. Regulatory and legal framework.

<sup>111</sup> Uchet. Regulatory and legal framework.

Table 22. Rates of lease payments

| Nº | Period  | Rates of payment (MRP) |
|----|---|------------------------|
| 1  | from 1 to 36 months of the license for exploration, for 1 block                         | 15                     |
| 2  | from 37 to 60 months of the license for exploration, for 1 block                        | 23                     |
| 3  | from 61 to 84 months of the license for exploration, for 1 block                        | 32                     |
| 4  | from the 85 <sup>th</sup> month of the license for exploration and further, for 1 block | 60                     |
| 5  | from 1 month of validity of the production license and further, for 1 km <sup>2</sup>   | 450                    |

### Past Costs Payments Abolished

The new Code has canceled payment for reimbursement of historical costs for new solid minerals licenses, but maintained for existing contracts. That is, the subsoil user who is carrying out activities under the license for exploration or production of solid minerals is not the payer of payment for reimbursement of historical costs, while observing the following conditions:

- u a license for the exploration or production of solid minerals was issued after December 31, 2017 in accordance with the RoK legislation on subsoil and subsoil use;
- u the territory for which a license for the exploration or production of solid minerals is granted does not apply to the territory for which prior to January 1, 2018, the subsoil use right was granted under subsoil use contracts in accordance with the legislation of the Republic of Kazakhstan on subsoil and subsoil use.<sup>112</sup>

### A decrease in the MPT rate for tin from 6% to 3%

Tin industry is expected to appear as a new branch of Kazakhstan's non-ferrous metal sector. However, tin production projects have an extremely low profitability with the current MPT rate of 6%.

The MPT rate is therefore was reduced to 3% according to the new Code. The initiators expect this to bring about over 600 new jobs and attract investment of about 100 billion KZT. In addition, the rates of MPT on rare and rare-earth metals (lithium, beryllium, tantalum, yttrium, etc.) are envisaged. Earlier, the data rates were set by the Government of the Republic of Kazakhstan.

## 7.3 THE REPUBLIC OF CHILE

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Mineral production is Chile's primary economic activity and a major factor in the country's economic development.

The mining industry made an average of 14.9% of Chile's GDP from 2006 to 2016, peaking at over 20% in 2006 and 2007. 7 out of 10 world's largest copper miners are situated in Chile. The world class deposits are large-scale long-term mines that are highly valued by major mining companies. The mining industry has accounted for about 60% of Chile's export revenue as the economic sector with the highest contribution to the budget in the past decade.

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<sup>112</sup> Uchet. Regulatory and legal framework.

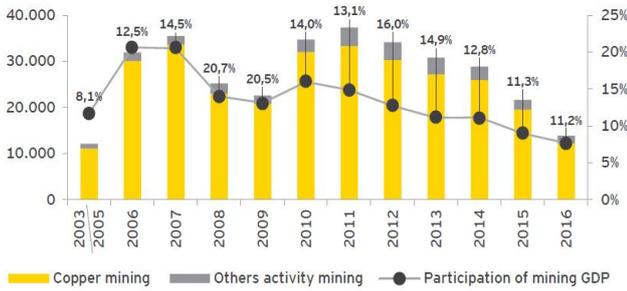


Figure 84. The contribution of the mining industry to GDP, millions USD

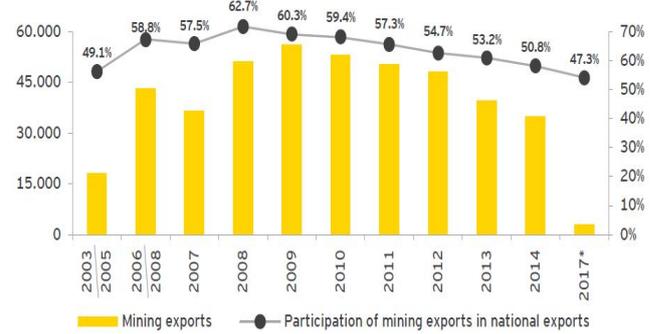


Figure 85. The export share of the mining industry

The attractiveness of mining in Chile is due to abundant minerals that concentrated in large deposits, often at high altitudes and in isolated areas, investor-friendly regulation as well as general economic and political stability, a well-established mining area with an extensive infrastructure of roads and ports, and highly skilled labor.

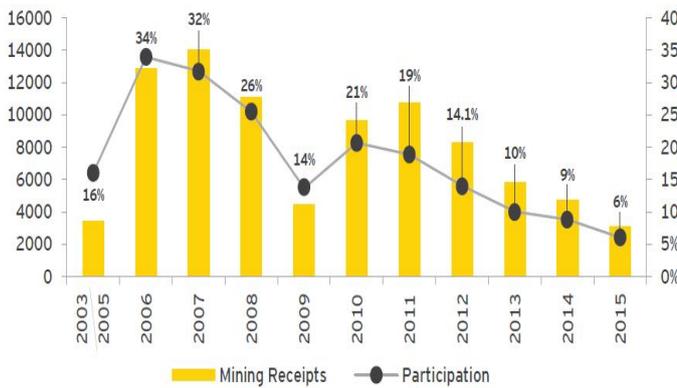


Figure 86. Revenue and payments of the mining industry, millions USD



Figure 87. Investment in Chile's mining industry and FDI share, millions USD

In 2015, FDI made 20.4% of the total investment in the country's mining industry.

Chile's mining industry is the leading employer account for over 8% of both direct and indirect jobs.

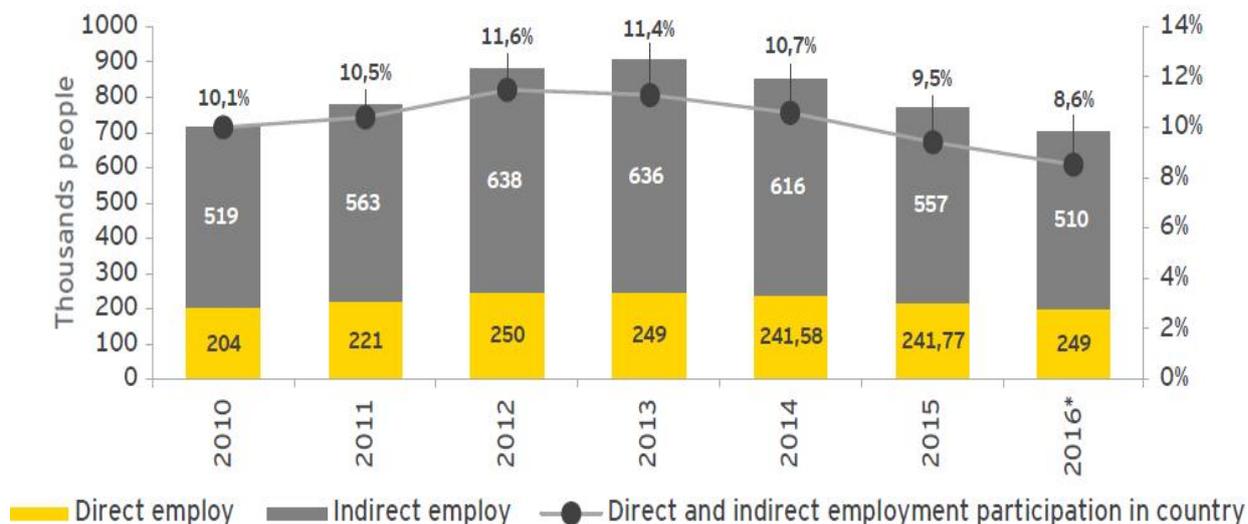


Figure 88. Numer of employees in the mining industry and ints contribution to employment, thousands pf people<sup>113</sup>

The standard tax treatment applies to all mid-sized and large businesses in Chile to regulate mining. Chile's tax treatment of mining and metal industries combines a corporate income tax with a special mining tax. Besides, mining companies are subject to special taxation on revenue from mine operation. However, mining companies as fixed-asset exporters and investors can apply for special VAT privileges. Moreover, since mining companies invest a lot in fixed assets, it is essential that the accelerated depreciation method is an option that every taxpayer has.

### 7.3.1 The Tax Reform. The corporate income tax (CIT)

The corporate income tax applies to all businesses that carry out commercial operations. In September 2014, Chile adopted a tax reform (Law No. 20.780) that is to be implemented stagewise from October 2014 and enter into force completely by 2018. The corporate income tax rate was 24% throughout 2016. It was to be paid in the April of the following year. The tax is imposed on accrued income on a yearly basis. It is based on profit net of special mining tax. An additional tax of 35% is imposed on any income that is withdrawn, distributed as dividends, or sent abroad to non-resident persons or entities. However, the entity gets a tax credit for the tax paid as the CIT. In case partners or shareholders of a company distributing profit are persons residing in Chile, the global cumulative tax has a progressive rate of 0% to 40%. According to the tax reform implemented under Law No. 20.780 and the simplification thereof, Law No. 20.899 (the Reform) has completely replaced the previously integrated income tax system with two new corporate tax regimes in place since January 1, 2017. Until December 31, 2016, companies entitled to choose either of the tax regimes under the Reform informed the Internal Revenue Service (IRS) of their respective choice:

- ▶ The Attributed Regime (14A): according to this regimes any income received or accrued by a company are to be attributed to its shareholders or partners regardless of the effective dividend distribution. A 25% CIT is to be imposed on companies. The CIT paid by any company is to be offset fully against the total taxes imposed on the shareholders (the global cumulative tax with marginal progressive limits of 0% to 35% or an additional tax with a fixed rate of 35%). That is, a common rate of 35% will be imposed on taxpayers.
- ▶ The Semi-Integrated Regime (14B): according to the semi-integrated regime, shareholders or partners will only be subject to taxation based on the distribution of the company's dividends or

<sup>113</sup> Chile's mining and metals investment guide 2016-2017, EY (May 2017)

profit. A 25.5% CIT will be imposed on companies, which will be increased to 27% from 2018. According to this tax regime, only 65% of the CIT paid can be used as an offset against the total taxes (except for resident shareholders under a tax agreement). That is, with the semi-integrated regime the total tax burden on non-resident shareholders will be 35% if they reside in a member country of the agreement or 44.45% otherwise.<sup>114</sup>

| Fiscal year 2017                             | 14A   | 14B   | 14B without tax agreements |
|--|-------|-------|----------------------------|
| The company's taxable income in Chile        | 1000  | 1000  | 1000                       |
| CIT  | (250) | (255) | (255)                      |
| Profit allotted to the foreign owned company | 750   | 745   | 745                        |
| Additional tax base                          | 1000  | 1000  | 1000                       |
| Additional tax                               | (350) | (350) | (350)                      |
| CIT deduction                                | 250   | 255   | 165.75                     |
| Additional tax payable                       | (100) | (95)  | (184.25)                   |
| Effective rate                               | 35%   | 35%   | 43.925%                    |

| Fiscal year 2018                             | 14A   | 14B   | 14B without tax agreements |
|--|-------|-------|----------------------------|
| The company's taxable income in Chile        | 1000  | 1000  | 1000                       |
| CIT  | (250) | (270) | (270)                      |
| Profit allotted to the foreign owned company | 750   | 730   | 730                        |
| Additional tax base                          | 1000  | 1000  | 1000                       |
| Additional tax                               | (350) | (350) | (350)                      |
| CIT deduction                                | 250   | 270   | 175.5                      |
| Additional tax payable                       | (100) | (80)  | (174.5)                    |
| Effective rate                               | 35%   | 35%   | 44.45%                     |

### 7.3.2 Special mining tax for local companies

#### Provisions for Local Companies

The mining tax, locally referred as the "mining royalty" tax, was enacted in 2006 and modified in 2010. It applies to commercialization of metallic and non-metallic resources. It is important to highlight that it is not an actual royalty, but rather a progressive tax instrument paid on operating income. The tax is between 0 and 14% depending on the firm's profit.

- ▶ (a) Sales less than equivalent to 12,000 tons of refined copper per year: exempt.
- ▶ (b) sales equivalent to between 12 000 and 50,000 tons of refined copper per year: 0.5% to 4.5%; and
- ▶ (c) sales equivalent to over 50,000 tons of refined copper per year: an effective tax rate of 5% to 14% applies depending on the operating margin.

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<sup>114</sup> Kura Minerals Resources in Latin America

The tax is to be filled and paid on an annual basis with preliminary monthly payments for the yearly tax liability at 0.3% of monthly mineral sales. The advance payment rate can be adjusted year-on-year depending on the respective annual tax liability.

The tax is applied in a progressive fashion with a maximum tax rate of 14% for firms where the operating margins are higher than 85%. Under a previous version of the mining tax law, which was in place from 2006 to 2010, the tax rate varied from 4 to 9% depending on the firm's profit share. When the new amendment to the mining tax law was passed in 2010, firms were allowed to continue with the previous tax rate for eight years. If they chose to apply the new tax rates immediately, however, they would pay the higher tax rate of 5% (in the lower profit margin bracket) for three years, and then revert to the previous sliding scale of 4–9% for the following eight years.

Those holding a foreign investment contract as of December 1, 2004 are protected under the a general tax stability and/or a stability pact under Article 11 bis of the Foreign Investment Statute or DL 600 and are not affected by the special mining tax for as long as their stability lasts (usually 20 years).

#### Provisions for Foreign Companies

Holders of a foreign investment contract as of November 30, 2004 were given the option to waive their general tax stability and the stability regime of Article 11 bis and elect for the stability regime contained in Article 11 ter of the DL 600. In this case, the special tax on mining activity would apply at a 4% flat rate for a period of 12 years. The election had to be made before November 30, 2005.

Foreign investment contract holders whose contracts were in effect after December 1, 2004 were also given the option to choose the stability regime under Article 11 ter, but in this case the tax on mining activity would apply at a 5% rate and for a period of 15 years. The election had to be made before November 30, 2005.

Most major mining companies that had Article 11 bis stability regimes chose to waive this right and elect for the Article 11 ter stability and become subject to the special tax on mining activity at a 4% rate for 12 years.

Due to the modifications introduced by Law No. 20.469, holders of any stability regime reflected above have been given the option to waive that stability regime and elect a new one that will imply a higher specific tax rate for 2010–2012 (rates ranging from 4% to 9%) but will provide for an extended stability period of six years under the new rates (5%–14%) from the moment that the original stability regime would have been considered ended.

These decisions to elect one of the regimes had to be made by January 17, 2011.

Tax Reform Law 20.780, enacted in 2014 (the Tax Reform Act), repealed the DL 600 effective January 1, 2016. In its place, the Direct Foreign Investment Framework Act (IED Act) was approved and enacted on June 2015, creating the new foreign investment framework under the above-mentioned 2014 Tax Reform Act.

### 7.3.3 Changes to foreign investment regulations

The rules of the statute apply to foreign investors such as the following: foreign citizens, foreign corporations, and non-resident Chilean citizens.

The contract must specify the conditions on which the foreign investor is to invest. The period must not exceed eight years for investment in mining and three years for other industries. The Foreign Investment Committee can decide unanimously to extend the limits to 12 years for investment in mining companies and up to 8 years for investment in production as well as non-production extracting projects of at least 50 million USD.

### 7.3.4 Further modifications

Chilean Law Bill 20.848 enacted on June 2015, defines the new framework for foreign investment in Chile. The Direct Foreign Investment Act (IED) sets direct foreign investment as the transfer of foreign capital or assets, owned or controlled by a foreign investor, to Chile for a value greater than or equal to 5,000,000 USD or the equivalent in another foreign currency, with an official application that must be submitted beforehand so that the new Foreign Investment Promotion Agency can verify compliance. The above certificate enables the foreign investor to exercise rights under the law such as access to the official foreign exchange market, a number of VAT exemptions, and more.

The same regulation is to be applied to foreign and local investors under the Foreign Investment Act. That is, foreign investors have the same rights and guarantees as local ones, in which arbitrary or discretionary discrimination is prohibited.

An investor also will be eligible for an exemption from VAT on the import of capital assets. The prerequisites of the Treasury Department for the exemption are as follows:

- a) The capital assets must be meant for the development/exploration of or production at mining, industrial, forest, power, infrastructure, telecommunication, research, or technological projects in Chile.
- b) Investment in fixed assets must be at least 5,000,000 USD.
- c) The assets must be used for projects generating taxable, non-taxable or exempt income at least 12 months after fixed assets are imported or acquired to Chile.

Besides, two new institutions have been established to attract foreign investment, namely the Foreign Investment Promotion Agency and the Foreign Investment Committee.<sup>115</sup>

## 7.4 THE REPUBLIC OF PERU

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Peru is one of the most extensively mineralized countries of the world. It is one of the world's biggest producers of metals. Currently, it is the second largest producer of copper in the world and a major supplier of gold (ranking 6th), silver (2nd), and zinc. Peru has 11% of the world's copper reserves, 5% of its gold, 21% of its silver, 12.5 of zinc, 8% of lead, and 3% of tin reserves.<sup>116</sup>

It is estimated that in 2016, mining and oil production represented 17.6% of the GDP, while revenue from mineral export reached 19 billion USD at the end of 2016, making 58% of the country's total export. Copper was the leading export article, followed by gold, lead, zinc, iron, silver, tin, and molybdenum.

Even though the absolute contribution of the mining industry to the country's GDP is growing, the relative contribution of mining to Peruvian GDP has been decreasing since 2010 with an average fall of 14.8% from 2004 to 2009 and 12.4% from 2010 to 2014. Both absolute and relative contributions of the mining industry to the country's export have been decreasing since 2011. The average contribution from 2004 to 2010 was 60% of the total export, which value decreased by an average of 52% from 2011 to 2014.

The government's revenue from minerals have been unstable over the past decade. From 2004 to 2007, the mineral revenue multiplied by a factor of more than nine, from 365 million USD in 2004 to as much as 3,411 million USD in 2007. The increase was mainly due to the following: increasing prices for minerals at the international market from 2004 to 2007; royalties introduced in 2004; and the payment of the corporate income tax from 2005 by the Antamina mining company, which had been previously exempt from the corporate income tax under the stabilization provisions of its contract. The slackening of global economy in 2008 and 2009 did affect Peru as well. Peru's economy began to revive in 2010 and 2011, but the revenue from mineral production began to drop again in 2012. That was mainly caused by a decrease in international prices and the fiscal instruments that the government implemented in 2011.

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<sup>115</sup> The same as the previous 2.

<sup>116</sup> Peru's mining & metals investment guide 2017-2018, EY (2017)

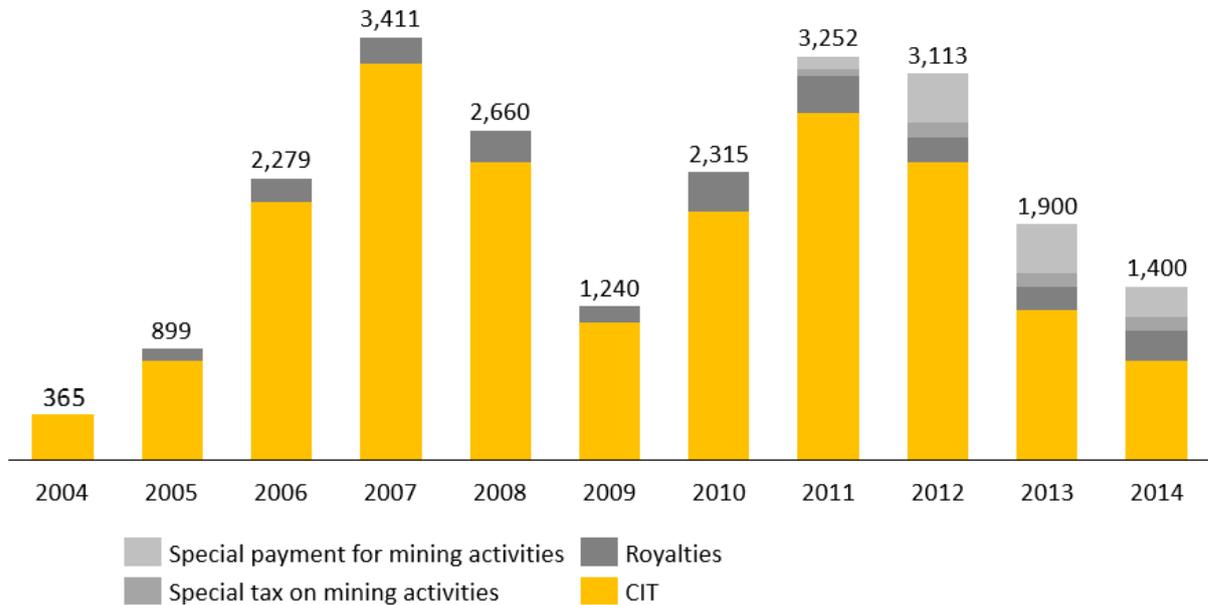


Figure 89. Governmental revenue from mining companies, millions USD

A large portion of the revenue from mining (about 60.3% in 2014) is distributed between municipal and regional governments (hereinafter referred to as subnational governments).<sup>117</sup>



Figure 90. Tax Revenue and the Share of the Mining Industry<sup>118</sup>

The national government largely shares two types of mineral extraction revenue with subnational governments: (i) Canon Minero comprising 50% of the corporate income tax collected from mining firms; and (ii) mineral royalties. A third source of revenue, the annual sub-surface fee, Derecho de Vigencia, only represents around 6.6% of the total revenue shared with subnational governments in 2014.

<sup>117</sup> Natural Resource Governance Institute. Mineral Revenue Sharing in Peru (April 2016)

<sup>118</sup> ESID Working Paper No. 79; Mining, political settlements and inclusive development in Peru

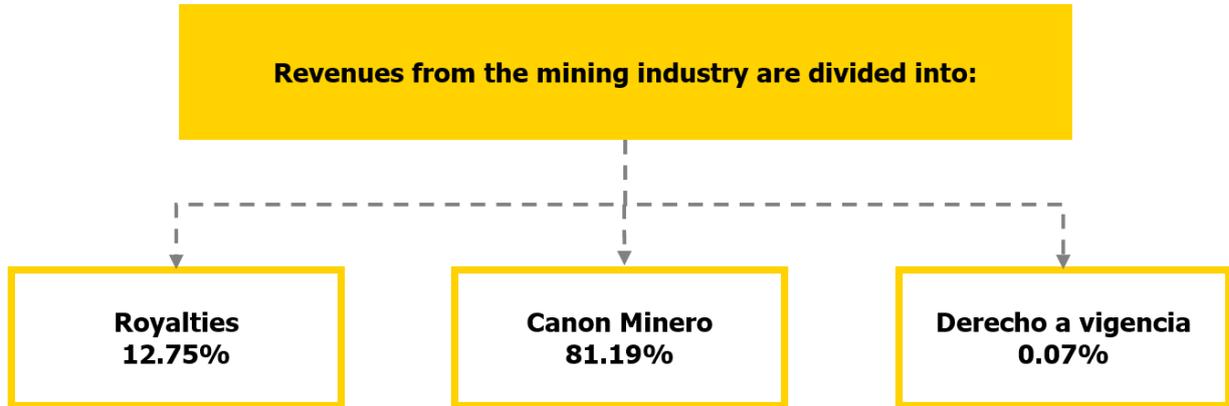


Figure 91. State revenue from mining companies allotted to subnational governments (the average for 2010 to 2013)

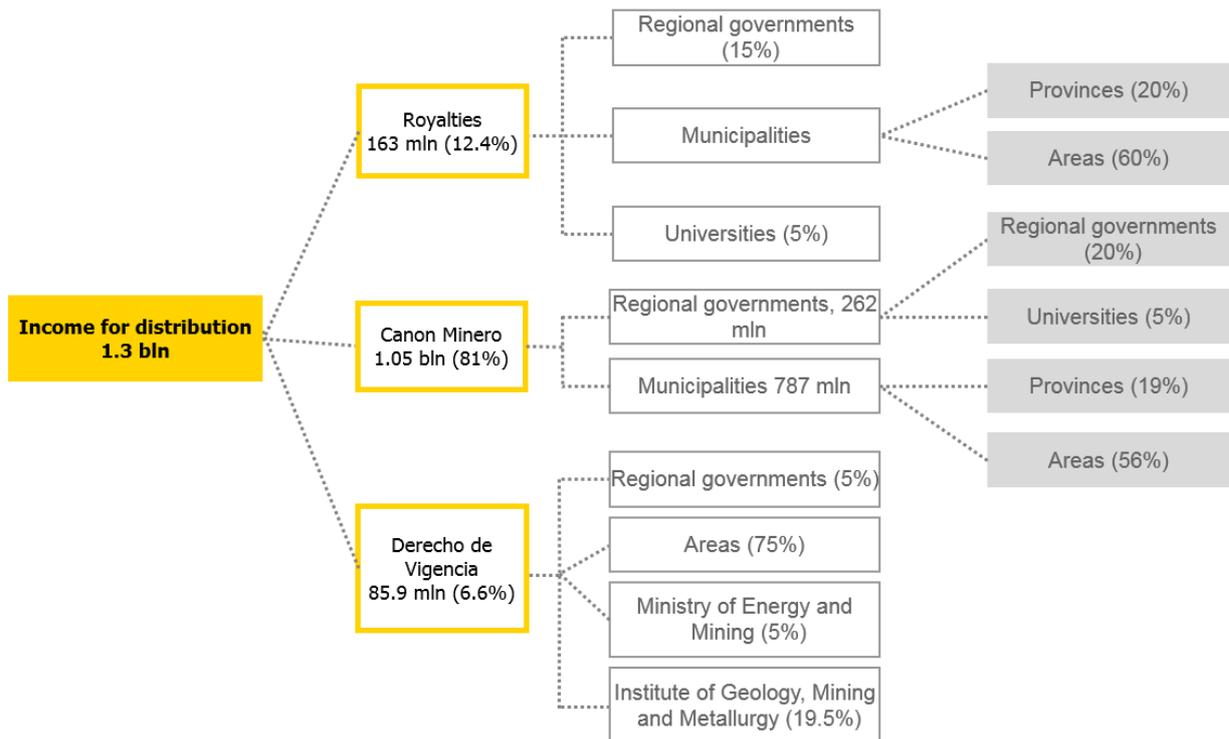


Figure 92. Distribution of state revenue from the mining industry, 2014 <sup>119</sup>

The total royalty amount in 2014 was 163 million USD, Canon Minero on CIT making 1.05 billion USD that was distributed among municipal (a greater portion) and regional governments as well as universities, and Derecho de Vigencia providing 85.9 million USD that was allotted to regional governments, districts, the Ministry of Energy and Mines, and the Geological, Mining, and Metallurgical Institute.

<sup>119</sup> Natural Resource Governance Institute. Peru: Mineral Revenue Sharing

The distribution of mining revenues is much-disputed, which causes frequent modifications of the legislation.

Table 23. Modifications to certain mining laws and regulations in Peru

| Law No.             | Title/Description  | Issue year |
|---------------------|--|------------|
| Decree No. 708      | Law of Investment Promotion in the Mining Industry   | 1991       |
| Decree No. 014-92   | Unique Ordered Text on the 1981 General Mining Law   | 1992       |
| Decree No. 88-95    | On establishing a share of revenue from the corporate income tax to be distributed to subnational governments  | 1995       |
| Law No. 27506       | The First Law of Canon   | 2001       |
| Decree No. 913      | Law that substitutes articles 39 and 57 of Decree No. 014-92.  | 2001       |
| Law No. 27651       | Law of formalization and promotion of small-scale and artisanal mining   | 2002       |
| Decree 261-2002     | On the distribution of Canon Minero resources  | 2002       |
| Law No. 27783       | General Decentralization Law   | 2002       |
| Law No. 28077       | Law modifying several articles of Law No   | 2003       |
| Law No. 28258       | Mining Royalties Law   | 2004       |
| Law No. 28322       | Law modifying certain articles of Law No. 75706 modified under Law No. 28077   | 2004       |
| Law No. 28327       | Law modifying Article 57 of the Unique Ordered Text of the 1981 General Mining Law   | 2004       |
| Decree No. 187-2004 | Modification to the Canon Law  | 2004       |
| Decree No. 071-2006 | Establishing the Solidarity Mining Program (Programa Minero de Solidaridad con el Pueblo – PMSP)   | 2006       |
| Law No. 29169       | Law that includes regional governments in the distribution of revenue from Derecho a Vigencia including payments from small-scale and artisanal miners | 2008       |
| Law No. 29788       | Law modifying Royalty Law No. 28258  | 2011       |
| Law No. 29789       | Law on the Establishment of the Special Mining Tax   | 2011       |
| Law No. 29790       | Law that establishes the legal framework for the Special Obligation on Mining  | 2011       |
| Decree No. 058-2011 | On emergency and special economic and financial measures f to maintain and promote the dynamism of the domestic economy                                | 2011       |
| Decree No. 005-2014 | Law that promotes regional and local public investment with the participation of the private sector  | 2014       |

Below is a summary of some of them that are of relevance to this study and might be interesting to the Kyrgyz Republic.

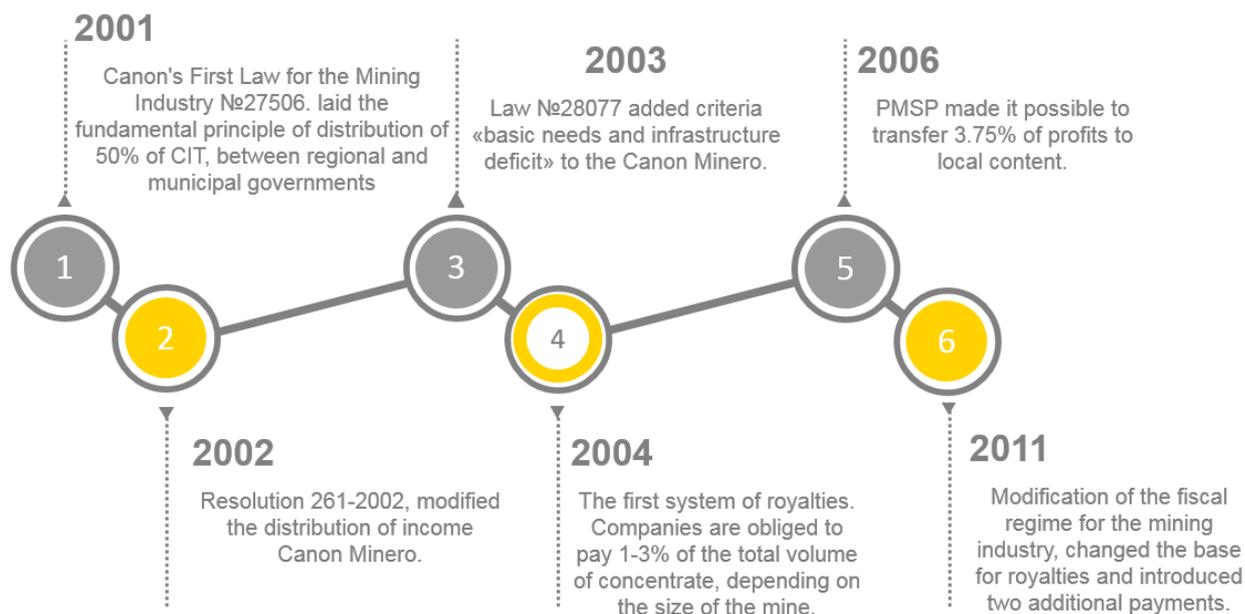


Figure 93. The Key Laws That Have Shaped Peru's Mining

#### 7.4.1 Canon Minero

The law reflects the advance of the revenue distribution system and provides an overview of how resource revenue is collected to be divided among subnational governments within Peru's broadest intergovernmental transfer system. In 2001, president Valentin Paniagua passed Law 27506 increasing the share of corporate income tax to be distributed to subnational governments from 20% to 50%. A few months after Law 27506 was published, the internal distribution of the Canon Minero was changed through Ministerial Resolution No.261-2002. Municipal (i.e., district and province) governments of the producing province would be allocated 20% of Canon Minero based on their urban and rural population, municipal governments of the producing region would be allocated 60% based on their population, and the regional government of the producing region would be allocated 20%. This new allocation took population into account for the first time. The modification also implied a shift away from a system that only compensated mineral producing municipalities, to a slightly more redistributive arrangement, also covering non-producing municipalities in the producing region.

In 2003, one year after the first elections in the new regions, Law No. 28077 introduced two modifications to the distribution of Canon Minero. Prior to the new law, money was distributed according to population. This resulted in sparsely populated and poor districts containing mining operations, such as Oyon, receiving a lower proportion of the money than highly populated areas, such as the Miraflores and San Isidro districts of Lima. The new law required that basic needs and infrastructure deficits be taken into account in addition to population. The second modification concerned the allocation of Canon Minero between the districts and provinces. A separate 10% allocation was to be shared equally among all producing districts. The remaining 90% was to be distributed on the basis of basic needs and infrastructure deficits as follows: 25% was allocated to district governments of the producing province with the exception of the producing district; 40% was allocated to provincial governments of the producing region with the exception of the producing province; and 25% was allocated to the government of the producing region. One year later Law No. 28322 of 2004 introduced another change: the producing district would be included in the revenue allocation of the producing province, and the producing province would be included in the revenue

allocation of the producing region. Since then no other changes have been made to the distribution of Canon Minero revenue.<sup>120</sup>

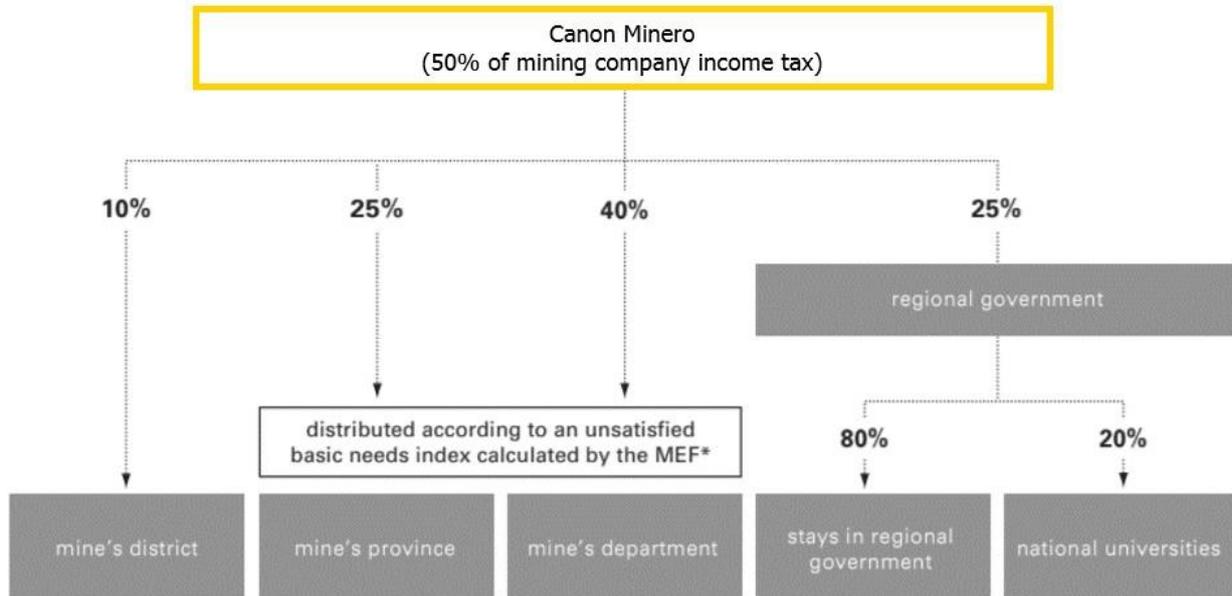


Figure 94. The Canon Minero distribution system<sup>121</sup>

However, the CIT was modified, of which Canon Minero comprises 50%. The CIT was increased from 28% to 29.5%. The new rate was introduced in 2017.

The process of collecting and distributing revenue is as follows: The Ministry of Energy and Mining (MINEM) provides information on mining concessions and extraction volumes to Peru's Tax Administration (SUNAT), which then informs the companies of the amount of corporate income tax to be paid—and collects the payments as well. The National Institute of Statistics and Information Technology (acronym in Spanish: INEI) provides information on subnational governments' population, infrastructure deficits and basic needs to the Ministry of Economy and Finance (MEF) which then creates distribution indexes with the data. The National Council of Decentralization (acronym in Spanish: shares the revenue with municipal governments while MEF shares the revenue with regional governments.

However, the primary distribution revenue, that from Canon Minero, has decreased greatly from 2012: the payments amounted to a total of 1588 million USD in 2012, 1183 million USD in 2013 (a 26% decrease as compared to 2012), and 923 million USD in 2014 A 42% decrease as compared to 2012). This decrease is not only due to the deduction of the two new taxes from the calculation of the income tax, but also because of price decrease of some minerals (which started in 2012) and, in some cases, to the lower extraction volume in some of Peru's regions.<sup>122</sup>

#### 7.4.2 The Mining Program of Solidarity with the People (PMSP)

President Alan García implemented the Mining Program of Solidarity with the People (acronym in Spanish: PMSP) through DecreeNo. 071-2006, a voluntary contribution by firms. The program was to complement Canon Minero. The PMSP gave the option to mining firms to allocate 3.75% of their net income to municipal and regional development purposes for the following five years. If the companies were already paying

<sup>120</sup> Natural Resource Governance Institute. Mineral Revenue Sharing in Peru (April 2016), page 14-15

<sup>121</sup> World Gold Council. The economic contribution of large-scale gold mining in Peru. Second Edition.

<sup>122</sup> Natural Resource Governance Institute. Mineral Revenue Sharing in Peru (April 2016)

royalties they could discount from the PMSP 64.4% of the amount paid in royalties. PMSP contributions were not transferred to the Peruvian state but to private funds created for the purpose. These funds were managed by the companies themselves, and not by regional and municipal governments as initially prescribed by the PMSP. A total of 44 regional funds and 80 local funds were created to invest in infrastructure, education, and health and nutrition.

The PMSP ended in 2011 as it was only conceived for five years, but some funds still had resources in 2014. Although it was estimated in 2006 that the PMSP would bring an additional revenue of approximately 900 million USD, GPC calculated it only contributed 740 million USD. This was at least \$660 million less than what companies would have paid through the windfall profit tax proposed by the presidential candidates in 2006. This along with the companies' slow pace of developing projects using PMSP increased public dissatisfaction and intensified public debate on imposing a windfall tax on mining companies.<sup>123</sup>

In 2011, Humala's administration resolved not to renew PMSP and paid the mandatory mining fee instead.<sup>124</sup>

### 7.4.3 Fiscal Renovation

In 2011, three laws regulating mining taxes were adopted, namely<sup>125</sup>:

| Concept                                 | Without stabilization agreements |            | With stabilization |
|---|----------------------------------|------------|--------------------|
|   | Royalty                          | SMT        | SMB                |
| System                                  | Substituting the current royalty | New        | New                |
| Base                                    | Operating revenue                |            |                    |
| Rates according to the operating margin | 1% to 12%                        | 2% to 8.4% | 4% to 13.12%       |
| Minimum payment                         | 1% of sales                      | N/A        | N/A                |
| Relation to profit tax                  | Deductible                       |            |                    |

#### Change in royalty

In 2004, the government of Alejandro Toledo passed Law No. 28258, which required companies to pay between one and three percent of total sales value of mineral concentrate depending on the size of the extraction site on a sliding three-step scale as a royalty in favor of the Peruvian Government. This excluded artisanal and small-scale mining firms. Firms with stability contracts were also exempt from this payment.<sup>126</sup> The mining royalty introduced in 2011 is based on operating revenue rather than sales. The modified royalty is to be paid on a quarterly basis with the rate varying from 1% to 12%. The ratio of operating Revenue to Mining Revenue (operating revenue margin) is to be calculated on a quarterly basis, in which the royalty rate growth as the margin does. The new system requires companies to pay a minimum sales royalty of 1% regardless of revenue.

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<sup>123</sup> Natural Resource Governance Institute. Mineral Revenue Sharing in Peru (April 2016)

<sup>124</sup> ESID Working Paper No. 79. Mining, political settlements and inclusive development in Peru (May 2017)6 page 23

<sup>125</sup> Peruvian Mining Fiscal System, EY (October 2011)

<sup>126</sup> Natural Resource Governance Institute. Mineral Revenue Sharing in Peru (April 2016), page 16

Table 24. Royalty rate variation depending on the operating revenue margin<sup>127</sup>

| Operating revenue margin (%) | Rate (%) | Effective rate (%) * |
|------------------------------|----------|----------------------|
| Less than 10                 | 1.00%    | 1.00%                |
| 10–15                        | 1,75%    | 1.25%                |
| 15–20                        | 2.50%    | 1.56%                |
| 20–25                        | 3.25%    | 1.90%                |
| 25–30                        | 4.00%    | 2.25%                |
| 30–35                        | 4.75%    | 2.61%                |
| 35–40                        | 5.50%    | 2.97%                |
| 40–45                        | 6.25%    | 3.33%                |
| 45–50                        | 7.00%    | 3.70%                |
| 50–55                        | 7.75%    | 4.07%                |
| 55–60                        | 8.50%    | 4.44%                |
| 60–65                        | 9.25%    | 4.81%                |
| 65–70                        | 10.00%   | 5.18%                |
| 70–75                        | 10.75%   | 5.55%                |
| 75–80                        | 11.50%   | 5.92%                |
| More than 80                 | 12.00%   | 7.14%                |

\* The effective rate includes the upper margin limit

Revenue allocation is as follows: 20% is distributed to the governments in districts containing the mining site, 20% to the municipal government of the province where the concession is located (based on population and basic needs), 40% to the municipal governments of the regions that contains the mining site (based on population and basic needs), 15% to the producing regional governments, and 5% to the public universities within the producing regions. The process of mineral royalty revenue collection and sharing is as follows: on the 15th of each month, SUNAT informs MEF on the amount of mineral royalty due from the previous month for each unit of production, and gives MEF details on the specific location of the mining concession (district, province, and region). The redistribution process then follows that for Canon Minero: MINEM provides information on mining concessions and extraction volumes to SUNAT, which then informs the firms of the amount to be paid –and collects the payments as well. INEI provides information on subnational governments' population and unsatisfied basic needs to MEF which then creates distribution indexes with the data. CND then shares the royalty with municipal governments and MEF shares with regional governments.<sup>128</sup>

<sup>127</sup> Natural Resource Governance Institute. Oil, Gas and Mining for Development

<sup>128</sup> Natural Resource Governance Institute. Mineral Revenue Sharing in Peru (April 2016), page 22.

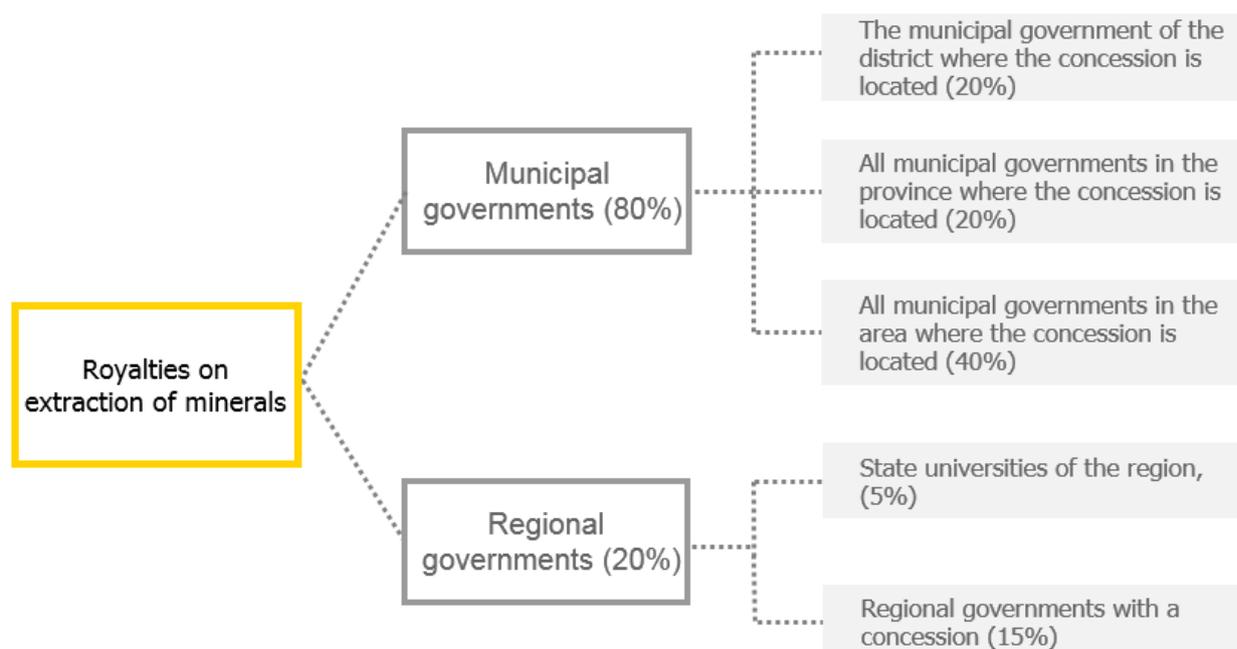


Figure 95. Rate Differentiation and Royalty Revenue Distribution across the Country

The royalty revenue (variable rate depending on the operating margin) are distributed between municipal and regional governments, receiving 80% (of which 20% is allotted to municipal governments in the districts where the concession is located, shared equally, 20% to municipal governments in the provinces where the concession is located based on infrastructure deficits and population, and 40% to municipal regions in the provinces where the concession is located based on infrastructure deficits and population) and 20% (15% of which is allotted to regional governments and 5% to universities) respectively.

#### Special Mining Tax (SMT)

The special mining tax was introduced along with the royalty modifications and imposed on mining operating revenue. Its rate varies from 2% to 8.4%. It is to be paid of a quarterly basis and applies to operating revenue from selling metals, whether the mining operator owns the property or uses it under a concession.<sup>129</sup>

Table 25. SMT rate variation depending on the operating revenue margin<sup>130</sup>

| Operating revenue margin (%) | Rate (%) | Effective rate (%) <sup>*</sup> |
|------------------------------|----------|---------------------------------|
| Less than 10                 | 2.00%    | 2.00%                           |
| 10–15                        | 2.40%    | 2.13%                           |
| 15–20                        | 2.80%    | 2.30%                           |
| 20–25                        | 3.20%    | 2.48%                           |
| 25–30                        | 3.60%    | 2.67%                           |
| 30–35                        | 4.00%    | 2,86%                           |

<sup>129</sup> Peru mining & metals investment guide 2017-2018, EY (2017), page 54

<sup>130</sup> Natural Resource Governance Institute. Mineral Revenue Sharing in Peru (April 2016)

| Operating revenue margin (%) | Rate (%) | Effective rate (%)* |
|------------------------------|----------|---------------------|
| 35–40                        | 4.40%    | 3.05%               |
| 40–45                        | 4.80%    | 3.24%               |
| 45–50                        | 5.20%    | 3.44%               |
| 50–55                        | 5.60%    | 3.64%               |
| 55–60                        | 6.00%    | 3.83%               |
| 60–65                        | 6.40%    | 4.03%               |
| 65–70                        | 6.80%    | 4.23%               |
| 70–75                        | 7.20%    | 4.43%               |
| 75–80                        | 7.60     | 4.63%               |
| 80–85                        | 8.00%    | 4.82%               |
| More than 85                 | 8.40%    | 5.36%               |

### Special Mining Burden (SMB)

The SMB is not a tax as determined by general legal principles given that its is not a compulsory payment imposed under Peru's authority to levy taxes. Mining companies that had stabilization agreements before 2011 could choose the payment to help build schools, hospitals, roads, electricity and water supplies that are much needed to reduce infrastructure bottlenecks. The SMB is accrued on a quarterly basis by operating revenue at a rate of 4% to 13.12%. If any royalties are due, the amount of the payment are to be deducted from them.<sup>131</sup>

Table 26. SMB rate variation depending on the operating revenue margin<sup>132</sup>

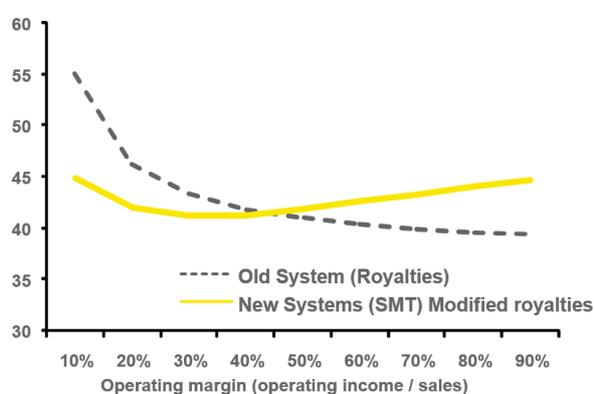
| Operating revenue margin (%) | Rate (%) | Effective rate (%)* |
|------------------------------|----------|---------------------|
| Less than 10                 | 4.00%    | 4.00%               |
| 10–15                        | 4.57%    | 4.19%               |
| 15–20                        | 5.14%    | 4.43%               |
| 20–25                        | 5.71%    | 4.68%               |
| 25–30                        | 6.28%    | 4.95%               |
| 30–35                        | 6.85%    | 5.22%               |
| 35–40                        | 7.42%    | 5.50%               |
| 40–45                        | 7.99%    | 5.77%               |
| 45–50                        | 8.56%    | 6.05%               |
| 50–55                        | 9.13     | 6.33%               |
| 55–60                        | 9.70%    | 6.61%               |

<sup>131</sup> Peru mining & metals investment guide 2017-2018, EY (2017), page 54

<sup>132</sup> Natural Resource Governance Institute. Mineral Revenue Sharing in Peru (April 2016)

| Operating revenue margin (%) | Rate (%) | Effective rate (%)* |
|------------------------------|----------|---------------------|
| 60–65                        | 10.27%   | 6.89%               |
| 65–70                        | 10.84%   | 7.18%               |
| 70–75                        | 11.41%   | 7.46%               |
| 75–80                        | 11.98%   | 7.74%               |
| 80–85                        | 12.55%   | 8.02%               |
| More than 85                 | 13,12%   | 8.79%               |

% of before tax income:



% of before tax income:

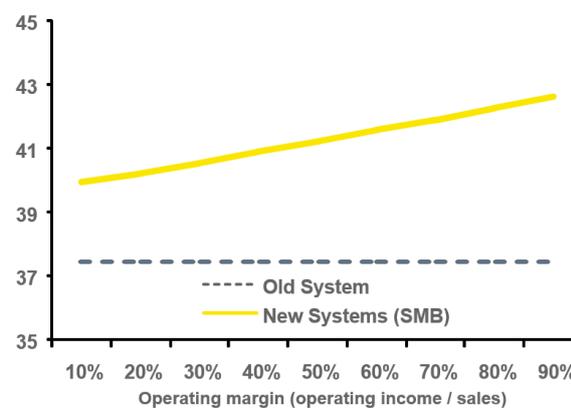


Figure 96. Effective rate, comparing the old and new systems<sup>133</sup>

The royalty base was modify to collect more tax from the most profitable operations and to derisk the government's revenue stream through the commodity super-cycle.<sup>134</sup>

<sup>133</sup> Peruvian Mining Fiscal System, EY (October 2011)

<sup>134</sup> S&P Global Market Intelligence. The effect of changes in Peru's mining tax

## 7.5 REPUBLIC OF TAJIKISTAN

The provisions of the general taxation treatment of subsoil users are according to the 7th Tax Code of the Republic of Tajikistan.

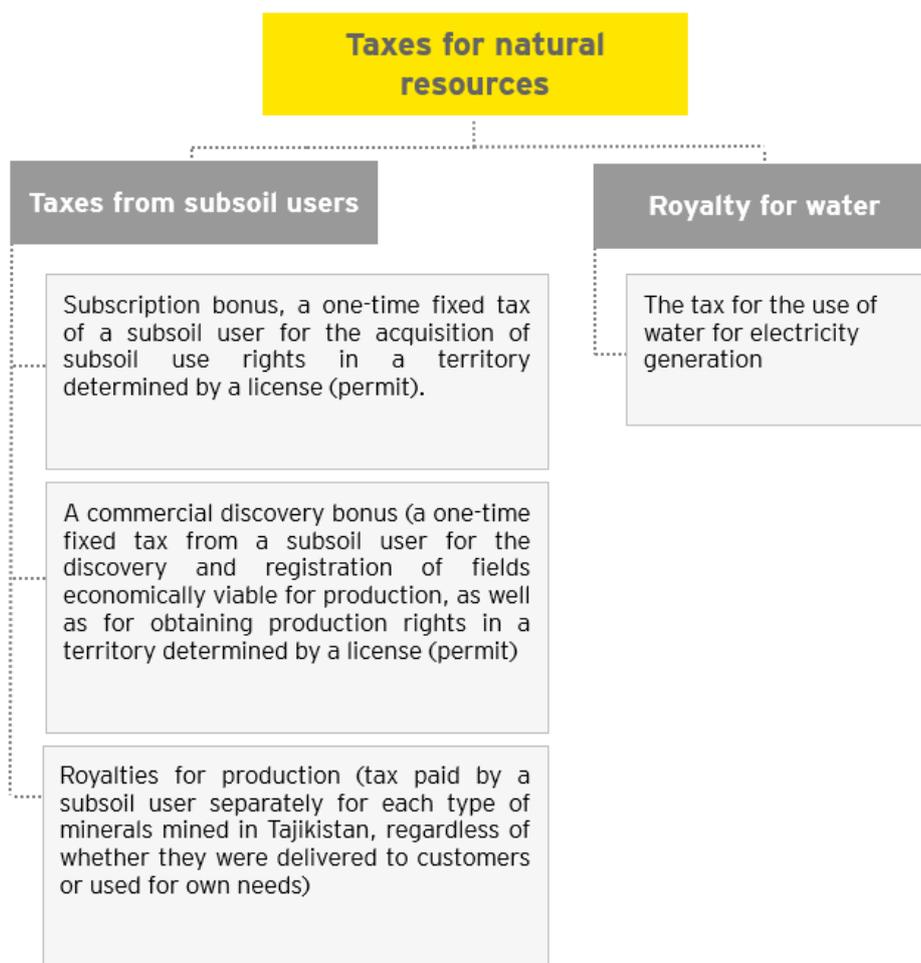


Figure 97. Taxes on natural resource use in Tajikistan<sup>135</sup>

### 7.5.1 Signature bonus

The Government of Tajikistan undertook to implement the EITI in August 2012 by issuing Presidential Decree 449 on Accession to the EITI. The EITI Board was established in 2012, and the country became an EITI candidate member in February 2013.<sup>136</sup> Tajikistan's efforts to improve its natural resource governance through the EITI Standard discusses by the EITI Board, which concluded overall inadequate progress following the recently published EITI Validation Report for Tajikistan to check compliance with

<sup>135</sup> 1-st National Report on the Implementation of the Extractive Industries Transparency Initiative in the Republic of Tajikistan (2014), page 18

<sup>136</sup> Extractive Industries Transparency Initiative (EITI), Validation of Tajikistan Report on initial data collection and stakeholder consultation by the EITI International Secretariat (October 2016)

the 2016 EITI Standard (published on March 8, 2017).<sup>137</sup> The Report notes that one of the main objectives in implementing the EITI has been the desire of the government to attract more foreign direct investment. Although there has not been clear evidence of achieving this, the EITI has uncovered issues that deter these investments such as cumbersome, lengthy and discretionary licensing procedures, an unclear fiscal regime, hidden company ownership, and the lack of up to date geological data. The signature bonus system was, in particular, regarded as unattractive<sup>138</sup>.

Tajikistan introduced the signature bonus for subsoil users in 2011 following the new version of the Tax Code.<sup>139</sup> The signature bonus is a lump sum fixed payment imposed on any subsoil users who discovers mineral reserve in Tajikistan. It is to be paid prior to any extracting activities. The lump sum payment often becomes the main obstacle preventing the beginning of production. Statistics shows budgetary revenue from this payment to be relatively high. For example, the signature bonus brought to the budget 153.6 million somoni in 2014, which is 80.4% higher than the 2013 value.<sup>140</sup>

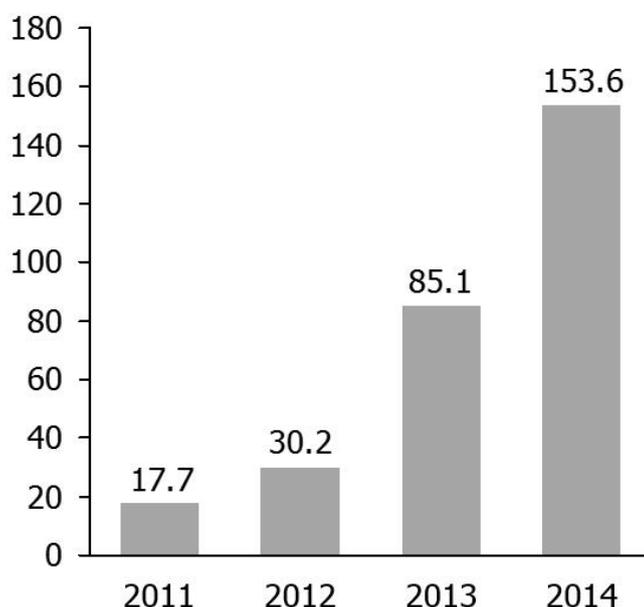


Figure 98. Changes to the amount of RT subsoil taxes, millions somoni<sup>141</sup>

The tax is paid once for the whole amount, e.g. of gold, before it is actually extracted. The license might entitle the company to produce gold for 20 or 30 years, but it will still have to pay for it in advance. This shifts the investment balance in the government's directions, increasing budgetary revenue and posing a challenge to companies, whether operating in the country or just planning to proceed with deposit development. In fact, the signature bonus reduced the project's profitability due to large costs at the early stage of the project, before any sales revenue is obtained.

### Retrospective Taxes

The large Chinese company Zijing mining Co. Ltd. has been producing gold and silver at the Tarror, Jilau, Olimpiyskoye, and Khirskhona mines since 2007. SP "Zarashfon" is Tajikistan's biggest gold miner producing 80% of Tajikistan's gold output.

<sup>137</sup> EITI International Secretariat. Tajikistan EITI assessment identifies issues that deter foreign direct investments

<sup>138</sup> EITI International Secretariat. Tajikistan EITI assessment identifies issues that deter foreign direct investments

<sup>139</sup> Media group, Tajikistan, Asia-Plus

<sup>140</sup> Sputnik. Investors are subject to exorbitant taxes or what is a subscription bonus (December 2015)

<sup>141</sup> 1-st National Report on the Implementation of the Extractive Industries Transparency Initiative in the Republic of Tajikistan (2014), page 18

When the Chinese investor came to mine gold in Tajikistan, the signature bonus did not exist. After it had been introduced in 2011, however, the company was required to pay the signature bonus retrospectively for previous exploration and production, which had begun many years before the bonus, in 2008. The estimated amount of the bonus was as much 203 million somoni (\$23 million).<sup>142</sup>

The above aspects affect the country's attractiveness in terms of foreign investment in mining.

### 7.5.2 Preferential or Special Tax Treatment

- ▶ Under the RT Law on Product Sharing Agreements
- ▶ Under the RT Law on the Investment Agreement
- ▶ Under the RT Law on Concessions

The Law of the Republic of Kazakhstan on the Investment Agreement, which came into effect in March 2013, provides for a special mechanism to regulate the relations between the government and the investor under investment agreements. This type of agreements is individual and aimed at establishing a special legal regime for individual investors that is different from the general legal treatment of other investors.

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<sup>142</sup> Media group, Tajikistan, Asia-Plus

## 8. METHODOLOGY OF THE STUDY

This project was the first multipurpose project of this type in Kyrgyzstan. Therefore, there was no established approach to collecting and consolidating data required to analyze the total socio-economic contribution of the non-ferrous metal sector to the country's economy. EY was guided by similar projects from other countries, primarily CIS members.

To ensure that the study data were correct and reliable, the following official and publicly accessible sources were used for calculation data:

- ▶ the National Statistics Committee of the Kyrgyz Republic;
- ▶ Information provided on requests to companies in the KR non-ferrous metals;
- ▶ Information provided on requests to various governmental committees, statistic agencies, and analytical companies in the Kyrgyz Republic as well as abroad;
- ▶ Yearly and financial reports by businesses in the sector;
- ▶ Study data from publicly available analytical and business periodical.

The estimated total socioeconomic contribution of the non-ferrous metal sector provided herein is based on the statistics of a number of developed countries, approved by their governments and statistics agencies, for the input-output model developed by Nobel Prize winner W. Leontief. It is also known as the interindustry balance table.

The interindustry balance table represents economic reproduction processes in terms of material and cost by economic activities according to the Common Classifier of Economic Activity of the Kyrgyz Republic.

The input-output table is integrated into the national accounting system of the Kyrgyz Republic and is used to establish interrelation and breakdown of accounts for goods and services, generation of income accounts, elements of revenue/capital distribution and use accounts, providing detailed balances of supply and disposition of goods and services generated in the process of production.

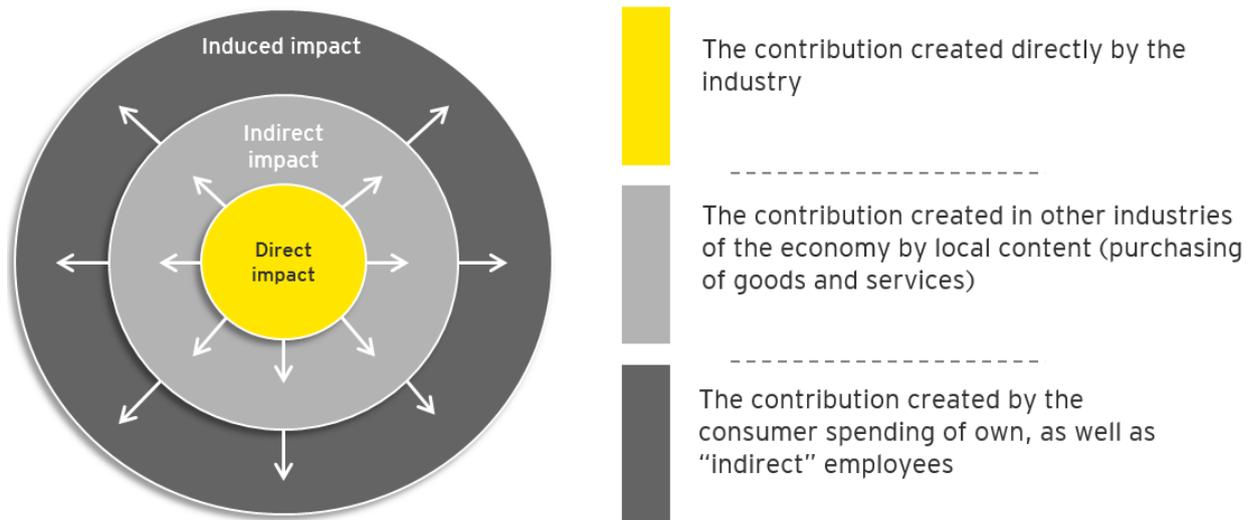
Input-output tables for 2014 and 2015 prepared by the National Statistics Committee of the Kyrgyz Republic were used to estimate the contribution of the non-ferrous metal sector. It should be noted that all figures for import of goods and services were excluded for the purposes of the estimate because only goods and services that are domestically produced and acquired have an economic effect within Kyrgyzstan's economy. Since the input-output table for 2016 was not available during the preparation of the study, the 2016 estimates were based on the 2015 table using the input data for 2016. Special regard was given to the following when using data provided by the KR National Statistics Committee:

- ▶ information for the non-ferrous metal sector in question pertains to two industries according to the KR CCEA, namely 07 Mineral Production and 24 Base Metal Manufacturing.
- ▶ Therefore, data on GDP structure from KR governmental resources for statistics were analyzed in combination with some data for the GDP of Base Metal Manufacturing when studying KR economy in general.

This is due to the fact that according to the KR CCEA<sup>143</sup> (page 72) the manufacturing of cast iron and processing of ferrous and non-ferrous metal, in particular pig iron and scrap, including electrical metallurgical production and the production of metal alloys by adding chemicals to pure metal are classified as Base Metal Manufacturing, to which sector precious metal processing operations by the operator of the Kumtor deposit belongs. This section is in turn included in Manufacturing, which is why data for Mineral Production represent a small percentage of the GDP in statistics (1% of the KR's total GDP for the recent 5 years).

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<sup>143</sup> Source: National Statistical Committee of the Kyrgyz Republic



The industry's total socioeconomic contribution to the economy includes three components (three effects), namely the direct, indirect, and induced impacts. The contribution of the non-ferrous metal sector was estimated by five parameters in this study, which were as follows:

- ▶ contribution to production of goods and services in the economy of the Kyrgyz Republic (output);
- ▶ contribution to the national GDP;
- ▶ contribution to population employment;
- ▶ contribution to the labor income;
- ▶ tax contribution.

Data on the direct contribution of the non-ferrous metal sector was not made available by the KR National Statistics Committee at the four-digit level of the CCEA as it is confidential. Therefore, a comparison with consolidated data provided on or request by each company participating in the study individually was carried out in order to estimate the direct contribution correctly for the non-ferrous metal sector as such.

|  | Direct impact<br><i>the company itself</i>            | Indirect impact<br><i>suppliers and contractors</i>                        | Induced impact<br><i>consumers</i>  |
|--|---|--|---|
| <b>Contribution to employment</b>      | Own workplaces  | Workplaces of suppliers and contractors                                    | Workplaces in companies that sell goods and services to employees of the company and its suppliers and contractors                                  |
| <b>Contribution to personal income</b> | Own employee earnings                                 | Suppliers and contractors' workers earnings                                | Employee earnings in companies that sell goods and services to employees of the company and its suppliers and contractors                           |
| <b>Contribution to GDP</b>             | The added value generated by the company's activities | The added value generated from the activities of suppliers and contractors | The added value generated by the activities of companies that sell goods and services to employees of the company and its suppliers and contractors |
| <b>Contribution to state budget</b>    | Taxes and fees paid by the company                    | Taxes and fees paid by suppliers and contractors                           | Taxes and fees paid by companies that sell goods and services to employees of the company and its suppliers and contractors                         |

Figure 99. An Overview of Each Contribution Type of the Sector

Below are the assumptions and hypotheses applied to each contribution indicator.

Contribution to KR economic output



Output, or gross output, is the most widely used criterion of economic performance, which includes value added and intermediate costs. Gross output is the equivalent of sales or revenue for most industries. Intermediate costs mean that resources are acquired in the course of producing other goods or services.

To estimate the direct contribution to output of the non-ferrous metal sector,

- ▶ Output data for the mining industry (excluding the Kumtor operator) provided by the National Statistics Committee of the Kyrgyz Republic was partly used. The figures were equal to the consolidated data that each company participating in the study provided on our request individually except for a minor error. The output generated by the Kumtor deposit operator was added to the value;
- ▶ part of the data for the non-ferrous metal sector was calculated.

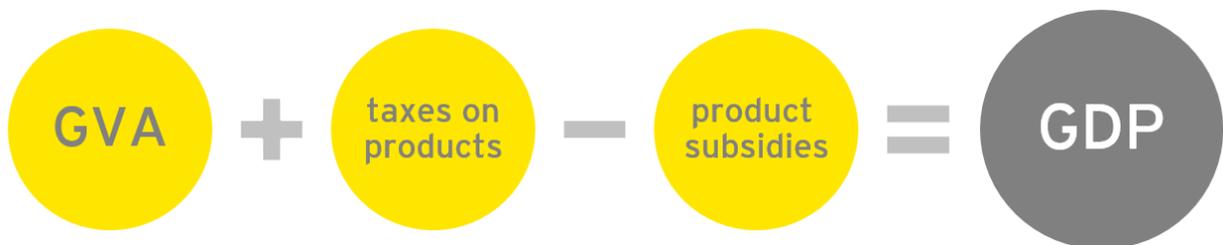
The indirect and mediated contribution to output as well as the other four indicators was determined in a model analysis using the above methodology with a number of assumptions that had been agreed on with the customer.

Contribution to GDP



A way of measuring the scale of a company, industry, or economy is to estimate its output, or turnover. The gross value added, of GVA, generated by all industries in all economic sectors, including the product tax and net of any tax credits, forms the national GDP (gross domestic product).

The standard method of estimated a company's direct contribution to the GDP (or its GVA) is by determining its value added. This is calculated as the difference between the company's total income before taxes and its total expenditures associated with the procurement of goods and services (that is, costs excluding salaries and wages), adjusted to any changes in stock. Income is the total revenue over a certain period. Both GVA and GDP are used as indicators of the economic development of a specific area (country, region, city, etc.) based on the value of goods and services and proceeds of business activities. GDP and GVA changes over a certain period are used to estimate the growth of the respective economic sector and/or the economy in general.



A GVA increase can result from increased profitability (due to higher output or prices) or decreased production costs. The components of GVA determine the share that each factor of production, labor costs, and capital has in the value.

The data on the direct contribution to GDP of the non-ferrous metal sector (excluding the figures for the Kumtor deposit operator) were provided by the National Statistics Committee of the Kyrgyz Republic.

### Contribution to employment and the labor income

#### Contribution to employment and labor incomes



The data on the direct contribution to employment of the non-ferrous metal sector (excluding the figures for the Kumtor deposit operator) were provided by the National Statistics Committee of the Kyrgyz Republic. The data provided by the Statistics Committee were equal to the consolidated data that each company participating in the study provided on our request individually except for a minor error. The employment offered by Kumtor was added to the value.

The data on the direct contribution to the labor income of the non-ferrous metal sector was found in the consolidated information provided individually by companies participating in the study.

### Tax contribution

#### Tax contribution



Only taxes and payments that had been paid/effectuated (not accrued) were used to estimate the direct tax contribution. The following approach was used to obtain reliable data on taxes and payments paid directly by companies in the non-ferrous metal sector:

- ▶ data for top 10 operators of the non-ferrous and precious metal sector (see the list above) was collected from the following sources: the Open Budget, data provided by the KR Social Fund, companies' annual reports and corporate websites, the KR Treasury, etc. The data collected was compared to information of taxes and other payments provided by companies in the sector. In case of significant differences priority was given to the figure provided by governmental bodies or whichever was lower. The conservative approach was adopted for the study in general, according to which possible underestimates are less risky and important in terms of user conclusions and potential decisions than overestimates for the same parameter.
- ▶ Data for the sector's top 11–20 companies was also sourced from the Open Budget and the KR Social Fund.
- ▶ The remaining businesses in the sector were determined according to the list of licenses issued and accounted for less than 3% of the sector's taxes and other payments. The data for them was sourced from the Open Budget.

The following approach was adopted to obtain data on the direct tax contribution of Kazakhstan's non-ferrous metal sector (for comparison with the KR data): mining companies whose activities are not in the field of non-ferrous metal production were excluded from the list of miners producing solid minerals that had prepared EITI<sup>144</sup> reports for 2016. The data on taxes and other payments by the remaining companies on the list contained in RK EITI reports for 2016 was further consolidated.

In order to compare different absolute figures between countries (output, GDP, taxes, etc.), they were all converted into a single currency, the US dollar. In order to convert from the national currency to US dollars, the country's official average annual exchange rate of the local for the relevant period was used.

<sup>144</sup> National EITI Reports Kazakhstan (August 2016)

## 9. LIST OF ACRONYMS AND ABBREVIATIONS

|            |  |
|------------|--|
| ACT        | Australian Capital Territory   |
| CIS        | Commonwelath of Independent Countries                                      |
| CIT        | Corporate Income Tax   |
| CND        | National Decentralization Committee (acronym in Spanish)                   |
| DB         | Declining Balance  |
| DBM        | Development Bank of Mongolia   |
| DROC       | Democratic Republic of the Congo   |
| EBIT       | Earnings Before Interest & Tax   |
| EITI       | Extractive Industries Transparency Initiative                              |
| FDI        | Foreign Direct Investment  |
| FEACN      | Foreign Economic Activity Commodity Nomenclature                           |
| FIFO       | First in first out   |
| FS         | Feasibility Study  |
| FSF        | Financial Stability Forum  |
| FSOE       | Foreign State Owned Entity   |
| GDP        | Gross Domestic Product   |
| GVA        | Gross Value Added  |
| HDI        | Human Development Index  |
| HDI        | Human Development Index  |
| ICMM       | International Council of Metals and Mining                                 |
| ILO        | International Labor Organization   |
| IMF        | International Monetary Fund  |
| INEI       | National Institute of Statistics and Information (abbreviation in Spanish) |
| KR         | Kyrgyz Republic  |
| KR<br>CCEA | Common Classifier of Economic Activity of the Kyrgyz Republic              |
| KR TC      | Tax Code of the Kyrgyz Republic  |
| LERO       | Legal Entities Registration Office   |
| LIFO       | Last in first out  |
| MED        | Ministry for Economic Development  |
| MEF        | Ministry of Economy and Finance  |
| MINEM      | Ministry of Power and Mining Canon Minero                                  |
| MNT        | Mongolian Tugrik   |
| MRPAM      | Mineral Resources and Petroleum Authority of Mongolia                      |
| MSI        | Mining and Smelting Industry   |
| NFMS       | Non-ferrous metal sector   |
| NPV        | Net Present Value  |
| NSW        | New South Wales  |
| NT         | Northern Territory   |
| PIT        | Personal Income Tax  |
| PMSP       | Mining Program of Solidarity with the People (abbreviation in Spanish)     |



## List of Acronyms and Abbreviations

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|        |   |
|--------|---|
| PR     | Payroll   |
| RK     | Republic of Kazakhstan  |
| RSA    | Republic of South Africa  |
| RT     | Republic of Tajikistan  |
| SA     | South Australia   |
| SCIPSU | State Committee for Industry, Power, and Subsoil Use of the Kyrgyz Republic |
| SL     | Straight Line   |
| SMB    | Special Mining Burden   |
| SMT    | Special Mining Tax  |
| SOE    | State-Owned Entity  |
| SUNAT  | Peru's Tax Administration   |
| TBR    | Tax Burden Ratio  |
| USD    | United States of America  |
| USSR   | Union of Soviet Socialist Republics   |
| VAT    | Value Added Tax   |
| WA     | Western Australia   |
| Y      | Official service life, years  |

## 10. LIST OF REFERENCES TO USED SOURCES OF INFORMATION

|    |   |
|----|---|
| 1  | <a href="http://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP32-Kumtor-Eng.pdf">http://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP32-Kumtor-Eng.pdf</a>   |
| 2  | Exports of basic goods, thousand dollars:<br><a href="http://stat.kg/ru/statistics/vneshneekonomicheskaya-deyatelnost/">http://stat.kg/ru/statistics/vneshneekonomicheskaya-deyatelnost/</a><br>Revenue from the sale of gold by Kumtor:<br><a href="https://www.kumtor.kg/ru/deposit/production-figures/">https://www.kumtor.kg/ru/deposit/production-figures/</a>   |
| 3  | -   |
| 4  | -   |
| 5  | According to S & P Global Market Intelligence   |
| 6  | -   |
| 7  | <a href="http://www.stat.kg/ru/statistics/nacionalnye-scheta/">http://www.stat.kg/ru/statistics/nacionalnye-scheta/</a>   |
| 8  | -   |
| 9  | <a href="http://www.sti.gov.kg/taxservice/report-sts">http://www.sti.gov.kg/taxservice/report-sts</a>   |
| 10 | <a href="http://www.stat.kg/ru/statistics/nacionalnye-scheta/">http://www.stat.kg/ru/statistics/nacionalnye-scheta/</a>   |
| 11 | <a href="http://hdr.undp.org/en/data">http://hdr.undp.org/en/data</a>   |
| 12 | <a href="http://stat.kg/ru/statistics/investicii/">http://stat.kg/ru/statistics/investicii/</a>   |
| 13 | Reference to the source according to data for 1998-2015. (file «4.03.00.02 Экспорт товаров по разделам Товарной Номенклатуры Внешнеэкономической Деятельности (ТНВЭД) (тыс. долларов»): <a href="http://stat.kg/ru/statistics/vneshneekonomicheskaya-deyatelnost/">http://stat.kg/ru/statistics/vneshneekonomicheskaya-deyatelnost/</a><br>Reference to the source according to 2016 data (pages 127-128):<br><a href="http://www.stat.kg/media/publicationarchive/d5022d2a-ab03-4927-a6b3-eae82dfce9f.pdf">http://www.stat.kg/media/publicationarchive/d5022d2a-ab03-4927-a6b3-eae82dfce9f.pdf</a>   |
| 14 | <a href="https://www.fraserinstitute.org/studies/annual-survey-of-mining-companies-2015">https://www.fraserinstitute.org/studies/annual-survey-of-mining-companies-2015</a>   |
| 15 | <a href="https://www.fraserinstitute.org/studies/annual-survey-of-mining-companies-2015">https://www.fraserinstitute.org/studies/annual-survey-of-mining-companies-2015</a>   |
| 16 | <a href="https://www.kumtor.kg/en/deposit/production-figures/">https://www.kumtor.kg/en/deposit/production-figures/</a>   |
| 17 | <a href="https://www.kumtor.kg/ru/deposit/production-basic-data/">https://www.kumtor.kg/ru/deposit/production-basic-data/</a><br>More recent data were not found in public sources  |
| 18 | <a href="http://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP32-Kumtor-Eng.pdf">http://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP32-Kumtor-Eng.pdf</a>   |
| 19 | <a href="http://www.kazminerals.com/ru/our-business/bozymchak/">http://www.kazminerals.com/ru/our-business/bozymchak/</a>   |
| 20 | <a href="http://kyrgyzaltyn.kg/проект-талды-булак-левобережный/">http://kyrgyzaltyn.kg/проект-талды-булак-левобережный/</a>   |
| 21 | <a href="http://mining.kz/arkhiv-novostej/vse-novosti-rk/item/21691-spisok-dejstvuyushchikh-litsenzij-na-mestorozhdeniya-zolota">http://mining.kz/arkhiv-novostej/vse-novosti-rk/item/21691-spisok-dejstvuyushchikh-litsenzij-na-mestorozhdeniya-zolota</a>   |
| 22 | <a href="http://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP32-Kumtor-Eng.pdf">http://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP32-Kumtor-Eng.pdf</a><br><a href="https://www.kumtor.kg/wp-content/uploads/2016/10/2015_annual_report.pdf">https://www.kumtor.kg/wp-content/uploads/2016/10/2015_annual_report.pdf</a><br><a href="https://www.kumtor.kg/wp-content/uploads/2017/10/2016_AR_Centerra.pdf">https://www.kumtor.kg/wp-content/uploads/2017/10/2016_AR_Centerra.pdf</a><br><a href="https://www.kumtor.kg/wp-content/uploads/2016/10/2014_annual_report.pdf">https://www.kumtor.kg/wp-content/uploads/2016/10/2014_annual_report.pdf</a><br><a href="https://www.kumtor.kg/en/deposit/reports/">https://www.kumtor.kg/en/deposit/reports/</a> |

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| 23 | <p>Exports of basic goods, thousand dollars:<br/> <a href="http://stat.kg/ru/statistics/vneshneekonomicheskaya-deyatelnost/">http://stat.kg/ru/statistics/vneshneekonomicheskaya-deyatelnost/</a><br/>         Revenue from the sale of gold by Kumtor: <a href="https://www.kumtor.kg/ru/deposit/production-figures/">https://www.kumtor.kg/ru/deposit/production-figures/</a></p>   |
| 24 | <p><a href="http://epublications.uef.fi/pub/urn_isbn_978-952-61-0936-7/urn_isbn_978-952-61-0936-7.pdf">http://epublications.uef.fi/pub/urn_isbn_978-952-61-0936-7/urn_isbn_978-952-61-0936-7.pdf</a><br/> <a href="http://www.zoinet.org/web/sites/default/files/publications/regulation_RUS.pdf">http://www.zoinet.org/web/sites/default/files/publications/regulation_RUS.pdf</a></p>   |
| 25 | <p><a href="http://cbd.minjust.gov.kg/act/view/ru-ru/90372?cl=ru-ru">http://cbd.minjust.gov.kg/act/view/ru-ru/90372?cl=ru-ru</a></p>  |
| 26 | <p><a href="http://www.gov.kg/?p=5374&amp;lang=ru">http://www.gov.kg/?p=5374&amp;lang=ru</a><br/> <a href="http://www.invest.gov.kg/ru/informatciia-dlia-investorov/regulirovanie-otdelnykh-otraslei/gosudarstvennoe-regulirovanie---mineraln/">http://www.invest.gov.kg/ru/informatciia-dlia-investorov/regulirovanie-otdelnykh-otraslei/gosudarstvennoe-regulirovanie---mineraln/</a><br/> <a href="http://www.gov.kg/?p=5374&amp;lang=ru">http://www.gov.kg/?p=5374&amp;lang=ru</a><br/> <a href="http://cbd.minjust.gov.kg/act/view/ru-ru/92912?cl=ru-ru">http://cbd.minjust.gov.kg/act/view/ru-ru/92912?cl=ru-ru</a></p>   |
| 27 | <p><a href="http://cbd.minjust.gov.kg/act/view/ru-ru/99445?cl=ru-ru">http://cbd.minjust.gov.kg/act/view/ru-ru/99445?cl=ru-ru</a></p>  |
| 28 | <p><a href="http://www.zoinet.org/web/sites/default/files/publications/regulation_RUS.pdf">http://www.zoinet.org/web/sites/default/files/publications/regulation_RUS.pdf</a></p>  |
| 29 | <p><a href="http://cbd.minjust.gov.kg/act/view/ru-ru/99446?cl=ru-ru">http://cbd.minjust.gov.kg/act/view/ru-ru/99446?cl=ru-ru</a></p>  |
| 30 | <p><a href="http://www.icmm.com/website/publications/pdfs/society-and-the-economy/161026_icmm_romine_3rd-edition.pdf">http://www.icmm.com/website/publications/pdfs/society-and-the-economy/161026_icmm_romine_3rd-edition.pdf</a> Стр 23<br/> <a href="http://copperalliance.org/wordpress/wp-content/uploads/2017/01/161026_icmm_romine_3rd-edition.pdf">http://copperalliance.org/wordpress/wp-content/uploads/2017/01/161026_icmm_romine_3rd-edition.pdf</a></p>  |
| 31 | <p><a href="https://wits.worldbank.org/CountryProfile/en/Country/KGZ/Year/1996/TradeFlow/Export/Partner/WLD/Product/sitc-rev2-groups/Show/Product%20Group:XPRT-TRD-VL;XPRT-PRDCT-SHR;/Sort/XPRT-TRD-VL">https://wits.worldbank.org/CountryProfile/en/Country/KGZ/Year/1996/TradeFlow/Export/Partner/WLD/Product/sitc-rev2-groups/Show/Product%20Group:XPRT-TRD-VL;XPRT-PRDCT-SHR;/Sort/XPRT-TRD-VL</a> - ore and metals (31 mln usd)<br/> <a href="https://wits.worldbank.org/CountryProfile/en/Country/KGZ/Year/2012/Summary">https://wits.worldbank.org/CountryProfile/en/Country/KGZ/Year/2012/Summary</a> - gold and precious metals ore and concentrates (617 mln usd), and also for 2015.</p> |
| 32 | <p><a href="http://www.icmm.com/website/publications/pdfs/society-and-the-economy/161026_icmm_romine_3rd-edition.pdf">http://www.icmm.com/website/publications/pdfs/society-and-the-economy/161026_icmm_romine_3rd-edition.pdf</a> , pages 34-35</p>  |
| 33 | <p><a href="http://www.icmm.com/website/publications/pdfs/society-and-the-economy/161026_icmm_romine_3rd-edition.pdf">http://www.icmm.com/website/publications/pdfs/society-and-the-economy/161026_icmm_romine_3rd-edition.pdf</a></p>  |
| 34 | <p><a href="http://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP32-Kumtor-Eng.pdf">http://www.ucentralasia.org/Content/Downloads/UCA-IPPA-WP32-Kumtor-Eng.pdf</a></p>  |
| 35 | <p><a href="https://www.gold.org/research/social-economic-impact">https://www.gold.org/research/social-economic-impact</a></p>  |
| 36 | <p>Medium-term and long-term mining development strategy project of the Kyrgyz Republic (2013). Ministry of Economy of the Kyrgyz Republic.</p>   |
| 37 | <p>Medium-term and long-term mining development strategy project of the Kyrgyz Republic (2013). Ministry of Economy of the Kyrgyz Republic.</p>   |
| 38 | <p><a href="https://www.kumtor.kg/en/media-relations/contribution-to-the-kyrgyz-economy/">https://www.kumtor.kg/en/media-relations/contribution-to-the-kyrgyz-economy/</a></p>  |
| 39 | <p><a href="https://www.kumtor.kg/ru/deposit/production-figures/">https://www.kumtor.kg/ru/deposit/production-figures/</a></p>  |
| 40 | <p>Source: <a href="http://www.abs.gov.au/ausstats/abs@.nsf/mf/8415.0">http://www.abs.gov.au/ausstats/abs@.nsf/mf/8415.0</a></p>  |
| 41 | <p>GDP data of countries: <a href="https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=KG">https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=KG</a><br/>         Exchange rates are taken from the website of the National Bank of the Kyrgyz Republic</p>  |
| 42 | <p>Data on Australia: <a href="https://www.fwc.gov.au/documents/sites/wagereview2016/statistical-reporting/statistical-report-awr-2015-16.pdf">https://www.fwc.gov.au/documents/sites/wagereview2016/statistical-reporting/statistical-report-awr-2015-16.pdf</a></p>   |

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|    | <p>Data on Mongolia: <a href="https://industry.gov.au/Office-of-the-Chief-Economist/Publications/ResourcesandEnergyQuarterlySeptember2017/documents/Resources-and-Energy-">https://industry.gov.au/Office-of-the-Chief-Economist/Publications/ResourcesandEnergyQuarterlySeptember2017/documents/Resources-and-Energy-</a></p> <p><a href="http://www.1212.mn/tables.aspx?tbl_id=DT_NS0_0400_006V1&amp;13999001_select_all=0&amp;13999001SingleSelect=T1&amp;Indicator_select_all=0&amp;IndicatorSingleSelect=2_2015&amp;Year_select_all=0&amp;YearSingleSelect=2016&amp;viewtype=table">http://www.1212.mn/tables.aspx?tbl_id=DT_NS0_0400_006V1&amp;13999001_select_all=0&amp;13999001SingleSelect=T1&amp;Indicator_select_all=0&amp;IndicatorSingleSelect=2_2015&amp;Year_select_all=0&amp;YearSingleSelect=2016&amp;viewtype=table</a></p> <p>Data on Kazakhstan:<br/> <a href="http://stat.gov.kz/faces/wcnav_externalId/homeNumbersLabor?_afzLoop=294827064540717#%40%3F_afzLoop%3D294827064540717%26_adf.ctrl-state%3D104ah0o0zj_119">http://stat.gov.kz/faces/wcnav_externalId/homeNumbersLabor?_afzLoop=294827064540717#%40%3F_afzLoop%3D294827064540717%26_adf.ctrl-state%3D104ah0o0zj_119</a></p> |
| 43 | <a href="http://www.stat.kg/ru/statistics/investicii/">http://www.stat.kg/ru/statistics/investicii/</a>   |
| 44 | <a href="http://www.stat.kg/ru/statistics/investicii/">http://www.stat.kg/ru/statistics/investicii/</a>   |
| 45 | <a href="http://www.stat.kg/ru/statistics/investicii/">http://www.stat.kg/ru/statistics/investicii/</a>   |
| 46 | <p>Data on Australia, Kazakhstan and Mongolia:<br/> <a href="https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD">https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD</a></p> <p>Data on Kyrgyzstan: <a href="http://www.stat.kg/ru/statistics/investicii/">http://www.stat.kg/ru/statistics/investicii/</a></p>  |
| 47 | <a href="http://www.stat.kg/ru/statistics/investicii/">http://www.stat.kg/ru/statistics/investicii/</a>   |
| 48 | <a href="http://kazenergy.com/ru/2012-06-20-08-42-46/13492--2012-2013-.html">http://kazenergy.com/ru/2012-06-20-08-42-46/13492--2012-2013-.html</a>   |
| 49 | <a href="http://www.icmm.com/website/publications/pdfs/society-and-the-economy/161026_icmm_romine_3rd-edition.pdf">http://www.icmm.com/website/publications/pdfs/society-and-the-economy/161026_icmm_romine_3rd-edition.pdf</a> pages 14-15, and 33, based on the data of 40 largest companies and 2,590 other companies in the database SNL Mining.  |
| 50 | EY calculations   |
| 51 | <a href="https://lsm.kz/v-kazahstane-real-naya-nalogovaya-nagruzka-na-nedropol-zovatelej-vyshe-v-4-5-raza-agmp">https://lsm.kz/v-kazahstane-real-naya-nalogovaya-nagruzka-na-nedropol-zovatelej-vyshe-v-4-5-raza-agmp</a>   |
| 52 | <a href="https://eiti.org/sites/default/files/documents/ru_2nd_national_eiti_report_of_tajikistan_for_2015-2016.pdf">https://eiti.org/sites/default/files/documents/ru_2nd_national_eiti_report_of_tajikistan_for_2015-2016.pdf</a> , <a href="http://tj.spinform.ru/nalogovaya_systema.html">http://tj.spinform.ru/nalogovaya_systema.html</a>   |
| 53 | <a href="http://www.minerals.org.au/file_upload/files/publications/2016_Update_Effective_tax_rates_on_Australian_mining.pdf">http://www.minerals.org.au/file_upload/files/publications/2016_Update_Effective_tax_rates_on_Australian_mining.pdf</a>   |
| 54 | <a href="https://www.treasury.wa.gov.au/uploadedFiles/Treasury/Publications/Overview_of_State_Taxes_and_Royalties_2016-17.pdf">https://www.treasury.wa.gov.au/uploadedFiles/Treasury/Publications/Overview_of_State_Taxes_and_Royalties_2016-17.pdf</a>   |
| 55 | <a href="https://www.treasury.wa.gov.au/uploadedFiles/Treasury/Publications/Overview_of_State_Taxes_and_Royalties_2016-17.pdf">https://www.treasury.wa.gov.au/uploadedFiles/Treasury/Publications/Overview_of_State_Taxes_and_Royalties_2016-17.pdf</a>   |
| 56 | <a href="https://www.bgr.bund.de/EN/Themen/Zusammenarbeit/TechnZusammenarb/Downloads/mongolei_MRAM_AnnualBulletin2016.pdf?__blob=publicationFile&amp;v=2">https://www.bgr.bund.de/EN/Themen/Zusammenarbeit/TechnZusammenarb/Downloads/mongolei_MRAM_AnnualBulletin2016.pdf?__blob=publicationFile&amp;v=2</a>   |
| 57 | EY calculations, World Bank data<br><a href="https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=KG">https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=KG</a>   |
| 58 | EY calculations, data from companies in the sector  |
| 59 | EY calculations, data from companies in the sector  |
| 60 | <a href="https://www.mrpam.gov.mn/public/pages/66/MPRAMreport2016EN.pdf">https://www.mrpam.gov.mn/public/pages/66/MPRAMreport2016EN.pdf</a>   |
| 61 | <a href="https://eiti.org/document/20152016-tajikistan-eiti-report">https://eiti.org/document/20152016-tajikistan-eiti-report</a><br><a href="http://www.stat.tj/ru/">http://www.stat.tj/ru/</a>  |
| 62 | <p>Minerals industry tax survey 2017, Minerals Council of Australia<br/> <a href="http://www.minerals.org.au/file_upload/files/annual_reports/180102_Deloitte_Access_Economics_MCA_2017_tax_survey_report.pdf">http://www.minerals.org.au/file_upload/files/annual_reports/180102_Deloitte_Access_Economics_MCA_2017_tax_survey_report.pdf</a></p>  |

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| 63 | -  |
| 64 | <a href="http://cbd.minjust.gov.kg/act/view/ru-ru/98154?cl=ru-ru">http://cbd.minjust.gov.kg/act/view/ru-ru/98154?cl=ru-ru</a>  |
| 65 | <a href="http://economy.gov.kz/ru/pages/nalogovyy-kodeks">http://economy.gov.kz/ru/pages/nalogovyy-kodeks</a>  |
| 66 | <a href="http://www.kazpravda.kz/fresh/view/mezhdunarodnie-standarti-nedropolzovaniya/">http://www.kazpravda.kz/fresh/view/mezhdunarodnie-standarti-nedropolzovaniya/</a>  |
| 67 | <a href="https://online.zakon.kz/Document/?doc_id=1026672#pos=13;-118">https://online.zakon.kz/Document/?doc_id=1026672#pos=13;-118</a>  |
| 68 | <a href="http://www.nationalbank.kz/cont/2018%20%D1%80%D1%83%D1%811.pdf">http://www.nationalbank.kz/cont/2018%20%D1%80%D1%83%D1%811.pdf</a>  |
| 69 | <a href="http://www.forexpf.ru/chart/gold/">http://www.forexpf.ru/chart/gold/</a>  |
| 70 | <a href="http://cbd.minjust.gov.kg/act/view/ru-ru/90080">http://cbd.minjust.gov.kg/act/view/ru-ru/90080</a>  |
| 71 | <a href="http://www.gkpen.kg/index.php/2017-01-11-10-19-23/database/436-15-11-2017">http://www.gkpen.kg/index.php/2017-01-11-10-19-23/database/436-15-11-2017</a>  |
| 72 | -  |
| 73 | -  |
| 74 | <a href="http://www.economicportal.ru/ponyatiya-all/zakon-oukena.html">http://www.economicportal.ru/ponyatiya-all/zakon-oukena.html</a>  |
| 75 | <a href="http://el-group.com/">http://el-group.com/</a>  |
| 76 | <a href="https://www.oecd.org/site/devaeo10/44282904.pdf">https://www.oecd.org/site/devaeo10/44282904.pdf</a>  |
| 77 | <a href="https://www.gold.org/data/gold-price">https://www.gold.org/data/gold-price</a>  |
| 78 | <a href="https://www.cnbc.com/2017/02/19/china-will-help-drive-33-increase-in-global-copper-prices-by-2020-citi.html">https://www.cnbc.com/2017/02/19/china-will-help-drive-33-increase-in-global-copper-prices-by-2020-citi.html</a>  |
| 79 | <a href="https://www.statista.com/statistics/533292/average-price-of-copper/">https://www.statista.com/statistics/533292/average-price-of-copper/</a><br><a href="http://markets.businessinsider.com/commodities/copper-price">http://markets.businessinsider.com/commodities/copper-price</a>   |
| 80 | <a href="https://investingnews.com/daily/resource-investing/base-metals-investing/copper-investing/copper-production-country/">https://investingnews.com/daily/resource-investing/base-metals-investing/copper-investing/copper-production-country/</a><br><a href="https://investingnews.com/daily/resource-investing/precious-metals-investing/gold-investing/top-gold-producing-countries/">https://investingnews.com/daily/resource-investing/precious-metals-investing/gold-investing/top-gold-producing-countries/</a>   |
| 81 | <a href="https://www.focus-economics.com/blog/gold-the-most-precious-of-metals-part3">https://www.focus-economics.com/blog/gold-the-most-precious-of-metals-part3</a><br><a href="https://minerals.usgs.gov/minerals/pubs/commodity/gold/mcs-2017-gold.pdf">https://minerals.usgs.gov/minerals/pubs/commodity/gold/mcs-2017-gold.pdf</a><br><a href="https://investingnews.com/daily/resource-investing/precious-metals-investing/gold-investing/top-gold-producing-countries/">https://investingnews.com/daily/resource-investing/precious-metals-investing/gold-investing/top-gold-producing-countries/</a><br><a href="https://www.mrpam.gov.mn/public/pages/66/MPRAMreport2016EN.pdf">https://www.mrpam.gov.mn/public/pages/66/MPRAMreport2016EN.pdf</a><br><a href="https://www.ausimmbulletin.com/feature/country-snapshot-mongolia/">https://www.ausimmbulletin.com/feature/country-snapshot-mongolia/</a><br><a href="https://www.gold.org/about-gold/gold-supply/gold-mining/gold-mining-map">https://www.gold.org/about-gold/gold-supply/gold-mining/gold-mining-map</a><br><a href="https://www.news.tj/en/news/tajikistan/economic/20170125/235942">https://www.news.tj/en/news/tajikistan/economic/20170125/235942</a><br><a href="http://raregoldnuggets.com/?p=2229">http://raregoldnuggets.com/?p=2229</a> |
| 82 | <a href="https://minerals.usgs.gov/minerals/pubs/commodity/copper/mcs-2017-coppe.pdf">https://minerals.usgs.gov/minerals/pubs/commodity/copper/mcs-2017-coppe.pdf</a><br><a href="http://www.gkpen.kg/index.php/mineral/mineral-rud">http://www.gkpen.kg/index.php/mineral/mineral-rud</a><br><a href="http://www.kazminerals.com/ru/our-business/bozymchak/">http://www.kazminerals.com/ru/our-business/bozymchak/</a>  |
| 83 | <a href="http://www.imf.org/external/np/ins/english/capacity_countries_pf_mongolia.htm">http://www.imf.org/external/np/ins/english/capacity_countries_pf_mongolia.htm</a>  |
| 84 | <a href="https://eiti.org/news/tajikistan-eiti-assessment-identifies-issues-that-deter-foreign-direct-investments">https://eiti.org/news/tajikistan-eiti-assessment-identifies-issues-that-deter-foreign-direct-investments</a><br><a href="https://eiti.org/validation/tajikistan/2016">https://eiti.org/validation/tajikistan/2016</a>   |
| 85 | <a href="https://openknowledge.worldbank.org/bitstream/handle/10986/18288/605130NWP0Mini10B_OX358322B01PUBLIC1.pdf?sequence=1">https://openknowledge.worldbank.org/bitstream/handle/10986/18288/605130NWP0Mini10B_OX358322B01PUBLIC1.pdf?sequence=1</a> , page 25  |
| 86 | <a href="http://www.eisourcebook.org/cms/January%202016/Mongolia%20Fiscal%20Regime%20for%20Mining.%20IMF.pdf">http://www.eisourcebook.org/cms/January%202016/Mongolia%20Fiscal%20Regime%20for%20Mining.%20IMF.pdf</a>  |
| 87 | <a href="https://www.eri.mn/download/8j5mczvm">https://www.eri.mn/download/8j5mczvm</a>  |

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| 88  | <a href="https://tradingeconomics.com/mongolia/gdp-growth">https://tradingeconomics.com/mongolia/gdp-growth</a>  |
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7 YEARS IN THE  
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