



Evaluation of the total ERG Group contribution to the social and economic development of the Republic of Kazakhstan

Study for 2019-2020

December 2021

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Project objectives were achieved as follows:



Project assessing ERG's total social and economic contribution to the social and economic development of Kazakhstan in 2019-2020

Collection and processing of statistics for modeling

Collection and processing of the Group's financial and economic, and production data for modeling

Update and adjustment of the economic model of Kazakhstan

Modelling ERG's total economic contribution at the national level for 2019-2020

Modelling ERG's total economic contribution at the regional level for 2019-2020

Presentation of the project outcomes

Full contribution of ERG to the socio-economic development of Kazakhstan in 2019-2020 was:



Creation of the added value in the economy

2,47T KZT
to RoK GDP

4,56T KZT
to output by the economy



Business development support



Job creation and employment support

146.5K
of people*
employed

727B KZT
earned by the nation



Increase of human wellbeing

587B KZT
of budget revenues



Replenishment of Government revenues

What does it mean for the economy of Kazakhstan?

1,8% of Kazakhstan's GDP was generated by ERG in 2020

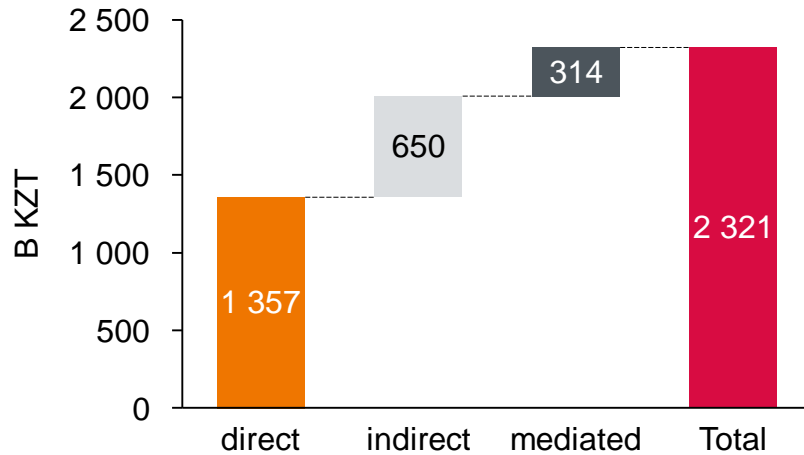
80K of additional jobs in the national economy were supported in 2020

62 KZT of additional added value in the economy is created for every 100 KZT of ERG's added value added as a result of the Group's operations

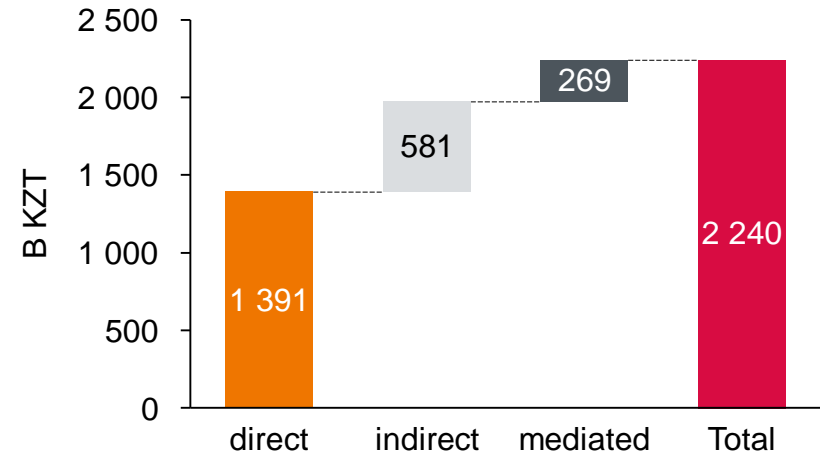
An aerial photograph of a desert canyon with a winding river, overlaid with an orange gradient and a white vertical line. The text "Contribution to the output" is centered in white.

Contribution to the output

Structure of ERG's total contribution to output in 2019



Structure of ERG's total contribution to output in 2020

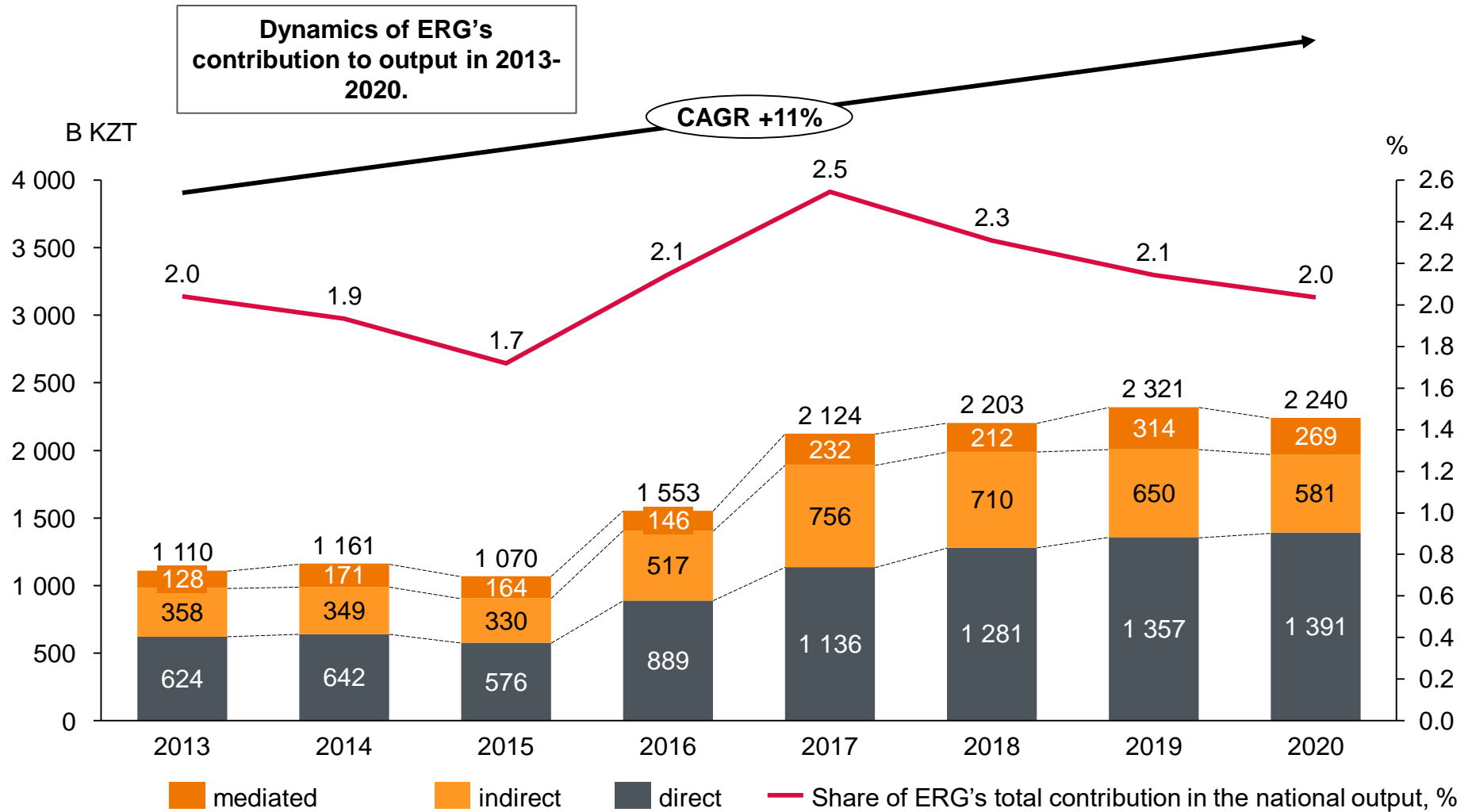


Total contribution multipliers

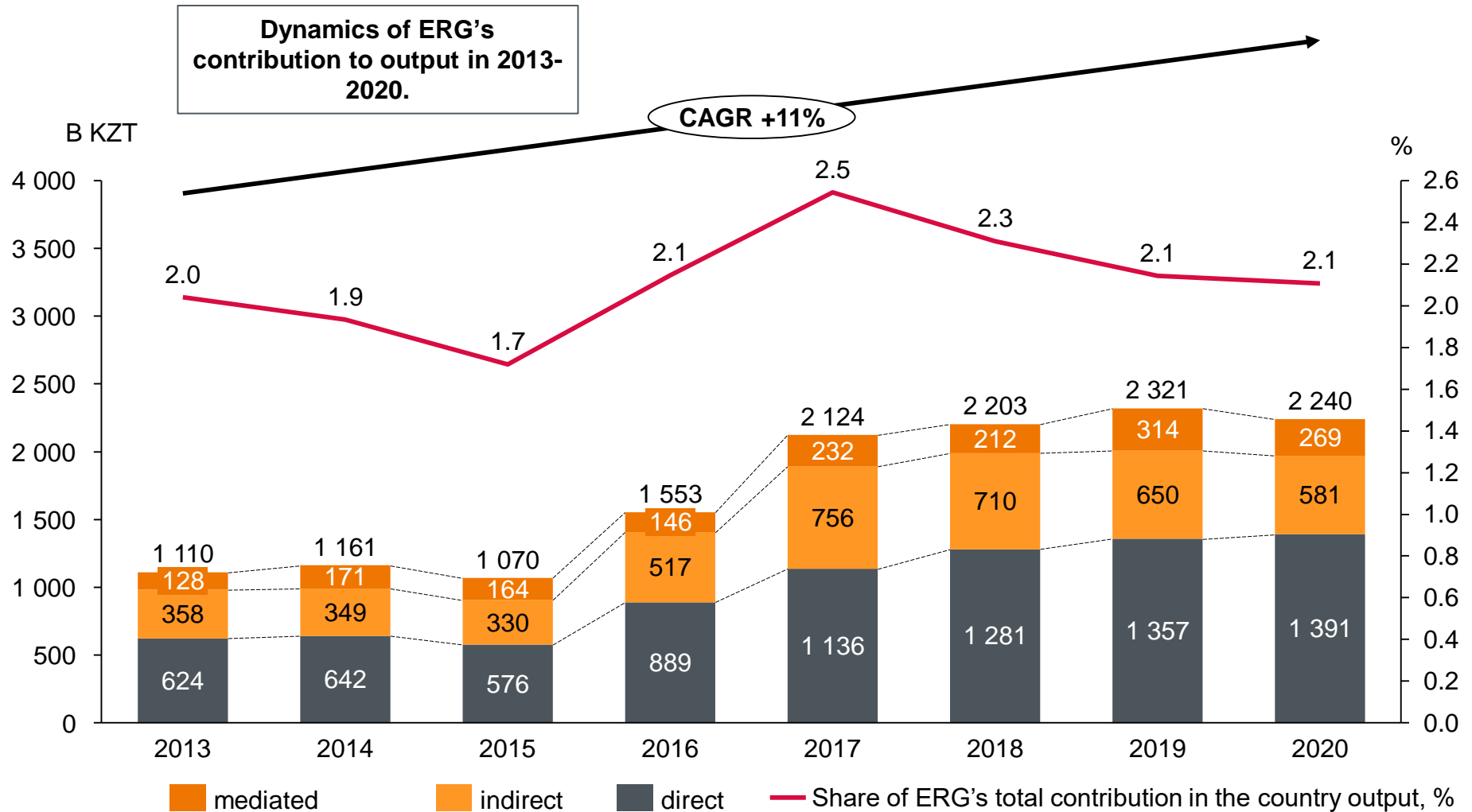
2013	1.78
2014	1.81
2015	1.86
2016	1.75
2017	1.87
2018	1.72
2019	1.71
2020	1.61

- » In 2020, additional 61 KZT of output was created in other sectors of economy per 100 KZT of ERG's output
- » In 2020, ERG's total production contribution decreased by 3.5% due to a decrease in goods and services purchased in 2020 compared to 2019.
- » About 22% of the total output of Pavlodar region in 2020 was accounted for by ERG enterprises.

The annual average growth of ERG's full contribution to output was 11% over the period of 2013-2020 - the first option



The annual average growth of ERG's full contribution to output was 11% over the period of 2013-2020 - the second option

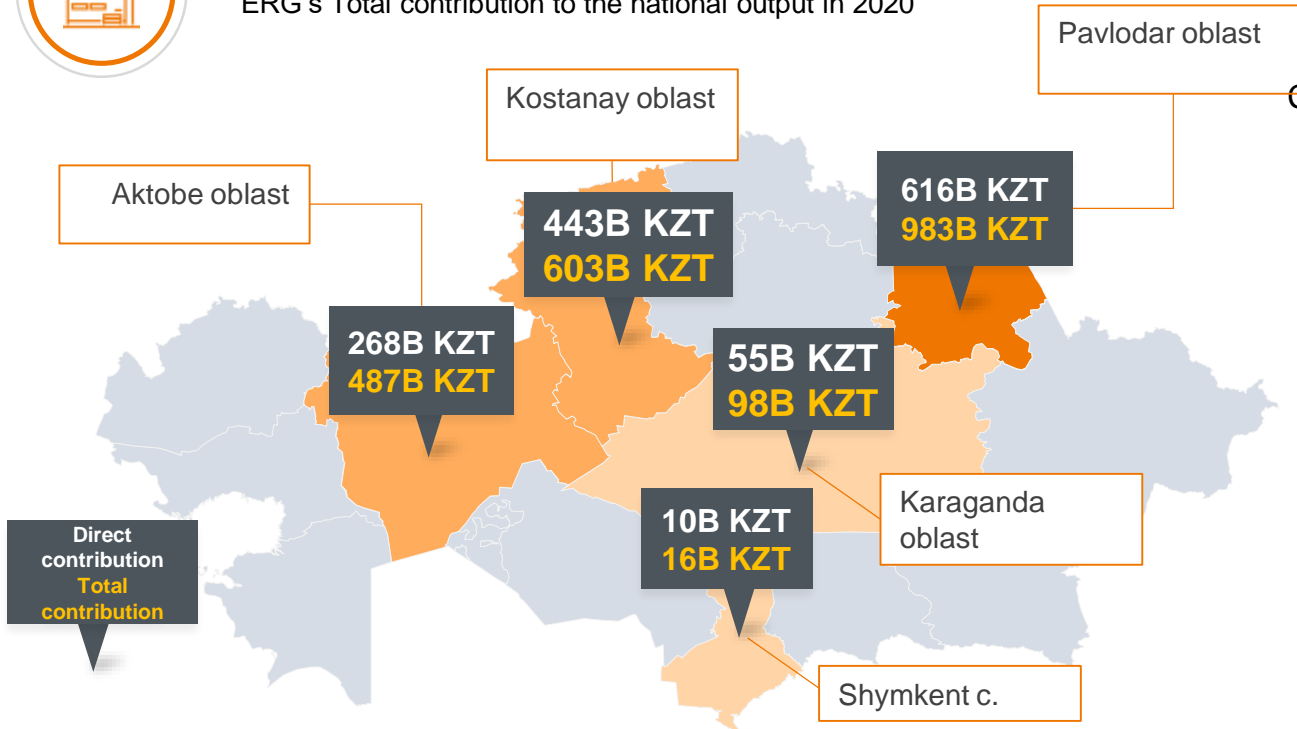


Regional breakdown of total output contribution, 2020

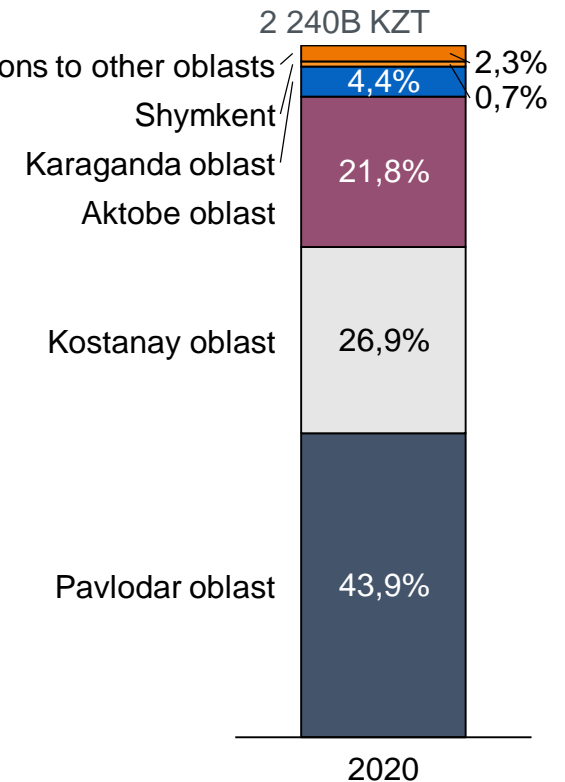


2,240T KZT

ERG's Total contribution to the national output in 2020



Structure of total contribution to output by regions for 2020



ERG's Total contribution to GRP of key regions of the Group's presence in Kazakhstan in 2020



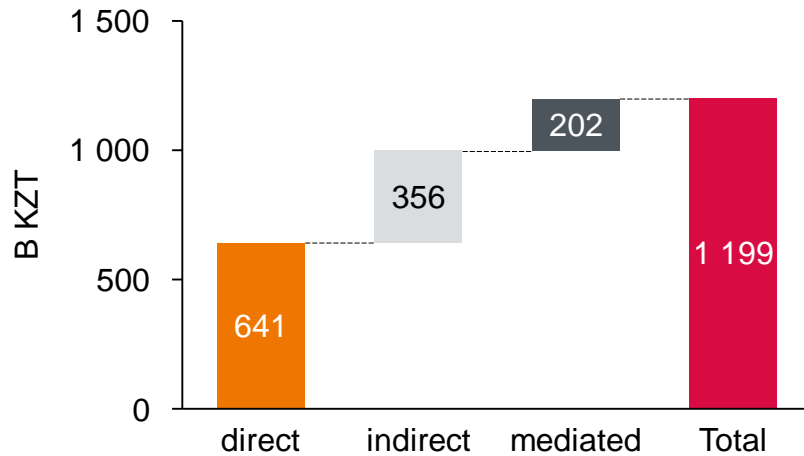
ERG's regional contribution to the regional output in Kazakhstan in 2020

- 22,5% Pavlodar oblast
- 16,0% Kostanay oblast
- 11,6% Aktobe oblast
- 1,1% Karaganda region
- 0,5% Shymkent c.

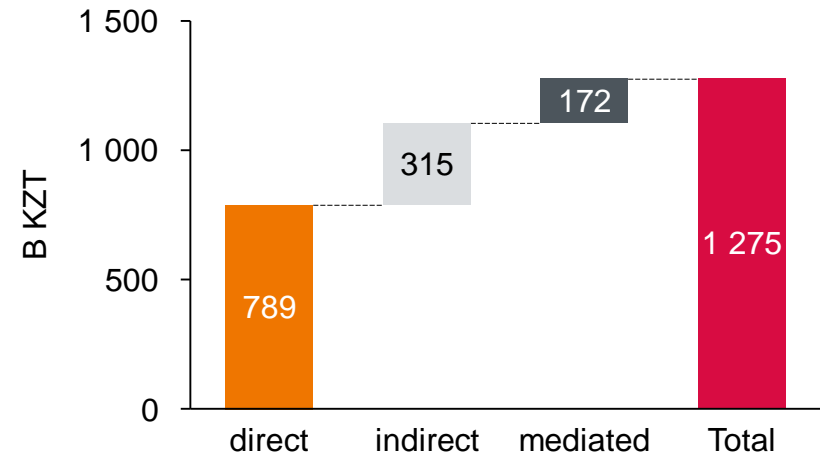
An aerial photograph of a vast, arid desert landscape. The terrain is characterized by numerous winding, light-colored paths or tracks that snake across the dark, sandy ground. In the lower right quadrant, a small, simple structure or tent is visible. The horizon is flat and extends to the top of the frame, where a pale, overcast sky meets the land. The entire image has a warm, orange-brown color cast.

Contribution to the added value of Kazakhstan

Structure of ERG's total contribution to GDP in 2019



Structure of ERG's total contribution to GDP in 2020

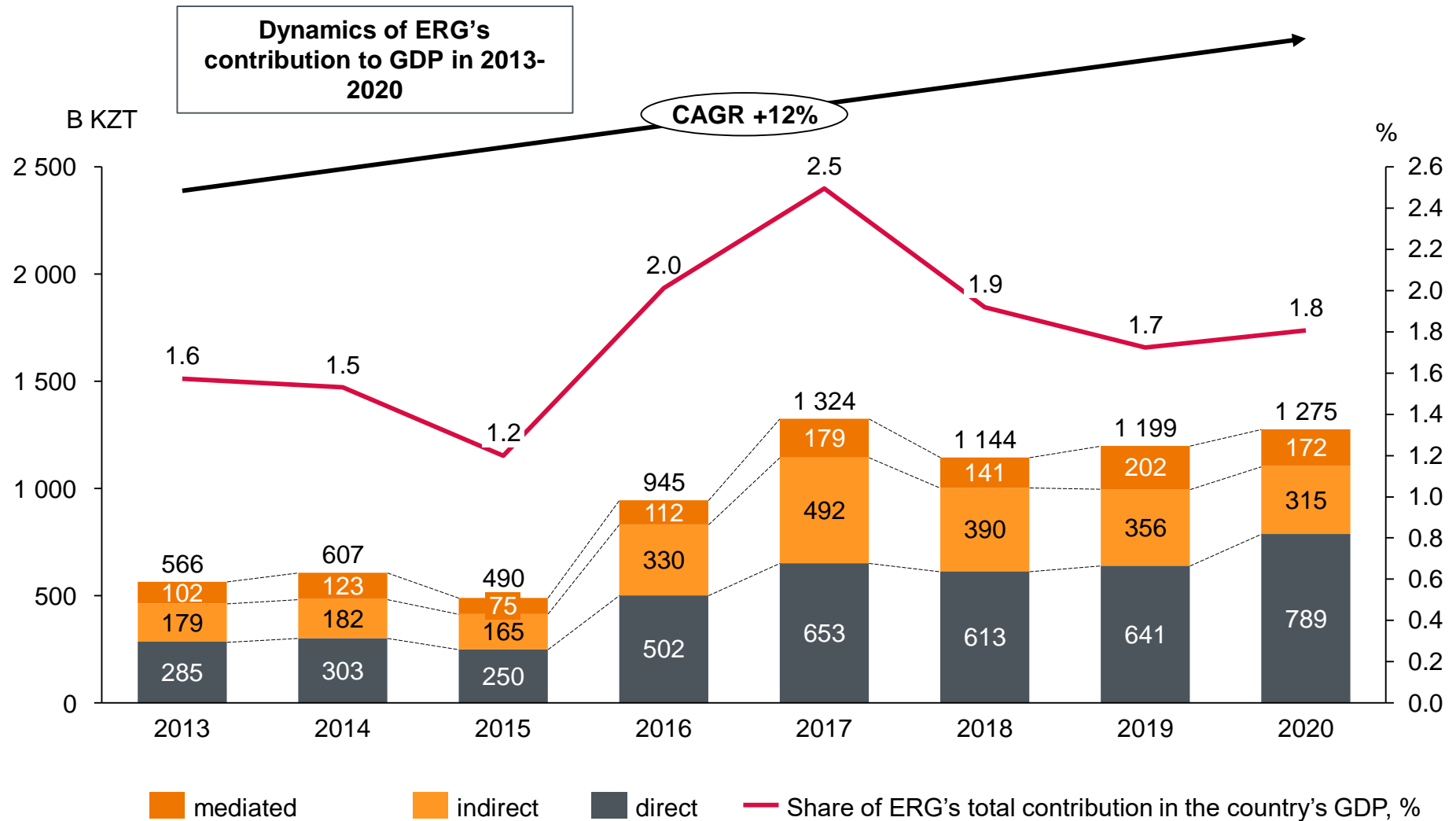


Total contribution multipliers

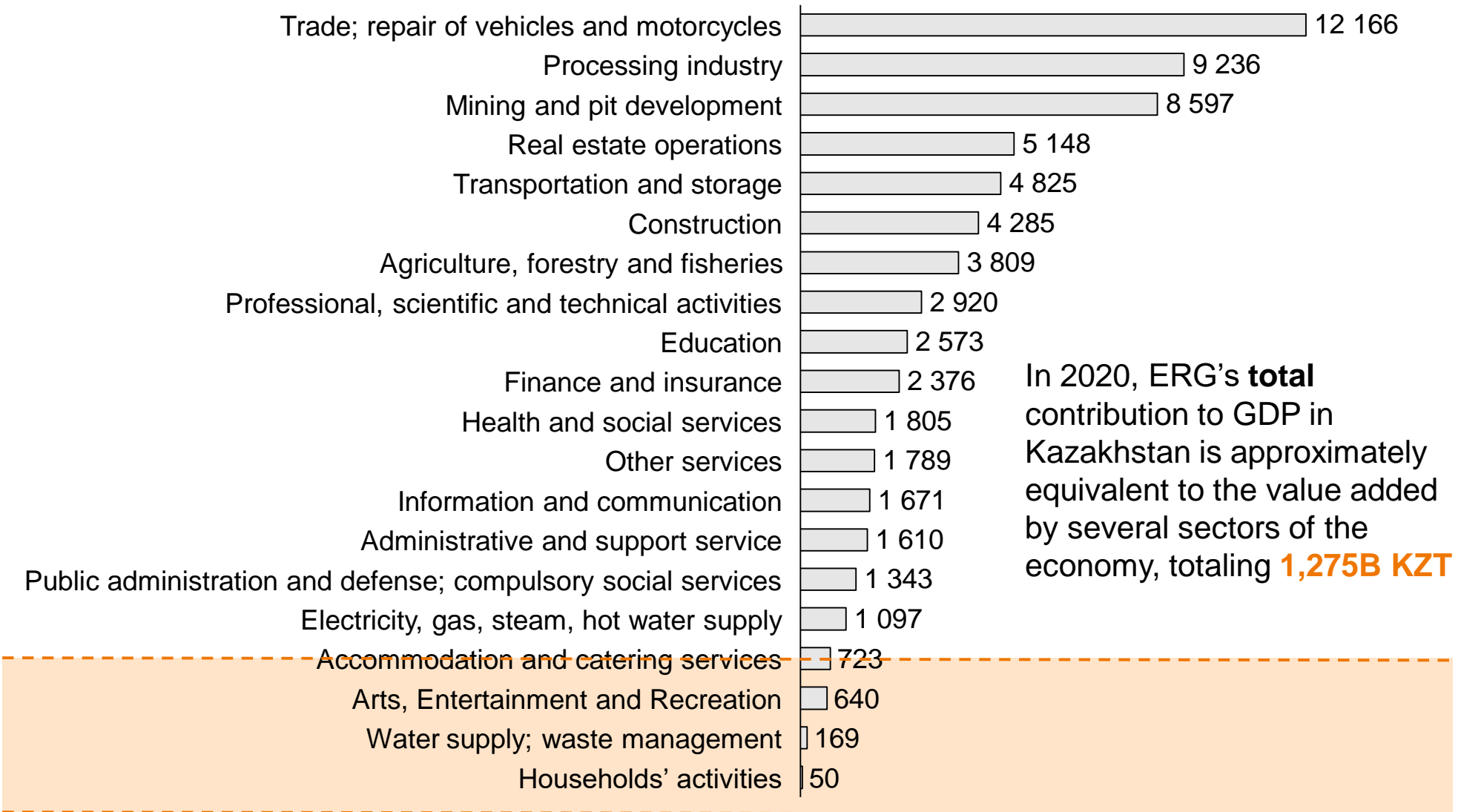
2013	1.99
2014	2.01
2015	1.96
2016	1.88
2017	2.03
2018	1.87
2019	1.87
2020	1.62

- » In 2020, additional 62 tenge was created in other sectors of economy per 100 KZT of ERG's contribution to the added value in the country's economy.
- » ERG's total contribution to the added value is almost equivalent to the total GVA of four sectors in Kazakhstan: accommodation and catering services; arts, entertainment and leisure; water supply; and waste management; and households' activities.
- » ERG's total contribution to Pavlodar oblast was 111B KZT, which is approximately 11% of total GRP of the oblast.

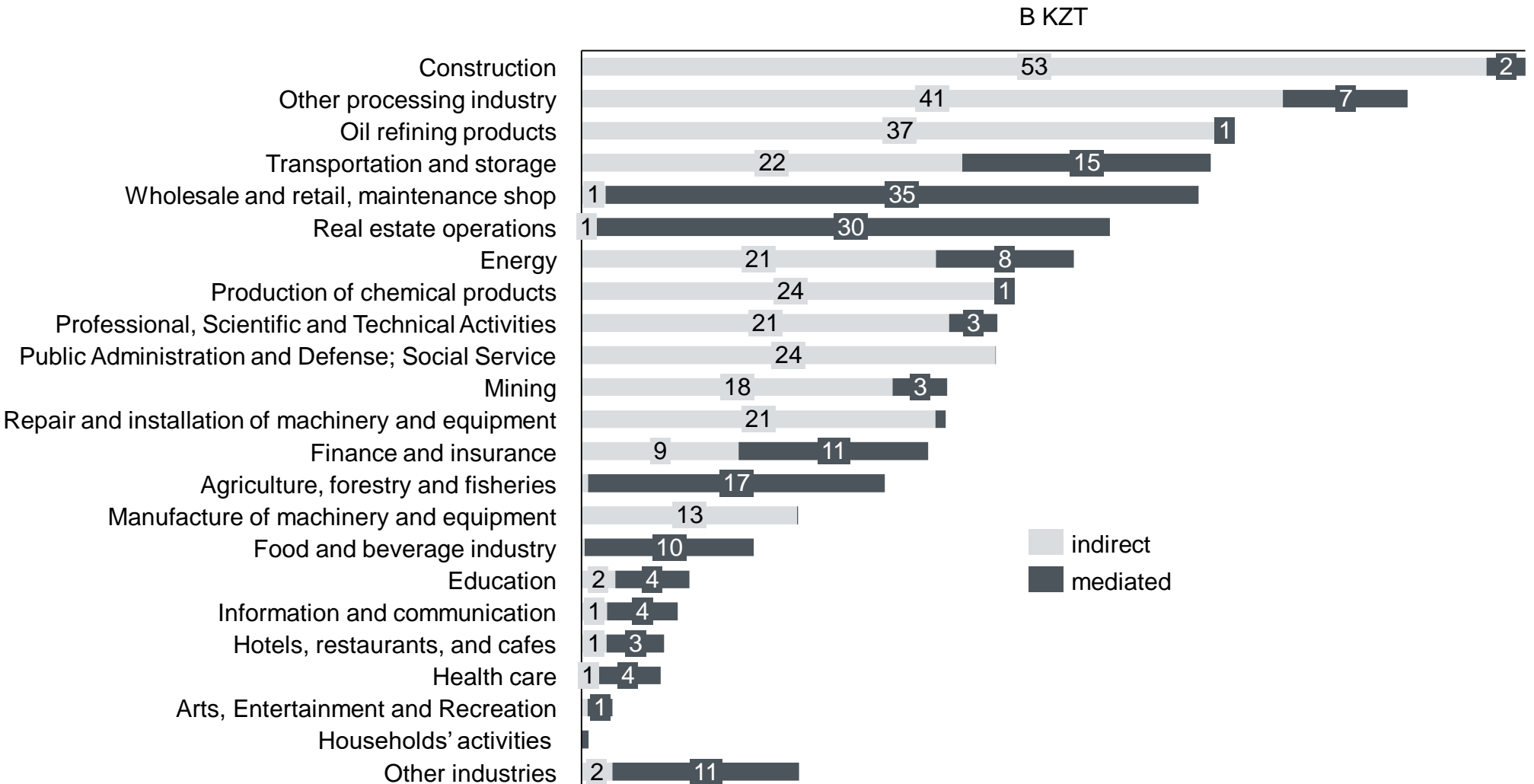
Share of ERG's total contribution to the country's GDP is about 2%



ERG's total contribution to GDP is approximately equivalent to the total added value of 4 sectors of the economy



Sectoral breakdown of indirect and mediated contributions to GDP in 2020, bln KZT

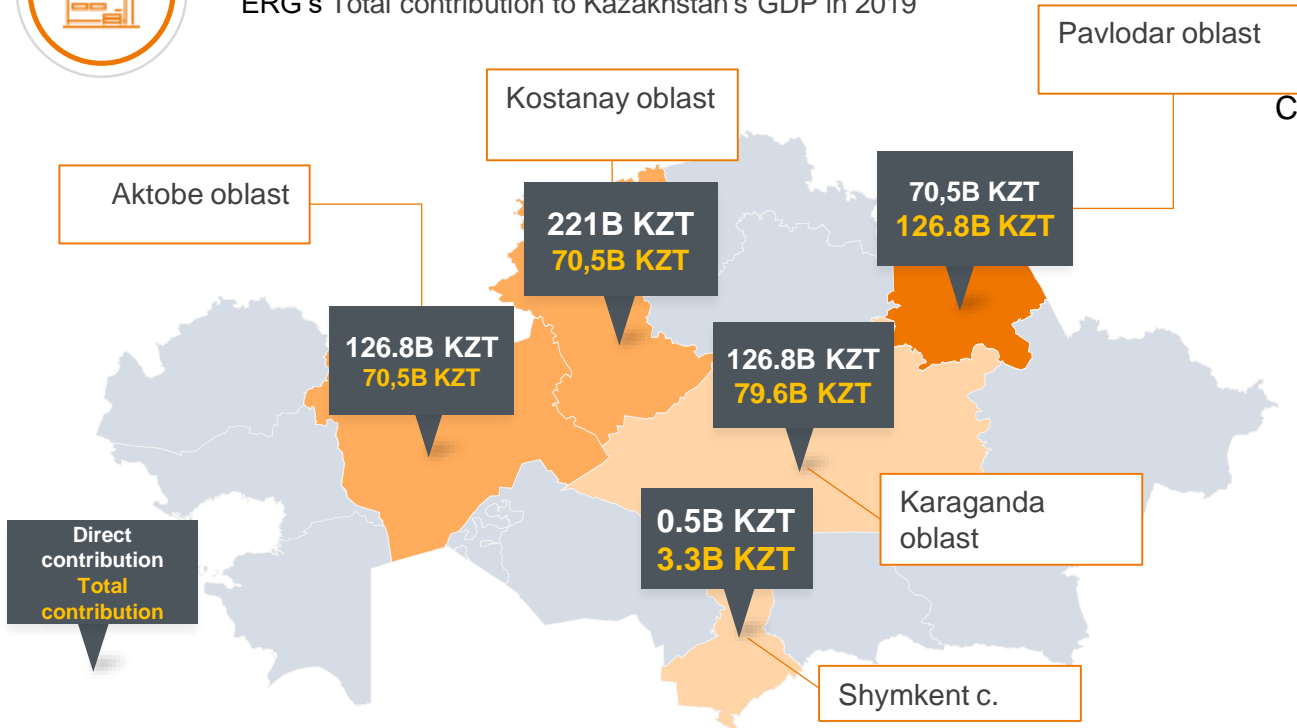


Regional breakdown of total contribution to GDP, 2019

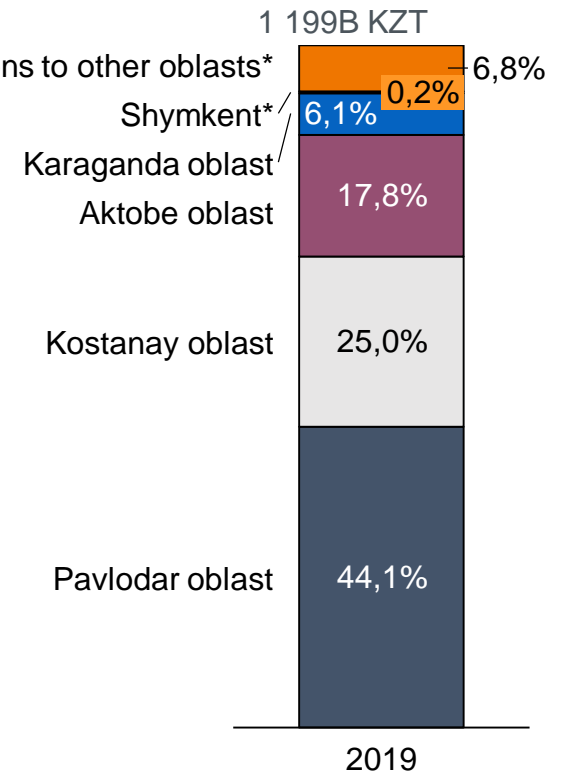


1 199T KZT

ERG's Total contribution to Kazakhstan's GDP in 2019



Structure of total contribution to GDP by regions in 2019



ERG's Total contribution to GRP of key regions of the Group's presence in Kazakhstan in 2019



ERG's regional contribution to GRP of Kazakhstan's regions in 2019

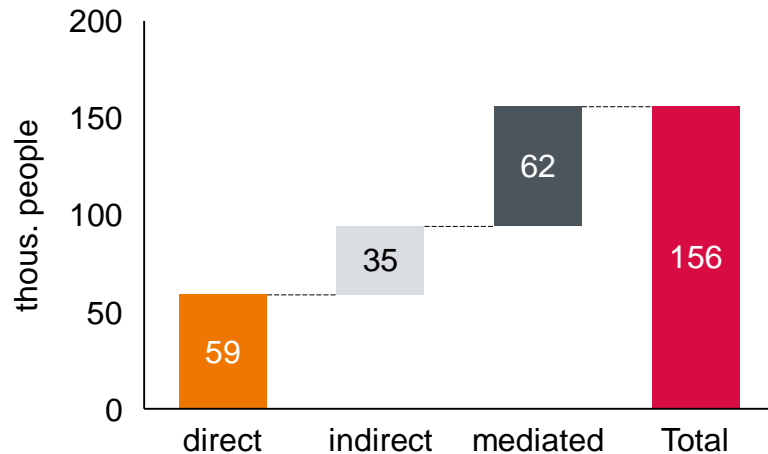


- 18% Pavlodar oblast
- 11% Kostanay oblast
- 8% Aktobe oblast
- 1% Karaganda region
- 0,1% Shymkent c.

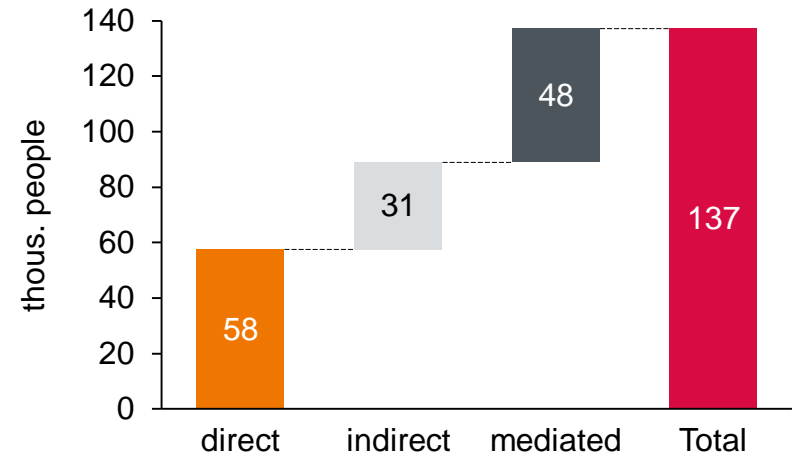
An aerial photograph of a desert canyon with a winding river, overlaid with an orange gradient and a white vertical line. The text "Contribution to job creation" is centered in white.

**Contribution to job
creation**

Structure of ERG's total contribution to employment in 2019



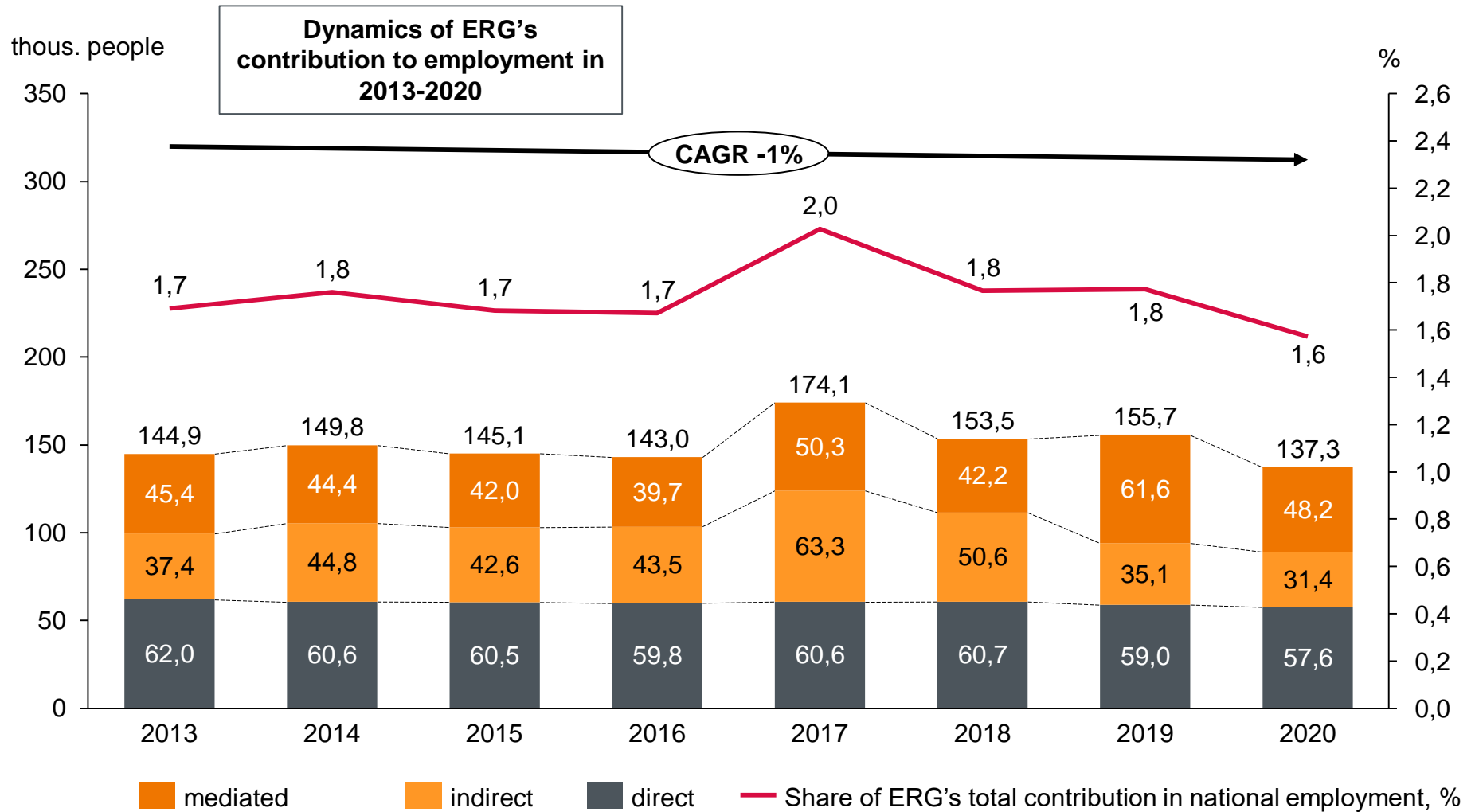
Structure of ERG's total contribution to employment in 2020



Total contribution multipliers	
2013	2.34
2014	2.47
2015	2.40
2016	2.39
2017	2.88
2018	2.53
2019	2.64
2020	2.38

- » For every 100 people employed by ERG, additional 138 jobs were created in other sectors of the national economy in 2020.
- » ERG's Total contribution was 1.4% of the level of national employment in 2020.
- » ERG's Total contribution to national employment decreased by 12% in 2020 compared to 2019; there were two main reasons: a slight decrease in the Group's direct contribution (i.e., ERG employees), and a decrease in indirect and mediated contributions, due to the reduction in the Group's purchases in 2020 compared to 2019.

The share of ERG's total contribution in national employment is about 1,4%

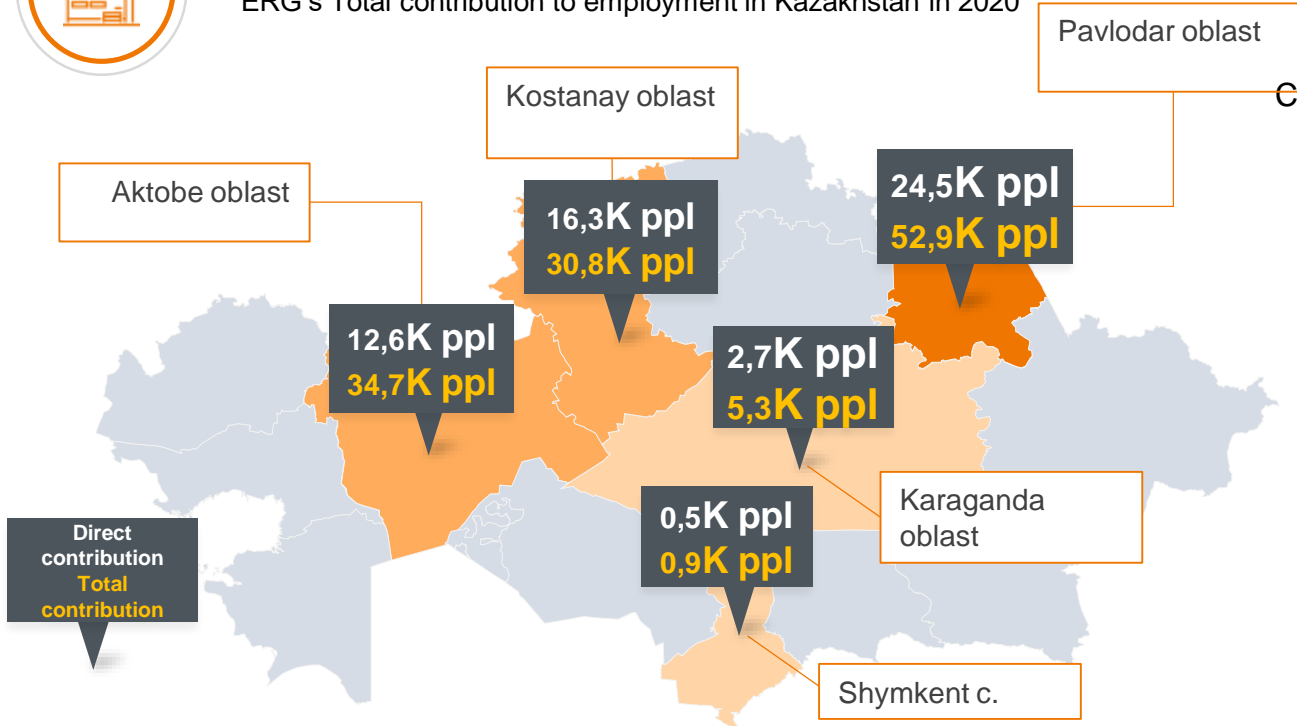


Regional breakdown of total contribution to employment, 2020



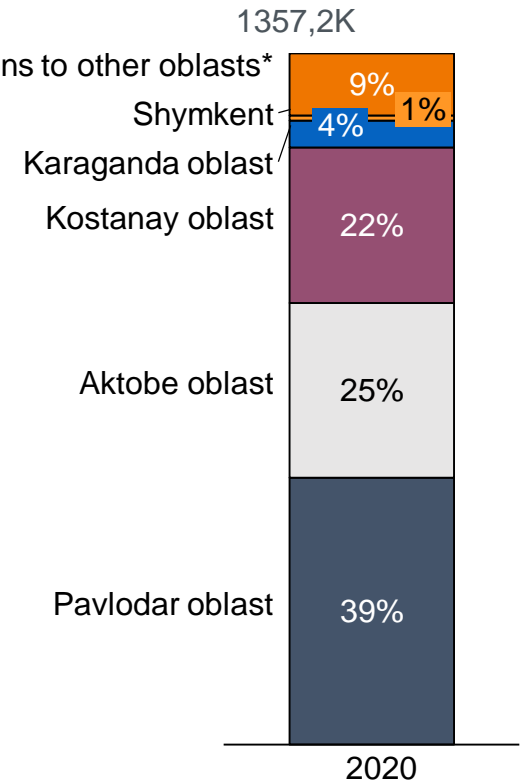
137,2K people

ERG's Total contribution to employment in Kazakhstan in 2020



ERG's total contribution to employment in key regions of the company's presence in Kazakhstan in 2020

Structure of total contribution to employment by regions in 2020



ERG's regional contribution to employment of Kazakhstan's oblasts in 2019

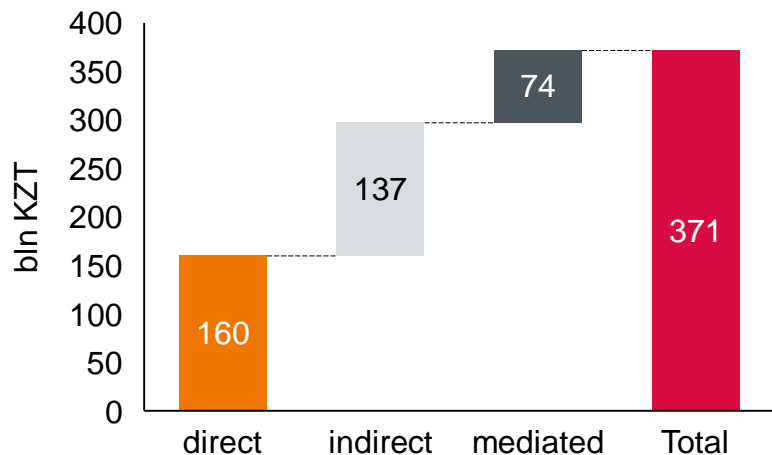


- 13,6% Pavlodar oblast
- 6,6% Kostanay oblast
- 8,3% Aktobe oblast
- 0,8% Karaganda region
- 0,2% Shymkent c.

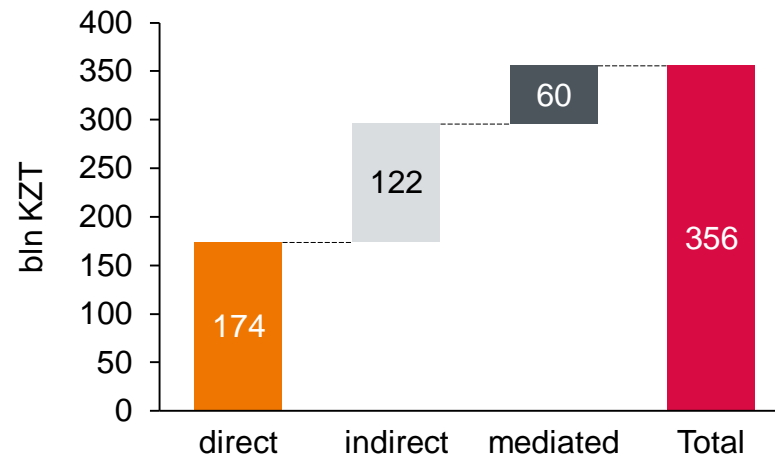
An aerial photograph of a desert canyon, showing winding paths and a river. The image is overlaid with a semi-transparent orange gradient. A vertical white line is positioned to the left of the text.

Contribution to personal income

Structure of total ERG contribution to national labor income in 2019



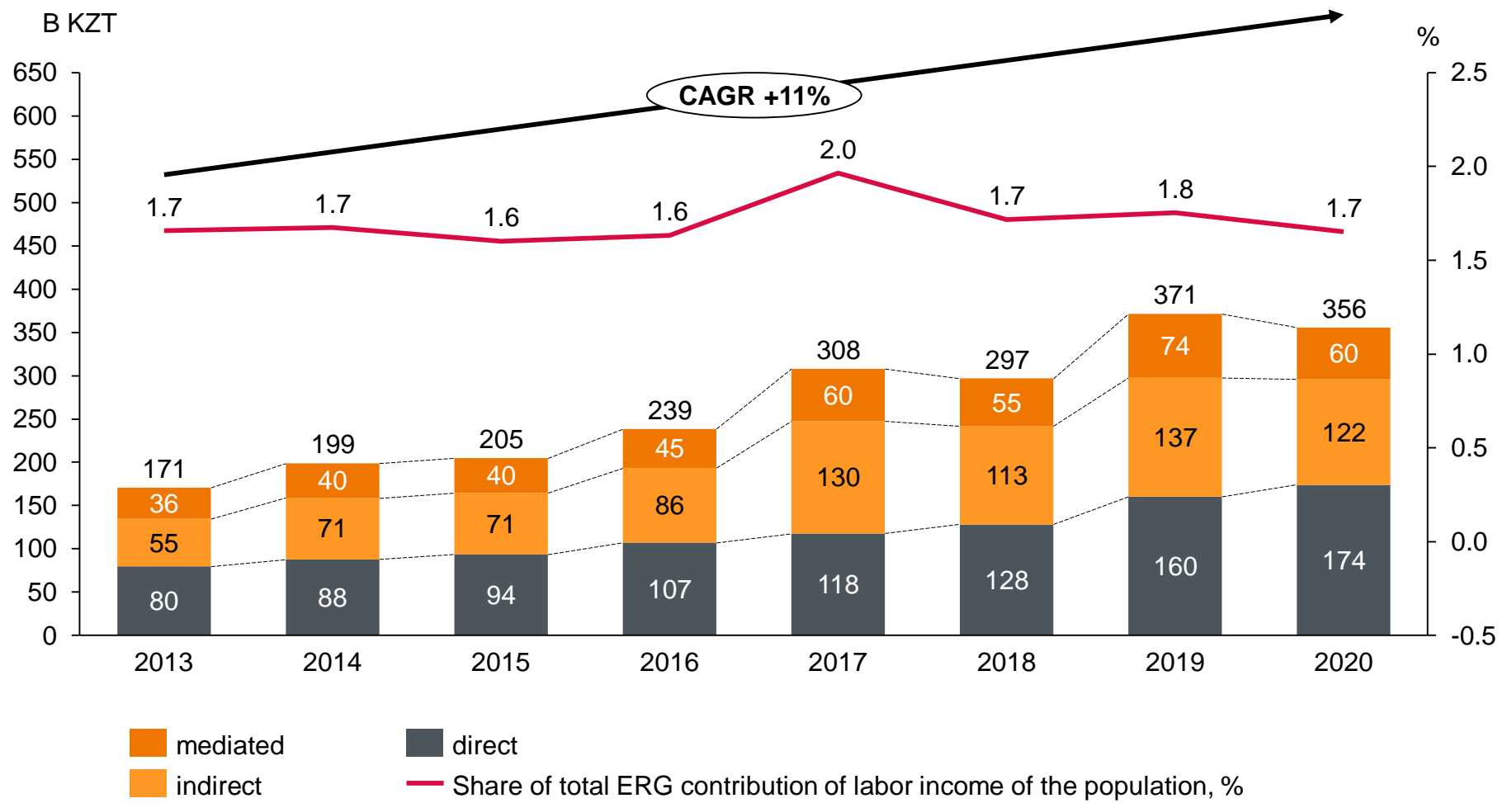
Structure of total ERG contribution to national labor income in 2020



Total contribution multipliers	
2013	2.14
2014	2.26
2015	2.19
2016	2.22
2017	2.61
2018	2.32
2019	2.32
2020	2.04

- » In 2020, additional 104 tenge in other sectors were added per 100 KZT of ERG's contribution to the national labor income.
- » Similar to contributions to value added and employment, ERG's total contribution to labor income decreased by 4% in 2020 compared to 2019. However, the direct contribution to labor income (i.e. salaries of ERG employees) increased by 9%, which demonstrates the social commitment of the Group to its workers – increasing salaries despite crises in the year of 2020.

Dynamics of ERG contribution to labor income for 2013-2020

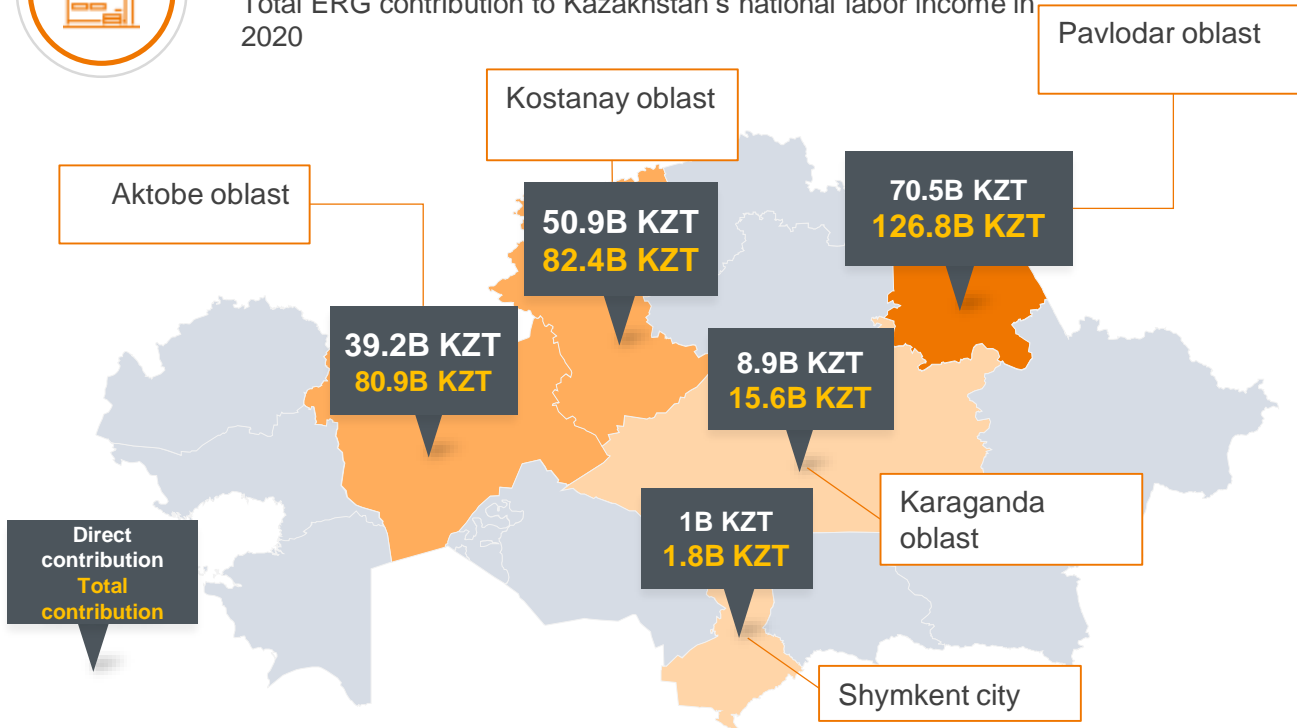


ERG's regional contribution to the payroll in 2020



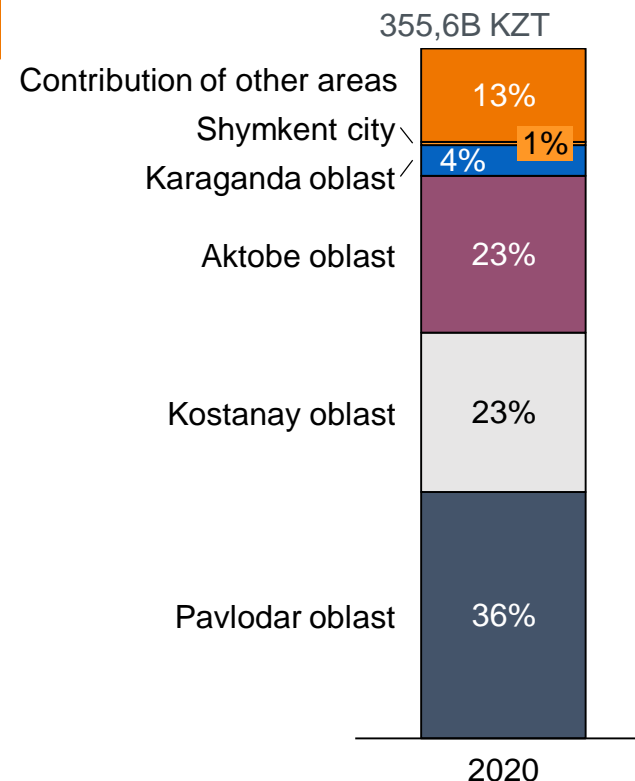
355,6B KZT

Total ERG contribution to Kazakhstan's national labor income in 2020



Total ERG contribution to the nation labor income of key regions of presence in Kazakhstan in 2020

Structure of total contribution to nation labor income in 2020



ERG's regional contribution to the labor income of Kazakhstan oblast in 2019 was

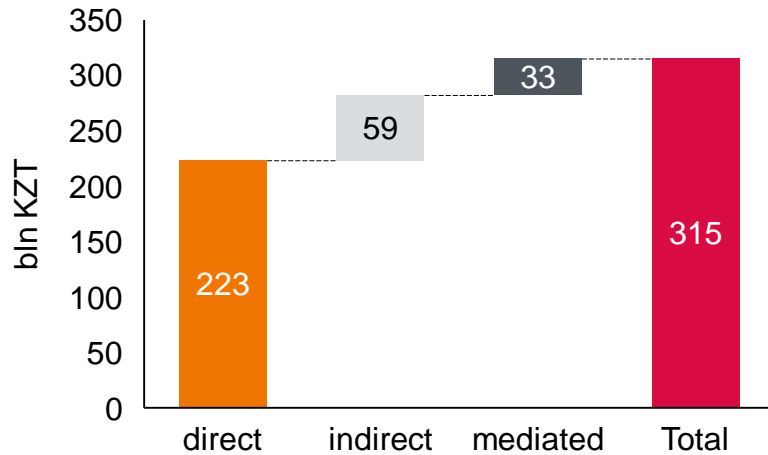


- 15,3% Pavlodar oblast
- 8,1% Kostanay oblast
- 9,3% Aktobe oblast
- 0,9% Karaganda region
- 0,2% Shymkent city

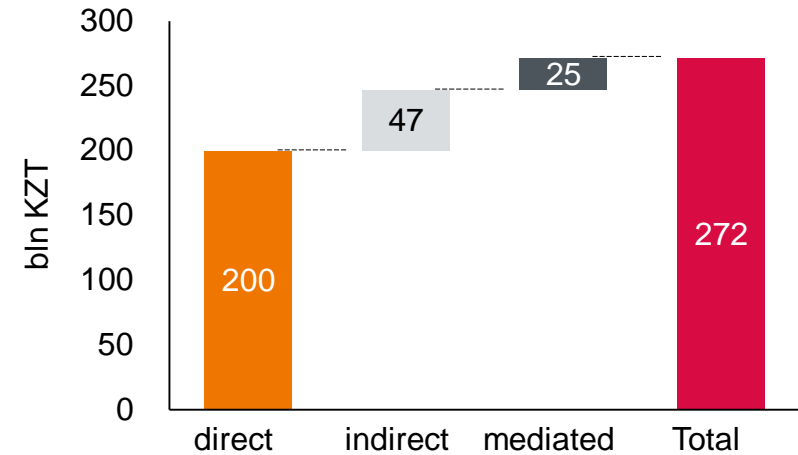
An aerial photograph of a dry, eroded landscape, possibly a desert or a semi-arid region. The terrain is characterized by winding, shallow paths and a small, winding stream. The entire image is overlaid with a semi-transparent orange filter. The text "Contribution to state budgets" is centered in the middle of the image in a white, bold, sans-serif font. A thin white vertical line is positioned to the left of the text.

Contribution to state budgets

Structure of ERG's total tax contribution in 2019



Structure of ERG's total tax contribution in 2020



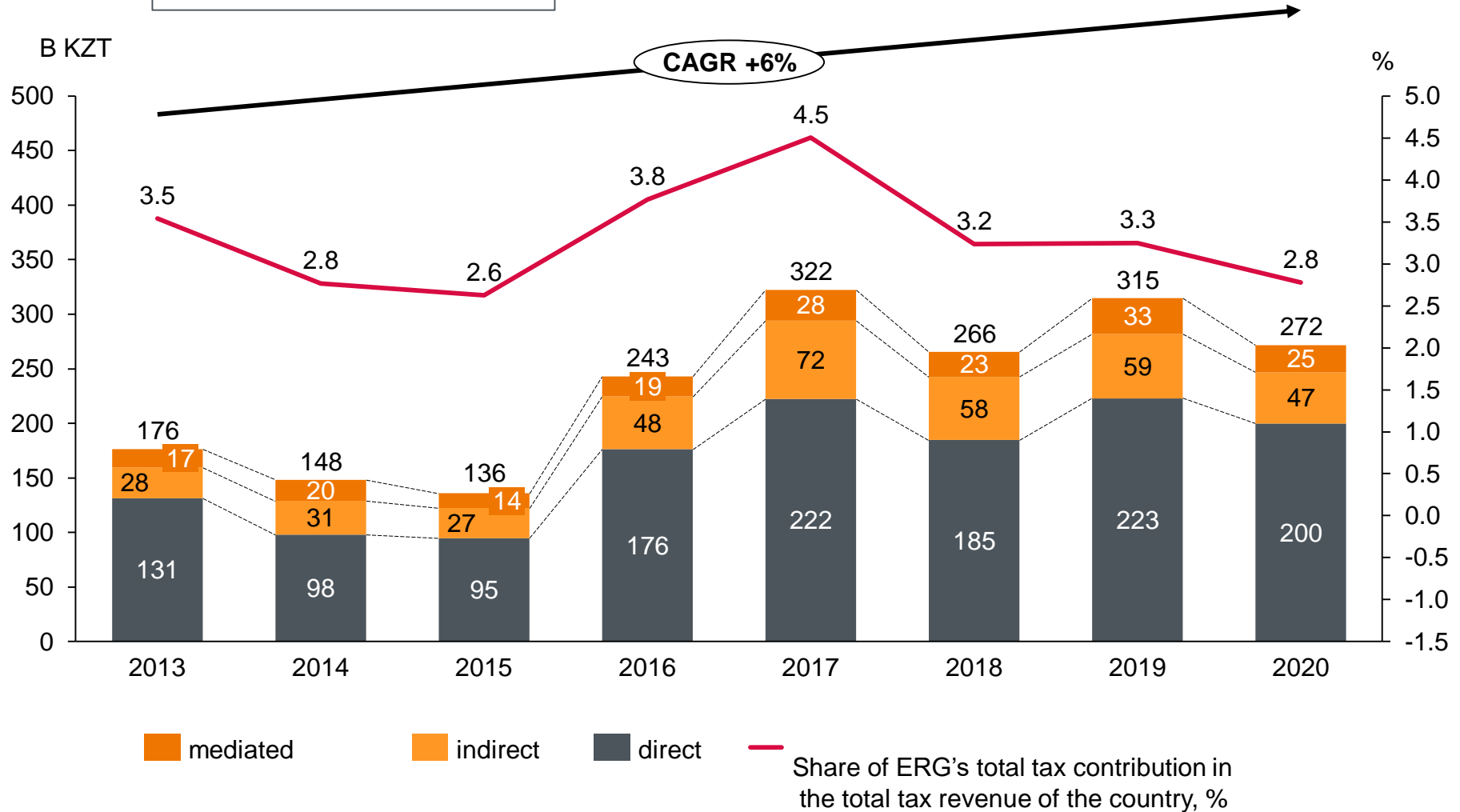
Total contribution multipliers	
2013	1.34
2014	1.51
2015	1.43
2016	1.38
2017	1.45
2018	1.44
2019	1.41
2020	1.36

- » In 2020, additional 36 KZT were created in other sectors of the national economy per 100 KZT of ERG's tax contribution.
- » ERG's Total tax contribution constitutes 2.8% of all taxes and obligatory payments paid into the national budget in 2020.
- » The average annual growth of ERG's total tax contribution to the total amount of all tax revenues in the national budget was 6% for the period from 2013 to 2020.

Share of ERG's total tax contribution was 2.8%



Dynamics of ERG's tax contribution for 2013-2020



An aerial photograph of a large-scale mining or construction site. The image shows extensive terraced earthworks, likely for a dam or a large-scale excavation. A prominent feature is a large, irregularly shaped pond with a bright blue-green hue, situated in the upper right quadrant. The surrounding terrain is a mix of greyish-brown earth and some sparse vegetation. The overall scene is one of significant industrial activity and land modification.

Methodology and key assumptions of the study

How does ERG contribute to the social and economic development of the country?



Contribution made directly by ERG through its operations:

ERG's direct contribution

Exploration and development

Upstream, Downstream and Production

Sales

Closure and reclamation

Logistics

Energy production

ERG's contribution to other sectors of economy through the purchase of goods and services:

ERG's indirect contribution



Goods and services purchased from ERG's suppliers and contractors and further down the supply chain

Contributions through consumer spending by ERG employees as well as "indirect" employees:

ERG's mediated contribution



Salaries of ERG employees and employees of its suppliers and contractors

ERG's Total contribution

Economic Effects:

ERG



Added Value created by ERG operations



Jobs and employees' income



Taxes and other mandatory payments

ERG's suppliers and contractors



Added Value in the supply chain



Jobs and income creation throughout the supply chain



Taxes and other mandatory payments in the supply chain

ERG employees and "indirect" employees



Added Value in the consumer sector of economy



Jobs and income created in the consumer sector of economy



Taxes and other mandatory payments in the consumer sector of economy



Data on ERG's 2019-2020 operating and financial performances, official data from the Statistics Committee of the RoK, the RoK State Revenue Committee and the Unified Pension Savings Fund, and publicly available data from analytical and business publications served as inputs into the model.



Modeling is based on the Input-Output model, developed by V.Leontief, a Nobel Prize winner, and a number of macroeconomic indicators of the RoK, adopted by the governments and statistical authorities of many developed countries.



The outcome is ERG's total social and economic contribution measured across 5 indicators (contribution to GDP, output, employment, payroll and government revenues) and three components of the contribution (direct, indirect and mediated effects) and calculated in monetary terms.



Assumptions and Constraints of the model

- » The Input-Output table for 2019 was used to calculate the contribution results for 2020, as the table for 2020 will not be available until late 2021. However, all input data needed for the model, such as GDP, employment, labor income, amounts of taxes and payments paid for the period, etc., were taken from official sources for 2020.
- » Due to the fact that the effect on the economy of Kazakhstan is created only by goods and services produced and/or purchased domestically, all data on purchases of goods and services of imported origin were excluded from the calculation while estimating the contribution.
- » For purchases from local suppliers engaged in resale of foreign products, only their share of trade margins was taken into account. This category of purchases was attributed to the trade industry.
- » Given the peculiarities of ERG's production process, the direct contribution data was classified by the Group's key business activities, for each of which the total contribution was then calculated (commodity mining and processing industries according to Common Classifier of Economic Activity of the RoK).



Total ERG social and economic contribution to regions of presence was calculated for four key regions of ERG presence - Pavlodar, Kostanay, Aktobe and Karaganda oblasts, as well as Shymkent city for 2019-2020.

In order to assess the regional contribution, the national Input-Output table was divided into a number of regional tables. The approach to regionalization of Input-Output tables is based on the international methodology involving the application of coefficients characterizing inter-regional and inter-sectoral relations, as well as the balance of flows of goods and services between regions of the country.^[1]



Modeling Assumptions and Constraints

- » The regional Input-Output tables for 2019 were derived by calculation. 2020 contribution is estimated similar to the national contribution - 2019 tables were used.
- » Industry-based output indicator was obtained by calculation using the formula:

$$\text{Output} = (\text{industry purchases}) + (\text{value added})$$

- » For the direct regional ERG contribution, only those enterprises located in the region of study were taken into account. Intra-group transactions between enterprises were also included, with the exception of transactions between enterprises within the same region.
- » Transactions between the companies located in different regions but belonging to the same enterprise were not accounted for in the calculations. For example, transactions between Aksu FP and DGOK, part of Kazchrome, were not included as purchases for Pavlodar oblast and outputs for Aktobe oblast.
- » Assessment of the total regional tax contribution was not made, due to the unrepresentativeness of the results because of the peculiarities of the tax system in Kazakhstan (most taxes and payments are paid to the national budget).

[1] Cambridge University Press: Input-Output Analysis Foundations and Extensions, Second Edition, Ronald E. Miller and Peter D. Blair (2009)