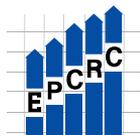


ULAANBAATAR CITY  
DISTRICT COMPETITIVENESS  
REPORT

2021



ECONOMIC POLICY AND COMPETITIVENESS  
RESEARCH CENTER

ЭДИЙН ЗАСГИЙН БОДЛОГО, ӨРСӨЛДӨХ  
ЧАДВАРЫН СУДАЛГААНЫ ТӨВ



The Asia Foundation

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## **ULAANBAATAR CITY DISTRICT COMPETITIVENESS REPORT 2021**

Ulaanbaatar. 2021

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## FOREWORD



I am pleased to present to you the third “Ulaanbaatar City: District Competitiveness Report”. The Economic Policy and Competitiveness Research Center has been conducting research on Mongolia’s competitiveness for the past 10 years including district and provincial competitiveness studies incorporating international methodologies and made them available for public use.

By analyzing the competitiveness of Ulaanbaatar city, the political and economic center of Mongolia, using cutting edge international methodologies we obtain crucial source of information regarding the country’s development status in all areas. The population of Ulaanbaatar city has

increased by 27 percent in the past 10 years, making it home to 46 percent of Mongolia’s population. The total internal migration to Ulaanbaatar city amounted to 39,515 people in the year 2020, which is the greatest record of the past 10 years. The shift from traditional nomadic lifestyles where people would move with the seasons following climate situations to more sedentary and urban lifestyles which offer more opportunities and choices continues to be observed.

Even though internal migration to the city has greatly increased in quantities, can we say the same about the quality of life? If there is a change in quality, is it getting better or worse? Are the cities and dis-

“

*This report illustrates the results of policies and activities taken place and implemented by district and government authorities. By evaluating current and past situations, we are better positioned to deal with problems in the future and plan our actions having learned from our past mistakes.*

districts able to support health, safety and life quality of its residents? Questions like these can come close to being answered by our District Competitiveness Report, giving our readers opportunity to come to their own conclusions using available data, thus making it different from other types of research outlets.

Even though the overall competitiveness index, published for the third time and in every 2 years, has improved when compared to 2017, attention needs to be paid to its growth inconsistency over the years. Due to the global pandemic COVID-19, information and technology and digital services industry

have become an essential part of our lives. Many scientists and researchers warn that COVID-19 will not completely disappear from our future. We are all faced with the need to adapt to ever-changing lifestyles brought on by the pandemic. The matters regarding digitalization of government services cannot just stay undone in papers but they must be addressed with utmost priority so that we can effectively deal with the impacts of the pandemic. Is digital transformation happening at the district offices and services? Or are we still seeing queues dominated by people holding paper documents to get government services at the district and khoroo offices in similar ways as in the 1980s?

## FOREWORD

Mongolia has the most land per capita in the world, yet the residents of Ulaanbaatar city are facing many problems—lack of parking space, pedestrian road, green space and traffic congestion, air and soil pollution—in their day to day lives making life very stressful, all because urban planning and standards have never been properly implemented. It is very sad that Mongolia is among the countries with the most soil and air pollution even though we have this spacious land available at our disposal. This speaks to how unorganized and left behind we are.

As of 2020, Chingeltei, Baganuur and Nalaikh districts experienced improvements in their competitiveness scores while all the other districts had their scores declined. Of the 9 districts of Ulaanbaatar, Khan-Uul came first in the District Competitiveness Report and Bayanzurkh and Bayangol districts came second and third. You can see the detailed information on each indicator from the report and demand changes from your local authorities in the sectors that are not performing so well, so that our city and districts can improve collectively. Also, local authorities

could use this report to their advantage to bring positive changes to all areas, whether it is already doing well or not doing so well.

2020 has been an unusual year of challenges and choices for Mongolia. While some countries had postponed their elections and sports events due to COVID-19, Mongolia had held its parliamentary and local elections, choosing its representatives for the next 4 years.

I would like to congratulate you on reading the District Competitiveness Report.

This report illustrates the results of policies and activities taken place and implemented by district and government authorities. By evaluating current and past situations, we are better positioned to deal with problems in the future and plan our actions having learned from our past mistakes. We are inspired when this report helps not only provinces and districts but also their residents in making their works advance further. The districts must learn from each other and educate themselves on what is or is not working thus creating a space

for improvement, while fixing past mistakes and getting better as one.

We thank the Asia Foundation, other institutions and those who made this report possible and for supporting informed decision-making process based on research and data.

We, at the Economic Policy and Competitiveness and Research Center, wish our readers the best of luck and abundance in your future endeavors. By measuring your work performance, you will have better control. By having better control, you will lead successfully.



**Dr. Tsagaan Puntsag**  
Chairman of the Board

## GREETINGS



The EPCRC District Competitiveness Report is one of the most important data sets that comes available to us every two years in Ulaanbaatar. The Asia Foundation has been partnering with the Municipality of Ulaanbaatar for more than a decade on a range of initiatives to improve the quality of services across the city, especially in the ger areas. One of the core areas of work we have focused on has been collaborating with our partners to gather information about the city as it is, and turn it in to useful data in various formats, such as GIS maps, tables and graphics that can help citizens, officials and decision makers alike.

Since starting our work, we have observed significant increases in the data that is available to help us understand the dynamics that are shaping the development of this vibrant and ever-changing city, and how we can best contribute to the improvements being made. The introduction of the District Competitiveness Survey conducted by the EPCRC every two year since 2017 has certainly been one of the most important data sets to emerge relating to the city's development.

This is a tool that helps us understand the complexities of governance and local economies across

the city, and how they interplay with each other. With the longitudinal data set now taking shape as the EPCRC keeps adding new data sets, we can also use this data to monitor our impact, as well as seek to understand what policies are behaviors shaping positive change the most. We have also noticed the growing interest among decision makers and local officials in understanding and using the data being produced to try and determine how they can make improvements within their own scope and powers. The feedback and accountability loops creat-

ed by having clear, consistent standards of performance measured over time is invaluable in trying to create an environment of positive development in Ulaanbaatar.

For these reasons, The Asia Foundation is very proud to again have supported this 2021 District Competitiveness report. I would like to congratulate the EPCRC for their excellent work this year, and offer my sincere best wishes for those who would use this report and make efforts towards further improvements in Ulaanbaatar.



**Mark Koenig**  
Country Representative, Mongolia  
The Asia Foundation

## ABBREVIATIONS

<b>AOA</b>	Apartment Owners Association
<b>EPCRC</b>	Economic Policy and Competitiveness Research Center
<b>GDP</b>	Gross Domestic Product
<b>LFS</b>	Labour Force Survey
<b>NSO</b>	National Statistics Office
<b>PSU</b>	Primary Sampling Units
<b>TVET</b>	Technical and Vocational Education and Training
<b>UBED</b>	Ulaanbaatar City Education Department
<b>UBHD</b>	Ulaanbaatar City Health Department
<b>UBSD</b>	Ulaanbaatar City Statistical Department

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Ms. Oyunbileg Delgersaikhan	Consultant
Mr. Enkhbaatar Ichinnorov	Consultant

## PREFACE

011

68 percent of Mongolia's population live in urban areas, and 46 percent or 1 of 2 people is living in the capital city.<sup>1</sup> Compared to that of two years ago, the numbers have both gone up by one percent. In other words, urbanization continues to expand even more. World Bank had estimated that 55 percent of world population was living in urban areas as of 2020 and predicts that urban population will double by 2050, of which 7 out of 10 people will be living in urban centers.

Urbanization brings people and ideas together very effectively, while creating a space where productivity and new ideas can flourish. More than 80 percent of the world GDP is generated in urban areas, creating more opportunities and choices for people and in the meantime, it plays a key role in combatting challenges faced by the world as a whole with

regards to society, economics and environment. It is important to note that If urbanization is not properly planned and organized, it will bring negative impacts in an even greater scale.

To successfully develop urban areas, there is a need for subjective measurements at all levels to fully identify its negative and positive consequences. Contributing to this collective development is the main goal of the District Competitiveness Report of Ulaanbaatar City.

We have measured district competitiveness of the city every 2 years, making it the 3rd one this year. The Overall City Competitiveness Index is 0.545 for Ulaanbaatar, a city with 1.5 million population. The index is measured 0-1, where 0 being the worst and 1 being the best.

The Overall City Competitiveness Index



<sup>1</sup> NSO, 2015

# PREFACE

The Overall City Competitiveness Index had improved by 7 percent in 2019 from the previous report (2017) and decreased by 2 percent in 2021 from the previous one (2019). Even though the index in the latest report had gone down slightly at 2 percent, attention needs to be paid to the fact that the competitiveness is not improving consistently. The Competitiveness Index should be constantly growing even at a slower rate than experiencing sudden

improvements in one year and slight decline in the next.

The quality of life in the city of Ulaanbaatar fails to accommodate for the growing number of populations it is facing and this sure translates into the stalling of the competitiveness. The main goal to bring the competitiveness index from 0.545 to 1 still stands and shall be addressed with appropriate measures taken for consistent growth.

## Main factors for consistent competitiveness growth



The base elements for consistent competitiveness growth are long term policy and foresight, and economic capacity. “The development agenda for Ulaanbaatar city from 2020 to 2040” was approved in 2020, emphasizing that the shift, from “the city with challenges” to “the city with satisfactory quality of life”, needs to take place. It is good

that there is a long-term development agenda to look up to and it is now imperative to implement these policies and ensure that the citizens are part of this development as well. The capital city is undeniably the center of Mongolia’s economy. 68.1% of all enterprises are operating in Ulaanbaatar and 66.2% of GDP is generated in the capital.

## PREFACE

013

Nonetheless, unemployment and poverty are rampant in Ulaanbaatar.

The reinforcing elements for consistent competitiveness growth are human development, infrastructure development and governance efficiency. Even though health care and education are better in Ulaanbaatar than that in the other provinces, there are not enough institutions available to satisfy the growing needs. Although some development in infrastructures is observed, the planning and their use sometimes negatively affect the life quality of its residents. As the population density increases, the governance efficiency is declining and citizen participation is weakening as well.

Lastly, strengthening elements for consistent competitiveness growth is technology and innovation. There is a lack of quality research, new technology and innovation solutions that should set the ground for competitiveness growth in Ulaanbaatar city.

To satisfy the fulfillment of these

elements, participation among residents and their desires must be taken into account since the residents ultimately benefits from the improvements that are taking place. 70 percent of the population of Ulaanbaatar is under the age of 39. What do these young adults want? Where are their lifestyles headed? How do we design the city so it is best suited for young generations to live?

The problems faced by the city is rapidly changing depending on the pace of the social and cultural developments taking place. The trend of moving to the city in search of opportunities is being replaced by people looking for peace and tranquility away from urbanization. Those who used to yearn for city's skylines now want more space and prefer to be closer to the nature. How are we going to make adjustments for these ever-changing human needs and make the city more flexible for any living situations?

The issues faced by the city are the issues of its people as well.

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<sup>2</sup> Number of active enterprises, as of 2020, GDP as of 2019, NSO

# 01

## PRINCIPLES OF ANALYSIS AND METHODOLOGY



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## ***Purpose of the research***

The main purpose of the research is to measure the competitiveness indices of all nine districts of Ulaanbaatar according to a diverse set of criteria, to determine strengths and weaknesses as well as the most pressing challenges that each of the districts is facing.

This report aims to provide municipal and district level policy makers with reliable information in a handbook which would be useful reference in shaping future development policies, plans and long-term development models.



## MEASURING DISTRICT COMPETITIVENESS

Competitiveness is a multifaceted concept. As a field of study it is contributing to the theory of economics by including not only economic indicators, but also other 'non-economic' factors when measuring the development progress of countries and regions. In other words, when measuring national, provincial and district level competitiveness, a broad list of criteria, consisting of economics-related and also non-economics-related factors, are used.

Ulaanbaatar district competitiveness is measured based on this concept and the most relevant and inclusive indicators are chosen for the purpose of compiling a comprehensive study.

Cities and districts are rapidly developing and evolving day by day. Therefore, the study of a city's

competitiveness has to keep pace as well.

Modern cities are not just defined by high-rise buildings or by being centers of industrialization and services.

Countries are increasingly emphasizing the importance of prioritising human development and providing healthy, safe and convenient living environments. Additionally, an increasing number of environmentally friendly 'green city' and 'smart city' related research and studies are underway.

In order to provide citizens with opportunities to be healthy, well educated and to have stable income, city authorities must focus on building comfortable living environments with good infrastructure.

### *Competitiveness criteria of the districts and the city*



Prioritizing human development



Convenient living environment



Good infrastructure and safety

One can say that a good quality of life and living environments result from the combination of effective governance, a favorable business environment and high economic performance.

Within this research, district competitiveness is measured according to quality of life, living environment, safety and security, governance and economic performance: altogether the five main factors. Each of these five main factors is divided into 15 sub-factors, and over 150 individual criteria.

There are 29 criteria under the quality of life section, including house hold livelihoods, and the

quality and availability of health and education services.

Living environment includes a total of 49 criteria, like urban planning, image of the city, urbanization, apartments and houses, surroundings and culture.

Safety and security covers a total of 30 criteria including safe living environments and greening of the city.

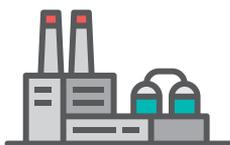
There are 31 factors in "Governance" including district budget, institutional frameworks and societal frameworks.

And the 11 economic factors include district economic performance, employment and the business environment.

*Please refer to the Appendix for the list of criteria.*



Urban culture



Ease of doing  
business



Efficient  
governance



High economic  
performance

## 5 MAIN FACTORS AND 15 SUB-FACTORS OF DISTRICT COMPETITIVENESS



- Standard of living
- Health
- Education



- Urbanization
- Basic infrastructure
- Culture



- Safety
- Security
- Healthy environment



- Budget
- Institutional framework
- Societal framework



- Economy
- Employment
- Business activity

*Please refer to the Appendix for the list of criteria.*

## DATA SOURCES

019

The Ulaanbaatar City District Competitiveness Report utilized two kinds of data sources:

1. Official statistics (hard data)
2. Household surveys (soft data)

Around one third of the 150 criteria come from hard data and two thirds from responses to household surveys. Note that some background data in the hard data section was not included in the computation of the competitiveness rankings.

Statistical data enabled us to analyze the status of competitiveness during

a given period of time (for example, during the past year) whereas survey data represented qualitative data that cannot be easily measured or compiled. Survey data validated some of the hard data results. As the survey results are more recent and better reflect the present situation, there is no time lag, which is often a problem with hard data that sometimes shows a “picture of the past”.

This report utilized 2019 statistics of the capital city and the districts and household survey was conducted in August 2020.

*Please refer to the Appendix for the list of criteria.*

## 020

## SURVEY SAMPLING

The household survey was carried out among randomly selected households from all nine districts of Ulaanbaatar. Two-stage, simple random sampling was conducted.

The sampling design is defined by the same principle as the previous

research. As the margin of error and design effect of the main criteria of the District Competitiveness report 2019 were at the predicted level, it was assumed that the sample size and design do not need to be changed.

### SAMPLING FRAME

The sampling frame consisted of Ulaanbaatar households, who are the end users of city and district level public services. The target survey

population was the population of Ulaanbaatar city as recorded at the end of 2019.

### POPULATION AND NUMBER OF HOUSEHOLDS OF ULAANBAATAR, BY DISTRICTS, 2019

	NUMBER OF HOUSEHOLDS	POPULATION
Baganuur	8,133	28,570
Bagakhangai	1,131	4,123
Bayangol	62,976	225,840
Bayanzurkh	104,764	361,689
Nalaikh	10,248	37,659
Songinokhairkhan	93,521	327,580
Sukhbaatar	40,061	144,409
Khan-Uul	51,241	187,278
Chingeltei	39,345	148,977
<b>Ulaanbaatar</b>	<b>411,420</b>	<b>1,466,125</b>

Source: NSO

### SAMPLE SIZE

A simple random sampling methodology was used in order to determine the sample size. The following formula was used in determining

the sample size given that all households had the same level of probability of being chosen in the simple random sampling.

$$n = \frac{z^2 p(1-p)}{e^2} deff$$

Where:

- n* - number of households or the sample size;
- z* - z value;
- p* - estimated prevalence of measure;
- deff* - design effect, assumed to be 2.0;
- e* - margin of error at 95 percent confidence interval

Poverty headcount was considered as a key factor when determining the sample size and its allocation. Theoretically speaking, this would enable same levels of probability for selecting either a poor or a not so poor household in the sample. Consequently, households from all

social classes had equal chances of getting selected when determining the simple random sampling. A total of 2,400 households were surveyed and an equal distribution of samples was considered when comparing and ranking the districts against each other.

### SAMPLE SIZE, BY EQUAL DISTRIBUTION

Districts	Sample size
Baganuur	200
Bagakhangai	200
Bayangol	300
Bayanzurkh	300
Nalaikh	200
Songinokhairkhan	300
Sukhbaatar	300
Khan-Uul	300
Chingeltei	300
Total	2,400

## 022

## SURVEY SAMPLING

SAMPLING  
UNIT

The study was designed using a two-stage and random sampling methodology. At the first stage, the primary sampling units (PSU) were chosen according to probability proportional to size sampling meth-

odology, while a simple random sampling methodology was used in the latter stage.

Probability proportional to size sampling is formulated as below.

A PROBABILITY THAT A PSU IS SELECTED IS:

$$P_{2hi} = \frac{n_h M_{hi}}{M_h}$$

A PROBABILITY THAT A HOUSEHOLD IS SELECTED FROM THE PSU AT THE SECOND STAGE IS:

$$P_{1hi} = \frac{M_{hi}}{M'_{hi}}$$

A PROBABILITY OF A HOUSEHOLD SELECTION IS THE MULTIPLICATION OF THE TWO PROBABILITIES:

$$P_{hi} = \frac{n_h M_{hi}}{M_h} * \frac{m_{hi}}{M'_{hi}}$$

Where:

- $P_{hi}$  - Probability of  $i$  PSU household selection in  $h$  strata;
- $n_h$  - The number of PSU drawn from strata  $h$ ;
- $M_{hi}$  - The number of sample households within  $i$  PSU frame in  $h$  strata;
- $M_h$  - The total number of households within sample frame in  $h$  strata;
- $m_{hi}$  - The number of households selected within  $i$  PSU in  $h$  strata;
- $M'_{hi}$  - The total number of households within  $i$  PSU in  $h$  strata.

*As the sample size was determined to be 2,400, 10 households were selected from each of the total 240 PSU in the sampling design.*

## SAMPLING WEIGHTS

THE SAMPLING WEIGHTS IN THE TWO-STAGE SAMPLING DESIGN WERE FORMULATED AS:

$$W_{hi} = \frac{M_h M'_{hi}}{n_h M_{hi} m_{hi}}$$

- $W_{hi}$  - Weight of  $i$  PSU household selection in  $h$  strata;
- $n_h$  - The number of PSU drawn from strata  $h$ ;
- $M_{hi}$  - The number of sample households within  $i$  PSU frame in  $h$  strata;
- $M_h$  - The total number of households within sample frame in  $h$  strata;
- $m_{hi}$  - The number of households selected within  $i$  PSU in  $h$  strata;
- $M'_{hi}$  - The total number of households within  $i$  PSU in in  $h$  strata.

IF A HOUSEHOLD DID NOT TAKE PART IN THE SURVEY, THE WEIGHT ALLOCATED FOR THAT HOUSEHOLD WAS DISTRIBUTED AS SHOWN BELOW.

$$W'_{hi} = W_{hi} \frac{m_{hi}}{m'_{hi}}$$

- $m_{hi}$  - The number of households selected in  $i$  cluster of  $h$  strata;
- $m'_{hi}$  - The number of households that took part in the survey in  $i$  cluster of  $h$  strata

## RESEARCH SAMPLING

### DATA COLLECTION

The household survey was conducted by personally interviewing adults who were able to provide requested information on behalf of his/her household. In this case, where nobody was at home at the time of visiting, 2 to 3 revisits were made in order to include all households that were selected during sampling.

If the selected household refused to answer the survey questions or if there were nobody who could be interviewed or if after 3 visits still nobody was at the household, then reserved household selections were utilized for the purpose of achieving the sample size. The reserved households are also randomly chosen within the district.

### DATA ANALYSIS

Survey data was analysed with the use of CSPro software (data entry and correction) and SPSS (statistical analysis and reporting). *Please refer to the Appendix for general characteristics of the sample.*

Criteria that were defined by the survey results were graded with points 1-10. If the respondent agreed with the statement the evaluation is closer to 10 and if not, it is closer to 1.

# COMPETITIVENESS INDEX METHODOLOGY

025

Competitiveness indices of the nine districts of Ulaanbaatar city were analyzed by combining household survey results and hard data. As the units of competitiveness criteria differ from each other, criteria were adjusted to index scores of 0-1 with no units, which enabled

us to compare them against one another. In order to calculate the overall index of Ulaanbaatar city and the competitiveness indices of the districts, indices of the 5 main factors and the 15 sub-factors were also computed.

## COMPUTING COMPETITIVE- NESS INDEX:

### 1. INDEXING OF A CRITERION

Of the 150 criteria, 135 criteria were indexed. Minimum and maximum values for each of the criteria were determined beforehand, and depending on the component and the magnitude, criteria were categorised as either a positive criterion or

a negative criterion.

A criterion is positive if it shows a positive outcome as its value increases. The following formula was used in calculating the index of a positive criterion:

$$\text{Index} = \frac{\text{Real value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum value}}$$

A criterion is negative if it indicates a positive outcome as its value decreases. The following formula was

used in calculating the index of a negative criterion:

$$\text{Index} = 1 - \frac{\text{Real value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum value}}$$

*Please refer to the Appendix for the maximum and the minimum values, and the positivity and the negativity of the competitiveness criteria.*

## COMPETITIVENESS INDEX METHODOLOGY

### 2. FACTOR INDEXING

The district competitiveness report consists of 5 main factors and 15 sub-factors. The overall indices were computed after calculating indices for each of criterion.

Factorial and sub-factorial indices were computed using their geometric means. In this case, each of the factors or sub-factors are considered to have equal weights.

$$\text{Factor index} = \left( \prod_{i=1}^n \text{Index}_i \right)^{\frac{1}{n}}$$

$\text{Index}_i$  - index of i criterion  
 $n$  - total number of criteria

### 3. OVERALL INDEXING

The overall index was computed from the geometric means of the

five main factorial indices.

$$\text{Overall index} = \left( \prod_{i=1}^n \text{Factor index}_i \right)^{\frac{1}{n}}$$

The overall index was scored from 0 to 1 and the districts were ranked according to their indexed values.

Overall index rankings indicate the competitiveness of the districts.



02

**DISTRICT**

**COMPETITIVENESS**

**SCOREBOARD**



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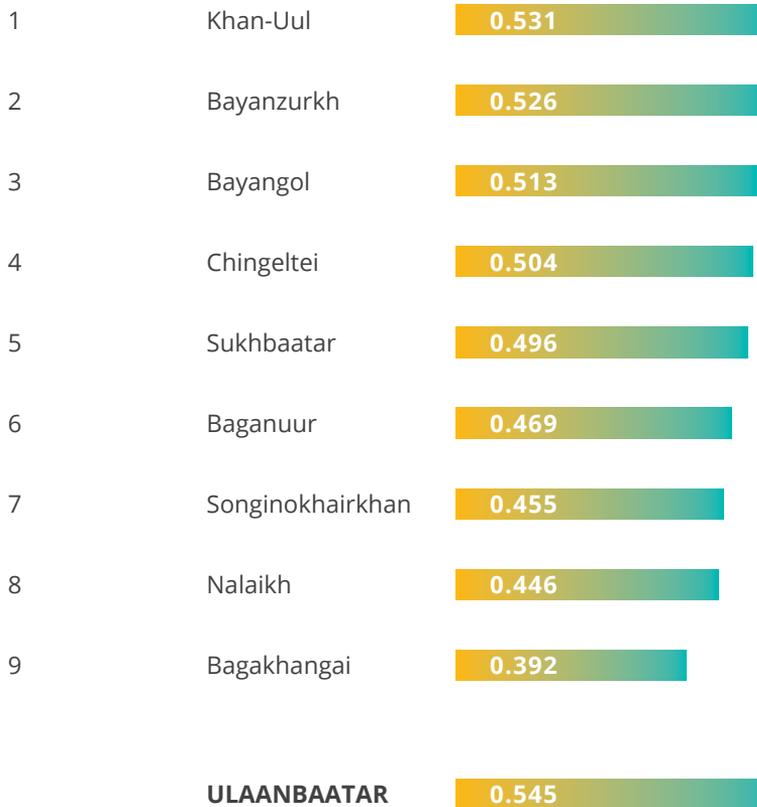
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28	OVERALL INDEX
29	COMPETITIVENESS FACTOR INDEX
34	COMPETITIVENESS SUB-FACTOR INDEX



030

# OVERALL DISTRICT COMPETITIVENESS INDEX



0

1

