



MINISTRY OF LABOR AND SOCIAL
PROTECTION OF MONGOLIA



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THE RESEARCH INSTITUTE OF LABOR AND SOCIAL PROTECTION



REPORT OF BAROMETER SURVEY ON LABOR MARKET DEMAND

ULAANBAATAR
2019

THE RESEARCH INSTITUTE OF LABOUR
AND SOCIAL PROTECTION

***BAROMETER SURVEY
ON LABOR MARKET DEMAND***

Survey undertaken by: Research Sector of Employment Policy,
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PREAMBLE

The Research Institute of Labour and Social Protection has carried out the 10th barometer survey to determine short term labor market demand of Mongolia and presents its report herein. It is a pleasure to emphasize that the study findings have been important data for the sector policy as well as scholars and researchers.

Following international methodology, the survey determines one-year labor-force demand in economic sectors, considering each region and qualification. It also finds out a lack of qualification in the previous year. The survey covered 18 sectors other than public management, defense, international organizations and country offices.

This survey presents labor market demand of 2020 and last year's labor-force shortage. I would like you to send your feedback to us in respect of the method and approach of the survey, while you read the survey outcomes and apply them in your work.

DIRECTOR

M. ALTANSUKH

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ABBREVIATIONS

NSO	National Statistics Office
MLSP	Ministry of Labor and Social Protection
RILSP	Research Institute of Labour and Social Protection
GOLSWS	General office for labour and social welfare service
RFB	Registration Fund of Business
CES	Classification for Economic Sectors
YAMAT	National Classification and Definition of Jobs and Professions
ISCO	International standards for classification of occupations

TERMS AND DEFINITIONS

Entity

Company, partner, cooperative or state-owned or locally-owned enterprise or legal person that is subject to pay corporate income tax and runs production or service and is responsible for obligations occurred in relation to its operations by the assets.

Workplace

All places or premises where a worker comes to undertake duties under employer's direct or indirect control.

Worker

A person who pertains to any status of employment by engaging in economic activity to earn wages or income. A person, who engages in economic activity to earn wages or income for more than one hour in the recent week, is deemed a worker.

Employer

A person who hires a worker under employment agreement;

Labor-force

All working-age people who are employed or search job actively and source that is prepared to hire workers

Labor-force demand

Size of labor services demanded by employer.

Job searcher

Unemployed person who is searching job and job-holding person who is searching job for better work and more income by registering at or referring to recruitment organizations and labor exchange;

Permanent job

Job duties which are undertaken at employer's workplace on work days or in shifts using the employer's work tools pursuant to a pre-determined procedure under the norm, evaluation and salary rate approved under the employer or its representative's supervision.

Permanent worker

A person who holds a permanent job under formal employment agreement and whose taxes and social insurance are paid by the employer and labor relations are regulated by laws on labor and public service.

Temporary job

Temporary job or position for which employment agreement or work agreement or service agreement is made for up to 6 months depending on the characteristics of operations and such agreement terminates after a particular task is completed, and where labor relations are regulated by labor and civil laws.

Temporary worker

An economically-active citizen, who earns wages or income by making employment agreement or work agreement or service agreement for up to 6 months depending on the characteristics of

operations where labor relations are regulated by labor and civil laws and who pays his/her taxes and social insurance.

Seasonal job

Job or position for which a permanent seasonal employment agreement is made, of which taxes and social insurance are paid by the employer and labor relations are regulated by labor law and other relevant laws.

Seasonal worker

A citizen who holds an official permanent seasonal employment agreement and whose taxes and social insurance are paid by the employer and labor relations are regulated by labor law and other relevant laws.

New job

New job or position that has newly emerged at formal or informal sector through expanding or creating production or service as part of the economic activity.

Registered unemployed person

A citizen who has lost job or has been fired due to any reason last week or prior to it and who is searching for a job actively and is ready to have a job by registering at a recruitment agency after getting his/her dismissal order in writing.

State-owned legal entity

A state-owned legal entity that has been established to implement the state duties and provide social needs by state properties, only.

Entity with foreign investment

A business entity incorporated according to the applicable legislations in Mongolia and has over-all equity of US\$100,000 or more (or equivalent in Mongolian tugriks or MNT), not less than 25 percent of which is invested by a foreign investor(s).

Skilled worker

A person who acquired knowledge and skills to do a particular job through schooling or whose knowledge and skills have been certified by an authorized body

Resigned at his or her own request

Unless otherwise stated in laws or employment agreement, a worker is entitled to quit job in 30 days after he or she has submitted an application to terminate his or her employment agreement, and in this case, his or her employment agreement is deemed to be terminated.

SUMMARY

The survey aims to determine short-term labor market demand (2020) by qualification and economic sectors and provide education and employment policy developers and decision makers and researchers with information.

This barometer study on labor market demand covered 3642 entities and organizations of 9 UB districts and 21 provinces in order to define workforce demand of 2020. 2585 entities encompassing 71.0 percent are from Ulaanbaatar, while 1057 entities encompassing 29.0 percent or 1057 entities are from 21 provinces.

Labor market demand has been 72.7 in 2020 throughout the country, increased by 4.8 percent than that of 2019. Thus, employees' number is able to go up by 6.3 percent than the preceding year.

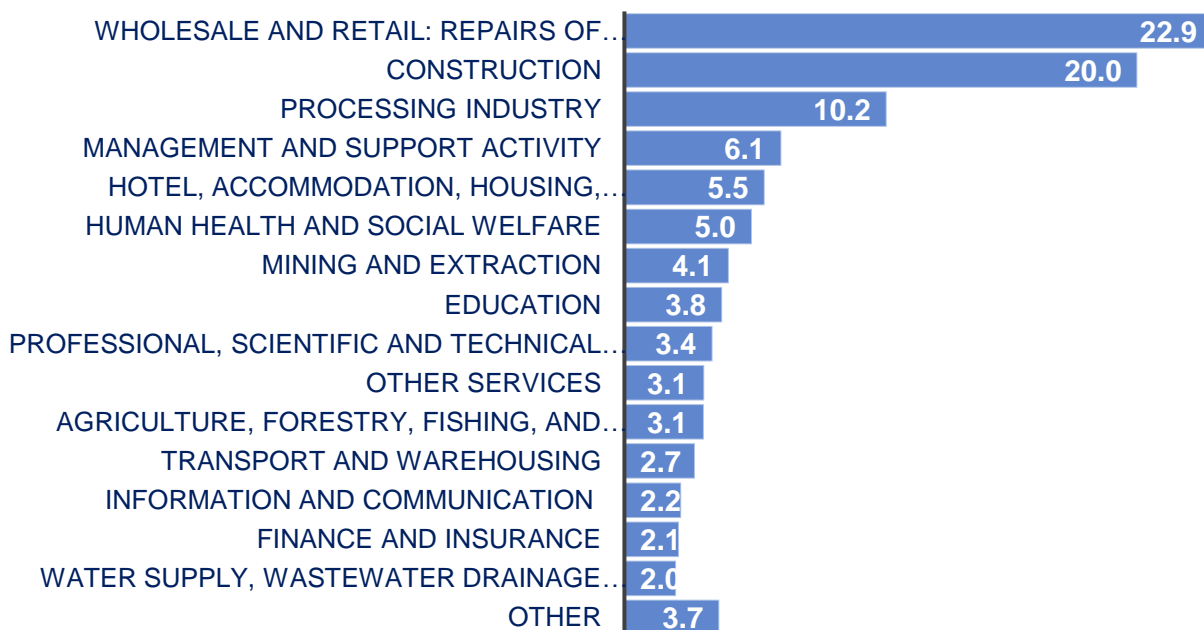
It has been observed that 81.6 percent of overall labor-force demand equivalent to 59,300 occurs in the first half of 2020 and the remaining 18.4 percent equivalent to 13,400 occurs in the last half. 81.3 percent of overall Labor-force demand is expected to be permanent jobs. As for job types, 59.8 percent is expected to be new jobs and 40.2 percent is expected to be vacant positions.

As for Labor-force demand in economic sectors, maximum demand is expected to occur in construction, wholesale and retail trade, processing industry and agriculture, which replicates the findings of the 2017, 2018 survey. Hence, such sectors are expected to have a major positive effect on labor market in 2020. On the other hand, labor-force demand is minimum in the economic sectors, including water supply; effluent and waste management and treatment; electricity, gas, steam and ventilation supply industry; entertainment and game industry; finance and insurance industry; and real estate industry, accounting for 12.8 percent equivalent to 9,300, only.

Hence, labor-force demand in construction solely occurs 20.0 percent of overall labor-force demand, it decreased by 17.9 percent compared to the previous year. Moreover, forecast of 16,700 labor-force demand in wholesale and retail trade is expected to be increased by 26.2 percent, compared to the previous year.

Demand for labor-force in the real estate, information and communications, transportation and warehousing, arts, entertainment and games, finance and insurance sectors is expected to decline from the previous year, while demand for labor-force in agriculture, mining, electricity and gas, steam and ventilation, education, human health and social welfare activities, and other service activities is expected to increase.

Figure 1. Labor-force demand of 2020, by sectors and percent /thousand persons/



More than 68.0% of overall labor-force in all sectors of economy is expected to occur in the first half of the year, with 7 of 10 jobs are expected to be created in the first half of the year.

Figure 2. Labor-force demand of 2020, by sector and percent



As for occupation, occupational demand that among in the high-demand labour-force sector is expected to high in this year. For instance, out of labor-force demand, construction assistant accounts for 11.0% percent, while pipe repairmen, electricians, welders, plumbers and pipe fitters accounts for 1.1 percent each.

Table 1. Occupations in demand, by percent

Д/д	ISCO	Jobs and occupations	Percent	Д/д	ISCO	Jobs and occupations	Percent
1	931211	Construction assistant	11.0	11	215111	Engineer / electric/	1.4
2	932912	Manufacturing labourers	4.8	12	833215	Trash car driver	1.3
3	524212	Seller	3.9	13	751111	Butchers, fishmongers and related food preparers	1.3
4	911214	Cleaner /Office/	3.1	14	523011	Store cashier	1.3
5	343412	Chef /General/	2.2	15	712612	Plumbers and pipe fitters	1.2
6	241113	Accountant /General/	2.1	16	221111	Generalist medical practitioners	1.1
7	833213	Truck driver	1.9	17	832213	Car, Taxi and Van Drivers	1.1
8	222111	Specialist medical practitioners	1.6	18	741111	Electrician	1.1
9	541411	Security /Contract service/	1.6	19	721214	Welder	1.1
10	513111	Waiter	1.4	20	712611	Plumbers and pipe fitters	1.1

In the labor market of 2019, the labor-force shortage reached 17.700 due to the lack of recruiting suitable professional people, and the biggest shortage was in the wholesale and retail trade, vehicle and motorcycle maintenance, processing industries and construction sector.

However, employers have provided 89.1 thousand workers with jobs in the last 12 months, while 59.8 thousand employees were quit work during the same period.

The main obstacles for employers to hire new employees are: For example, 18.8 percent of all the problems mentioned by the employer is workers' lack of desire to work in a stable manner, 15.0 percent is lack of experience, 14.5 percent is inability to handle workload, 13.9 percent is undervalue of working condition and salary by candidates, which accounting for 62.2 percent of total challenges faced. Accordingly, the inadequate experience of a job seeker is still a major obstacle for employers to hire new employees. It is worth noting that these difficulties are mentioned repeatedly in the annual surveys.

CHAPTER 1

CHAPTER 1. CURRENT STATUS OF LABOR MARKET

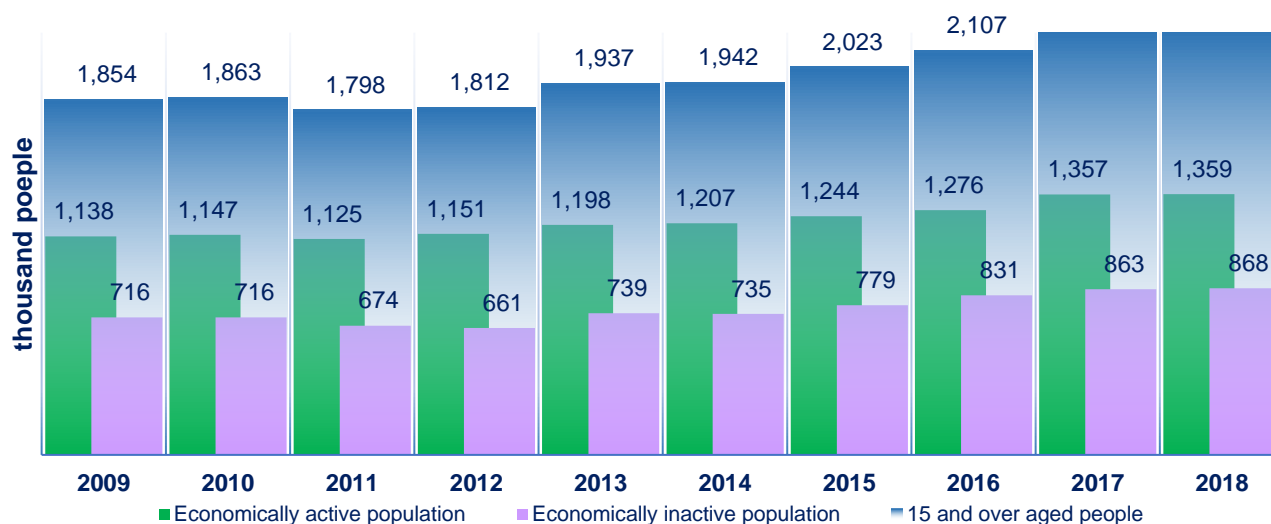
1.1. CURRENT STATUS OF LABOR MARKET

The constitution of the labor-force in labor marker is a person of the working-age population, and it is employment to produce or provide services for personal use and for others. This chapter discusses the state of the Mongolian labor market over the past 10 years.

Labor-force

Even though, Mongolia has a steady population growth, the working age population has been declining in recent years. Mongolia's working-age population reached 2.2 million people in 2018¹, 61.1 percent of them was economically active population

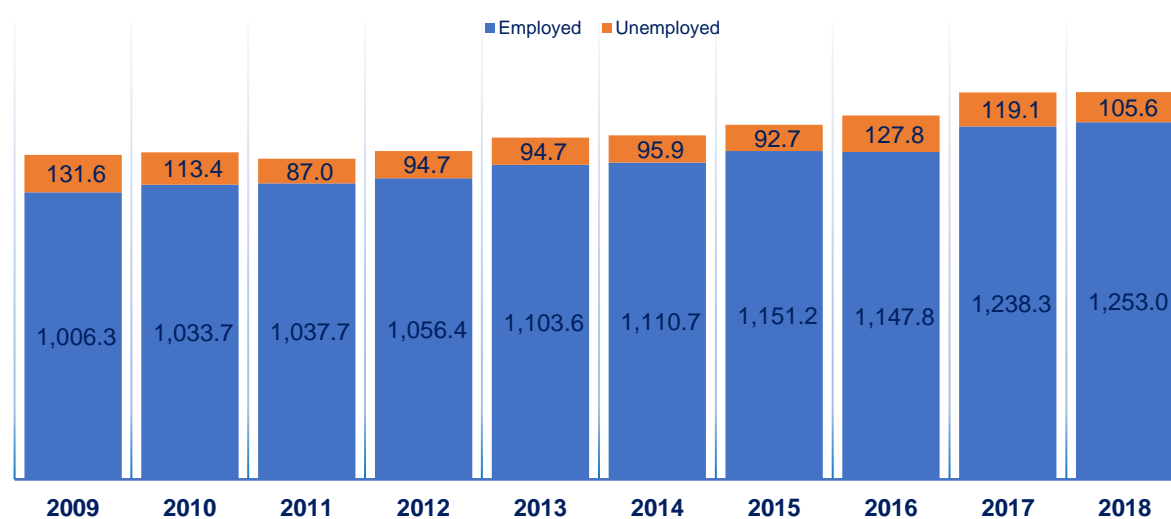
Figure 3. Population of Mongolia aged 15 and over, by thousand people, 2009-2018



Source: National Statistics Office

At end of 2018, the labor-force of Mongolia was 1358.6 thousand people. Unemployed population reached 105.600, which was down by 11.3 percent compared to the same period of the previous year, and unemployment rate decreased to 7.8 percent.

Figure 4. Labor-force, by thousand people, 2009-2018



Source: National Statistics Office

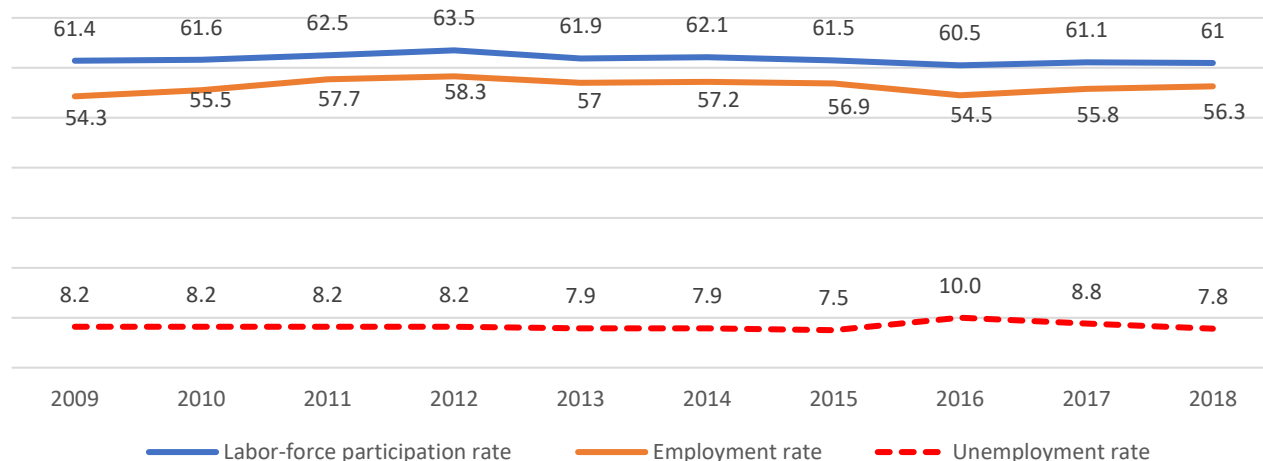
¹ At the end of finalizing the survey, the population number of 2019 was not released.

The labor-force participation rate shows that the percentage of the working age population in the labor-force. In the last 10 years, it was highest /63.5 percent/ in 2012, and it was 61.1 percent in 2018, which was a decrease of 0.1 unit from the same period of the previous year.

The employment rate determines what percentage of the working age population is employed. In the last 10 years, it was highest /58.3 percent/ in 2012, and it was 56.3 percent in 2018, which was a decrease of 0.5 unit from the same period of the previous year.

Unemployment has been declining since 2009, but increased sharply to 10.0 percent in 2016. It has been declining for the past 2 years, and reached to 7.8 percent in 2018.

Figure 5. Some statistics of employment, 2009-2018



Source: National Statistics Office

Some labor market indicators compared to the previous year are shown in Table 2.1 by region. As the end of 2018, the economically active population increased by 1.2 thousand people from the preceding year. The economically active population in the Western, Khangai and Central regions decreased, while the population increased in the Eastern region and Ulaanbaatar.

Table 2. Some statistics of labor-force, by regions and thousand people

Region	Economically active population		Employed population		Unemployed population		Unemployment rate	
	2017	2018	2017	2018	2017	2018	2017	2018
Total	1357.4	1358.6	1238.3	1253.0	119.1	105.6	8.8	7.8
Western	194.0	193.8	173.2	176.5	20.9	17.2	10.7	8.9
Khangai	282.7	280.7	254.9	260.7	27.8	20.0	9.8	7.1
Central	234.4	234.2	215.1	216.4	19.4	17.8	8.3	7.6
Eastern	92.7	94.7	83.1	86.4	9.7	8.3	10.4	8.7
Ulaanbaatar	553.6	555.3	512.2	513.1	41.4	42.3	7.5	7.6

Source: National Statistics Office

40.9 percent of overall employed population lives in Ulaanbaatar and it is down by 0.5 percent than that of previous year, while the overall employed population in Khangai region increased by 5.8 thousand (2.3%), which is the highest rate of the total.

At the end of 2018, the number of unemployed people in nationwide decreased from the previous year and decreased in all regions except Ulaanbaatar. As a result, the unemployment rate has declined in nationwide.

Employers

As entered in the Business Register Fund of NSO, 85.700 entities and organizations were operating as of the end of 2018, which was up by 9.0 percent than that of 2017. Number of employers increased in all sectors other than electricity and heat production and water supply, sector of state administration, defense and official social protection. 47.9 percent of overall growth was created in wholesale and retail, and vehicle and motorcycle repairs sector

Table 3. Actively operating entities and organizations, by economic sector

Economic sectors	2017		2018	
	Number	Percent	Number	Percent
Agriculture, forestry, and hunting	3.8	4.9	3.8	4.5
Fishing	0.0	0.0	0.0	0.0
Mining and extraction	0.8	1.0	0.9	1.1
Processing industry	5.8	7.4	6.2	7.3
Electricity, gas, steam, ventilation supply	0.2	0.3	0.3	0.3
Construction	6.3	8.1	6.7	7.8
Wholesale and retail: repairs of vehicle and motorcycle	30.5	38.8	33.9	39.6
Hotel, accommodation, housing, catering service	2.3	2.9	2.4	2.8
Transport and warehousing	2.9	3.7	3.3	3.8
Finance and insurance	1.2	1.5	1.3	1.5
Real estate	7.6	9.6	8.3	9.7
Public administration, defense, and compulsory social protection	1.5	1.9	1.5	1.7
Education	3.6	4.5	3.8	4.5
Human health and social welfare	3.4	4.3	3.8	4.5
Other social and individual support services	8.8	11.2	9.4	11.0
Total	78.6	100.0	85.7	100.0

Source: National Statistics Office

Out of actively operating entities and organizations, 39.6 percent was wholesale and retail, 11.0 percent was other social and individual support services, 9.7 percent was from real estate, lease and other business sector, 7.8 percent was construction, 7.3 percent was processing industry, and 4.5 percent was agriculture, forestry, fishing and hunting sector.

Table 4. The number of employees, by classification of economic activities

Economic sector	2017		2018	
	Number	Percent	Number	Percent
Agriculture, forestry, fishing, and hunting	356.4	28.8	334.1	26.7
Mining and extraction	52.0	4.2	57.7	4.6
Processing industry	93.1	7.5	100.8	8.0
Electricity, gas, steam, ventilation supply	17.5	1.4	16.3	1.3
Water supply, wastewater drainage system, waste management and treatment	4.9	0.4	6.9	0.5
Construction	70.6	5.7	76.6	6.1
Wholesale and retail: repairs of vehicle and motorcycle	204.5	16.5	211.2	16.9
Transport and warehousing	72.7	5.9	73.6	5.9
Hotel, accommodation, housing, catering service	36.4	2.9	37.5	3.0
Information and communication	14.5	1.2	14.1	1.1
Finance and insurance	24.1	1.9	25.7	2.1
Real estate	0.4	0.0	0.8	0.1
Professional, scientific and technical activity	12.7	1.0	14.6	1.2

Management and support activity	20.8	1.7	18.2	1.5
Public administration and defense: compulsory social security	82.2	6.6	76.2	6.1
Education	98.9	8.0	98.7	7.9
Human health and social welfare	40.0	3.2	49.5	3.9
Art, entertainment, and gaming	10.1	0.8	13.8	1.1
Other services	22.7	1.8	23.4	1.9
Household activities to hiring a person	2.3	0.2	1.2	0.1
International organizations and country office	1.5	0.1	2.3	0.2
Total	1238.3	100.0	1253.0	100.0

Source: National Statistics Office

Even though the number of actively operating entities and employees has increased, the number of employees in some sectors has decreased. For instance, the number of employees in some sectors such as agriculture, forestry, fishing, hunting, electricity, gas, steam, and ventilation supply, information and communications, administrative and support activities, government and defense activities, formal social protection, education and family-owned household has decreased, respectively. Moreover, the number of workers in the field of human health and social activities, processing industry, wholesale and retail, cars and motorcycles maintenance has increased, which influenced on overall increase of number of employees.

1.2. REGISTERED UNEMPLOYED CITIZEN

Registered unemployed people is a citizen who has lost job or has been fired due to any reason last week or prior to it and who is searching for a job actively and is ready to have a job by registering at a recruitment agency after getting his/her dismissal order in writing. In 2019, 20.7 thousand unemployed people were registered at the GOLSWWS, which is a decrease of 17.2 percent compared to the same period of the previous year. As for the regions, 32.3% is in Ulaanbaatar, 22.1% is in Khangai, 19.4% is in the Western, 15.5% is in the Central and 10.7% is in the East, respectively.

According to the education level of the registered unemployed people, 0.9% is masters and doctors, 25.7% is diploma and undergraduate, 10.9% is technical and vocational, 52.9% is completed secondary and the remaining 9.6% is below-secondary education.

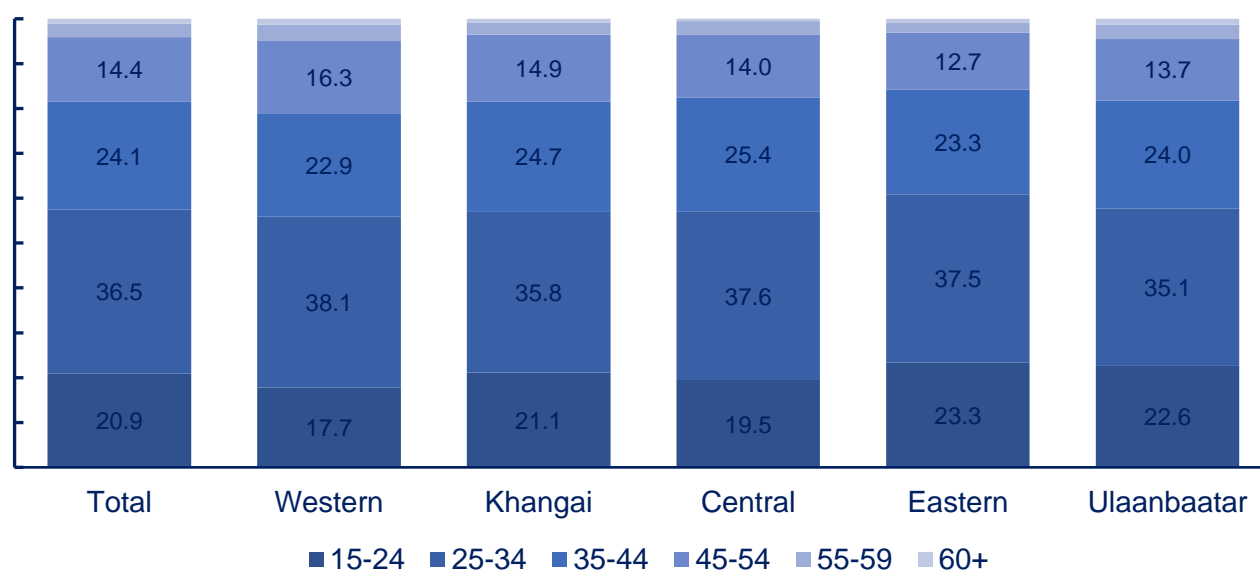
Table 5. Registered unemployed citizen, by level of education and region, 2019

Region	Uneducated	Primary education	Basic education	Secondary education	Technical and vocational	Secondary special education	Diploma and Bachelor's degree	Master, Ph.D.	Total
Western	79	125	300	1994	316	254	962	7	4037
Khangai	58	153	416	2697	290	126	836	8	4584
Central	29	49	174	1649	238	183	867	24	3213
Eastern	48	73	184	1146	248	97	414	5	2215
Ulaanbaatar	72	44	196	3495	235	286	2250	134	6712
Total	286	444	1270	10981	1327	946	5329	178	20761

Source: GOLSWWS

According to the age group of registered unemployed people, 20.9% is 15-24 years old, the highest 36.5% is 25-34 years old, 24.1% is 35-44 years old and 4% are over 55 years old.

Figure 6. Registered unemployed citizen, by age group and percent

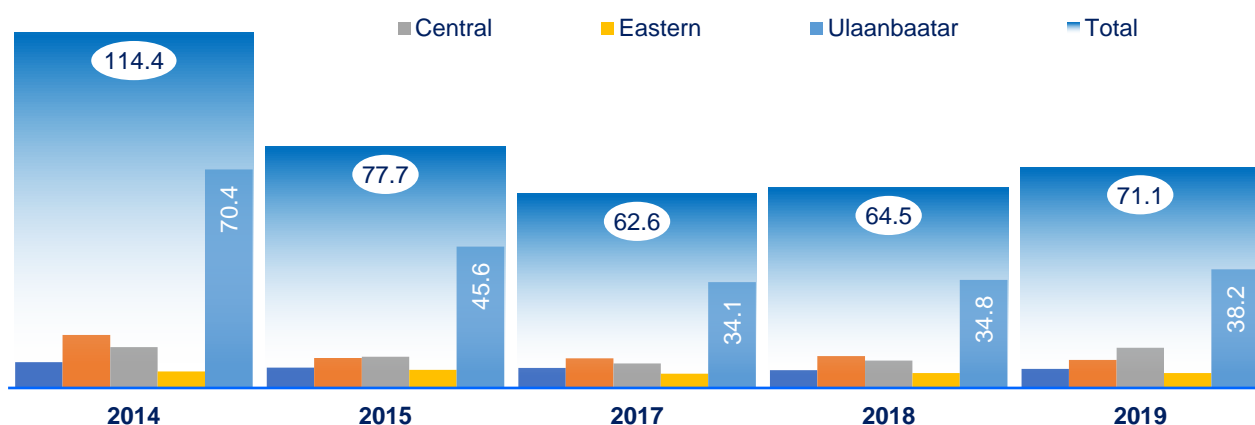


Source: GOLSWWS

1.3. JOB ORDERS

Based on previous year's research of the RILSP, we predicted 69.4 thousand labor-force demand will be occurred in 2019. According to the information of job orders in 2019 among the GOLSWWS and private labor exchanges, 71.1 thousand jobs were announced open, which increased by 10.2% from same period of the previous year.

Figure 7. Job orders, by region and thousand people, 2014-2019²



Source: General office for labour and social welfare service

Work place orders increased by 46.5 percent in the Central, 5.1% in the Western, respectively, while it decreased by 11.6 percent in the Khangai region, and it remained the same in the Western region.

Out of job orders in 2019, 34.8% was other service sectors, and 13.6% was mining extraction sector.

As for economic activity, the job orders in the field of agriculture, forestry, fishing, and hunting, processing industry, electricity, gas, steam and ventilation supply, hotel, accommodation, housing and catering service, management and support activity, human health and social welfare and art, entertainment and gaming has declined, while the job orders in mining and extraction sector has increased by 83.0 % from same period of the last year.

Table 6. Job orders, by classification of economic sectors, 2014-2019

Economic sectors	2014	2015	2017	2018	2019
Agriculture, forestry, fishing, and hunting	8.4	5.7	4.3	4.7	4.4
Mining and extraction	7.2	5.5	5.3	5.3	9.7
Processing industry	16.2	7.8	5.8	6.1	6.0
Electricity, gas, steam, ventilation supply	1.0	0.9	0.5	0.6	0.6
Water supply, wastewater drainage system, waste management and treatment	0.9	0.7	1.0	0.6	0.8
Construction	27.8	13.4	4.4	6.9	6.9
Wholesale and retail: repairs of vehicle and motorcycle	7.6	4.2	2.5	2.4	3.4
Transport and warehousing	3.1	1.6	0.7	0.8	0.8
Hotel, accommodation, housing, catering service	3.5	2.1	1.2	2.0	1.4
Information and communication	0.6	0.3	0.2	0.5	0.6
Finance and insurance	1.0	0.7	0.6	1.0	1.2
Real estate	0.2	0.1	0.1	0.0	0.0
Professional, scientific and technical activity	0.2	0.1	0.1	0.1	0.1
Management and support activity	0.7	0.5	1.6	1.8	1.5
Public administration and defense: compulsory social security	2.3	2.4	2.8	1.3	1.9
Education	4.0	3.5	3.9	3.7	4.0

² There are no database of job vacancies or job placement in 2016 from GOLSW

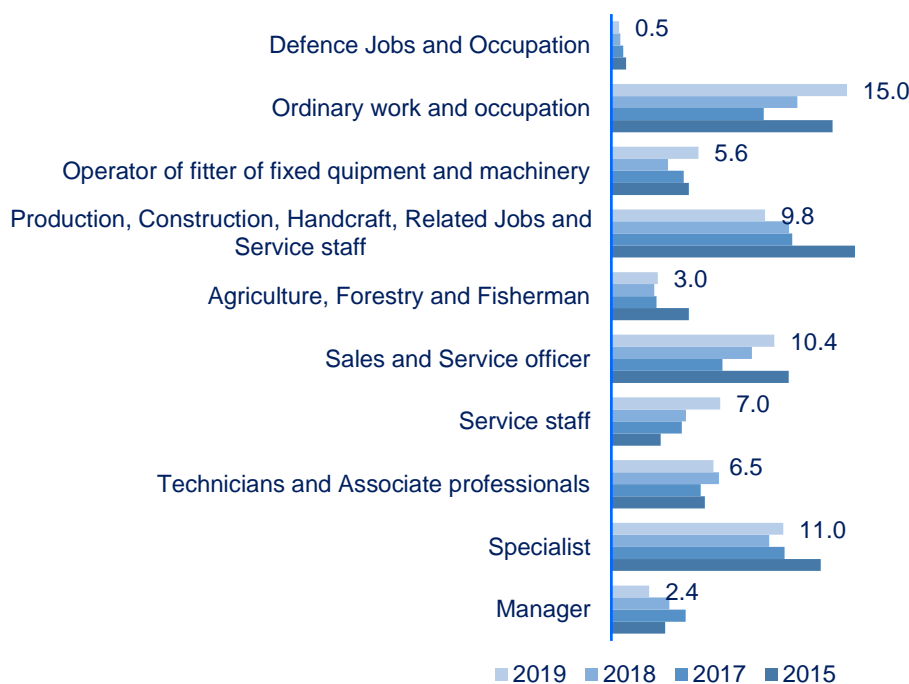
Human health and social welfare	1.8	1.6	1.9	3.6	2.0
Art, entertainment, and gaming	0.5	0.4	0.4	0.5	0.4
Other services	26.4	25.2	24.1	21.9	24.8
Household activities to hiring a person	1.2	0.8	1.2	0.5	0.6
International organizations and country office	0.0	0.1	0.1	0.1	0.3
Total	114.4	77.7	62.6	64.5	71.1

Source: General office for labour and social welfare service

As for occupational categories, annual trend observed in group occupation orders: “Ordinary Occupation”, “Specialist” and “Sales Service Staff” are mainly occurred and accounts for more than 50.0% of the total job orders. As for a result, the "Ordinary Occupation" group occupation orders are 27% or the highest increase, while the " Processing Industry, Construction, Craft and Related Worker" group occupation orders are 13.5% or the largest decrease.

Particularly, 9.8 thousand workplace or 13.8% of total job orders in 2019 and 11.3 thousand workplace or 17.6% of the total job orders in 2018 were “Processing Industry, Construction, Craft and Related Worker’ group jobs.

Figure 8. Job orders, by fundamental classification of occupation and thousand people



Source: General office for labour and social welfare service

As of end of 2019, 44.100 people were hired in accordance to the above job orders through recruitment agencies. In 2018, 18.7 thousand people or 42.5% of the total hired population through recruitment agencies was in Ulaanbaatar, 18.6% (8.2 thousand) was in the Khangai region, 16.1% (7.1 thousand) was in the Central region, 13% (5.7 thousand) was in the Western region, and 9.8% (4.3 thousand) was in the Eastern region.

Table 7. Employed through an intermediary, by region and thousand people, 2014-2019

Region	2014	2015	2017	2018	2019
Western	6.9	6.0	6.5	5.6	5.7
Khangai	13.2	9.1	10.1	8.3	8.2
Central	9.0	7.5	6.6	6.6	7.1
Eastern	4.5	4.1	4.4	4.2	4.3
Ulaanbaatar	20.8	23.0	18.0	18.4	18.7
Total	54.4	49.7	45.7	43.1	44.1

Source: General office for labour and social welfare service

When comparing those who were recruited with that of previous year, classifying by economic sectors, the number of employed people through an intermediary decreased by 13.4% in other service sectors, while the job orders in the mining and extraction sector increased by 13.3%.

Table 8. Employed through an labor exchange, by classification of economic sectors and thousand people, 2014-2019

Economic sectors	Number of employed through an intermediary				
	2014	2015	2017	2018	2019
Agriculture, forestry, fishing, and hunting	6.5	4.6	3.5	3.4	3.1
Mining and extraction	3.6	3.1	4.0	3.6	4.9
Processing industry	7.7	5.7	3.6	4.9	4.7
Electricity, gas, steam, ventilation supply	0.5	0.5	0.4	0.4	0.4
Water supply, wastewater drainage system, waste management and treatment	0.7	0.6	0.7	0.4	0.7
Construction	9.7	6.8	2.8	3.6	4.1
Wholesale and retail: repairs of vehicle and motorcycle	3.4	3.0	2.0	2.8	2.7
Transport and warehousing	1.2	1.1	0.6	0.5	0.5
Hotel, accommodation, housing, catering service	1.6	1.5	1.0	0.7	1.1
Information and communication	0.2	0.2	0.1	0.2	0.2
Finance and insurance	0.7	0.6	0.5	0.8	0.4
Real estate	0.1	0.0	0.1	0.0	0.0
Professional, scientific and technical activity	0.1	0.1	0.0	0.1	0.1
Management and support activity	0.5	0.5	1.4	1.5	1.4
Public administration and defense: compulsory social security	1.7	2.0	2.4	1.1	1.3
Education	3.0	2.9	3.4	2.9	3.3
Human health and social welfare	1.1	1.2	1.6	1.2	1.5
Art, entertainment, and gaming	0.2	0.3	0.3	0.3	0.5
Other services	10.8	14.2	16.5	14.2	12.3
Household activities to hiring a person	0.9	0.7	0.6	0.3	0.5
International organizations and country office	0.0	0.1	0.1	0.0	0.3
Total	54.3	49.7	45.7	43.1	44.1

Source: General office for labour and social welfare service

In 2019, 27.9% of the overall people recruited by an intermediary were hired in the other service activities, 11.1% in the mining and extraction industries, and 10.6% in the processing industry sector.

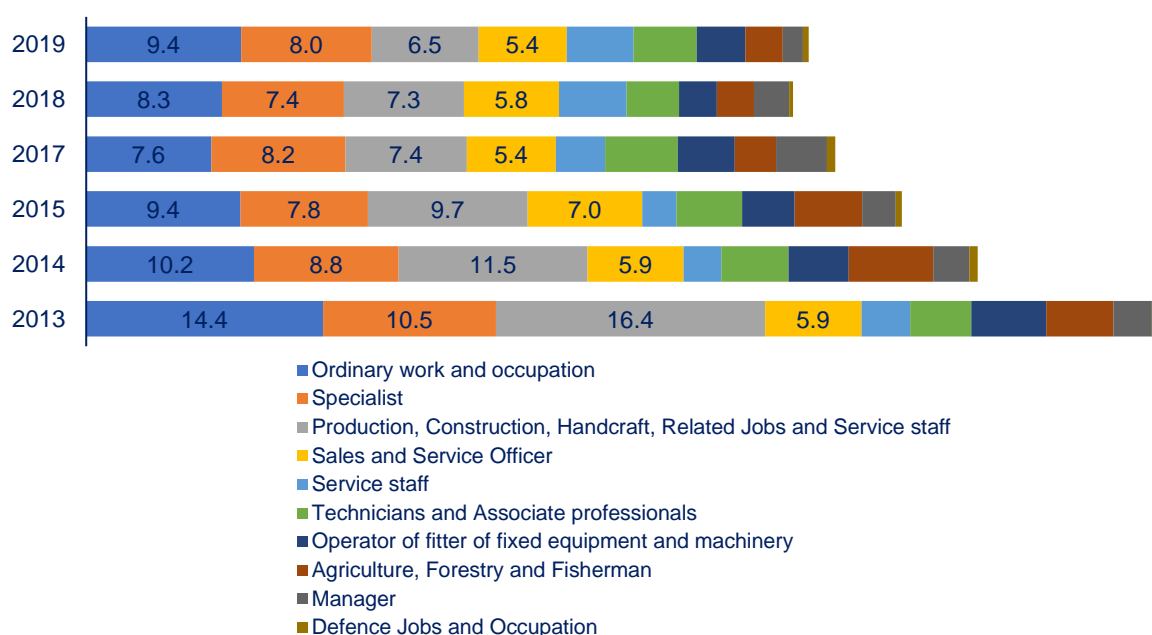
Of the 71.1 thousand jobs in 2019, 62% or 44.1 thousand jobs were hired by an intermediary.

As for group occupation, 21.4% of the people hired for new jobs were classified in "Specialist" group, 18.1% in "Ordinary Occupation" group and 14.8% in "Service Staff", respectively.

When comparing those who were hired for new jobs in 2019 with that of previous year, their number increased by 47.0 percent in “Defence Jobs and Occupation”, by 29.3 percent in “Operator of fitter of fixed equipment and machinery” and 20.2 percent in “Technician and assistant/ secondary specialist”, respectively. Hence, number of people who were hired for new jobs as manager and workers of production, construction, handicrafts and relevant works and services was down in 2019.

However, the number of people employed through labor exchange in the positions of managers and employees in manufacturing, construction, handicrafts, related works and services, offices and service workers decreased.

Figure 9. Employed through an labor exchange, by classification of economic sectors and thousand people



Source: General office for labour and social welfare service

Foreign citizens, working in Mongolia as per the law on receiving labor-force from foreign countries, account for certain percent of employees. For example, under work permit, 16500 foreign citizens in 2017 and 10.700 foreign citizens in 2018 were working in various economic sectors in Mongolia.

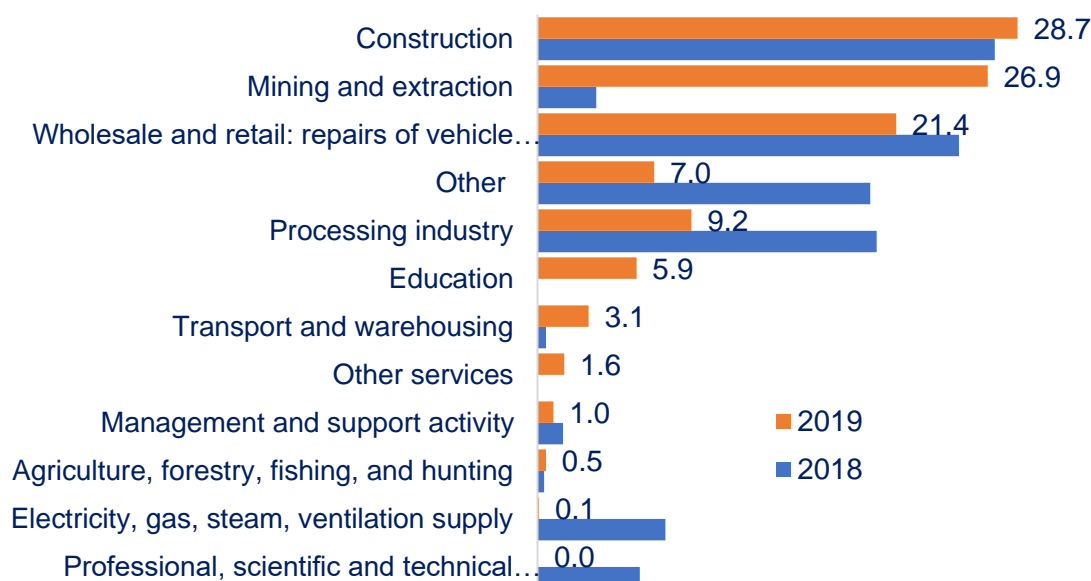
Despite the number of foreign workers who hold work permit in Mongolia has not been changed significantly over the last year, there have been significant changes between the sectors of economic activity.

For example, out of foreign citizens who worked in 2018, 3.5% worked in mining and extraction sector, and it increased to 26.9% in 2019. The number of foreign workers in the processing industry was 20.3% in 2018, which declined to 9.2% and by 11 points in 2019.

Number of foreign workers increased by 23.4 points in the mining and extraction sectors, 5.9 points in education, 2.6 points in the transportation and warehousing sector, respectively, while number of foreign labor-force declined in most sectors compared to the same period of the previous year.

Out of foreign citizens who worked in 2019, 28.7% was working in construction, 26.9% was in mining and extraction, 21.4% was in wholesale and retail, vehicle and motorcycle maintenance, 5.9% was in education and the remainin percent was working in other sectors.

Figure 10. Foreign workers, by classification of economic sector /percent/



Source: General office for labour and social welfare service

In 2019, according to the foreign workers by occupational classification, specialists amounts of 24.5 percent, and employees of the manufacturing, construction, handcraft, other related services group \ accounts for 23.5 percent of overall. Compared to the previous year, the number of employees in the ordinary occupation, production, construction, handcraft, and related jobs and services increased significantly.

Table 9. Foreign workers in 2019, by main occupational group

Main occupational group		Percent
1	Manager	3.6
2	Specialist	24.5
3	Technicians and Associate professionals	14.3
4	Service staff	0.7
5	Sales and Service Officer	0.2
6	Agriculture, Forestry and Fisherman	0.0
7	Production, Construction, Handcraft, Related Jobs and Service staff	23.5
8	Operator of fitter of fixed equipment and machinery	17.7
9	Ordinary work and occupation	15.4
10	Defense Jobs and Occupation	0.0

Source: General office for labour and social welfare service

As for occupation of foreign workers in Mongolia, the following jobs are ranked relatively high: Mining, construction and manufacturing engineers, technicians and other related professionals. There is also a significant percentage of employees, including teachers and chefs.

Table 10. Foreign workers, by occupation

YAMAT-08 code	Occupation	Total number	Percent
2	Mining engineer, metallurgist and other related specialists	1176	11.1
2	Civil Engineering	479	4.5
2	Teacher	464	4.4
2	Teaching specialist	422	4.0
2	Engineer (except for this group)	409	3.9
2	Specialist	406	3.8
2	Electrical Engineering	388	3.7
2	Mechanical engineer	345	3.2
3	Technicians and Associate professionals	327	3.1
3	Mechanical engineering technician	297	2.8
3	Mining and metallurgical technician	268	2.5
3	Chef	247	2.3
7	Welder	216	2.0
7	Construction and related worker (except electricians)	201	1.9
7	Masonry, other related jobs	193	1.8
7	The builder	171	1.6
7	Other skeletons / similar structures / assemblies not elsewhere classified	165	1.6
7	Manufacturer of metal structures	162	1.5
7	Plasterer	155	1.5
7	Concreter, concrete surface finishers and related professionals	155	1.5
8	Heavy truck driver	147	1.4
8	Drill borehole and other similar personnel	146	1.4
8	Earthmoving, road maintenance and related machine operators	116	1.1
8	Underground and quarry	112	1.1
8	Operator, treasury, rock processing equipment	111	1.0
9	Construction worker	100	0.9
9	Construction assistant	96	0.9
9	Simple jobs and occupation	92	0.9

Source: General office for labour and social welfare service

41.8% of all foreign workers who hold work permit in Mongolia is working for limited liability companies, 34.4% is working for foreign invested entities, 10% is working for educational and scientific institutions, 4.3% is working for foreign representative office and 4% is working for non-governmental organizations.

Table 11. Foreign employees, by type of organization ownership

Ownership type	Percent
Limited Liability Company	41.8
Foreign invested entity	34.4
Education and Science Organization	10.0
Foreign representative organization	4.3
Non-governmental organization	4.0
State-owned enterprises	1.7
Joint Stock Company	1.3
Religious organization	1.0
Government agency	0.7
Other	0.3
International organization	0.3

Source: General office for labour and social welfare service

CHAPTER 2

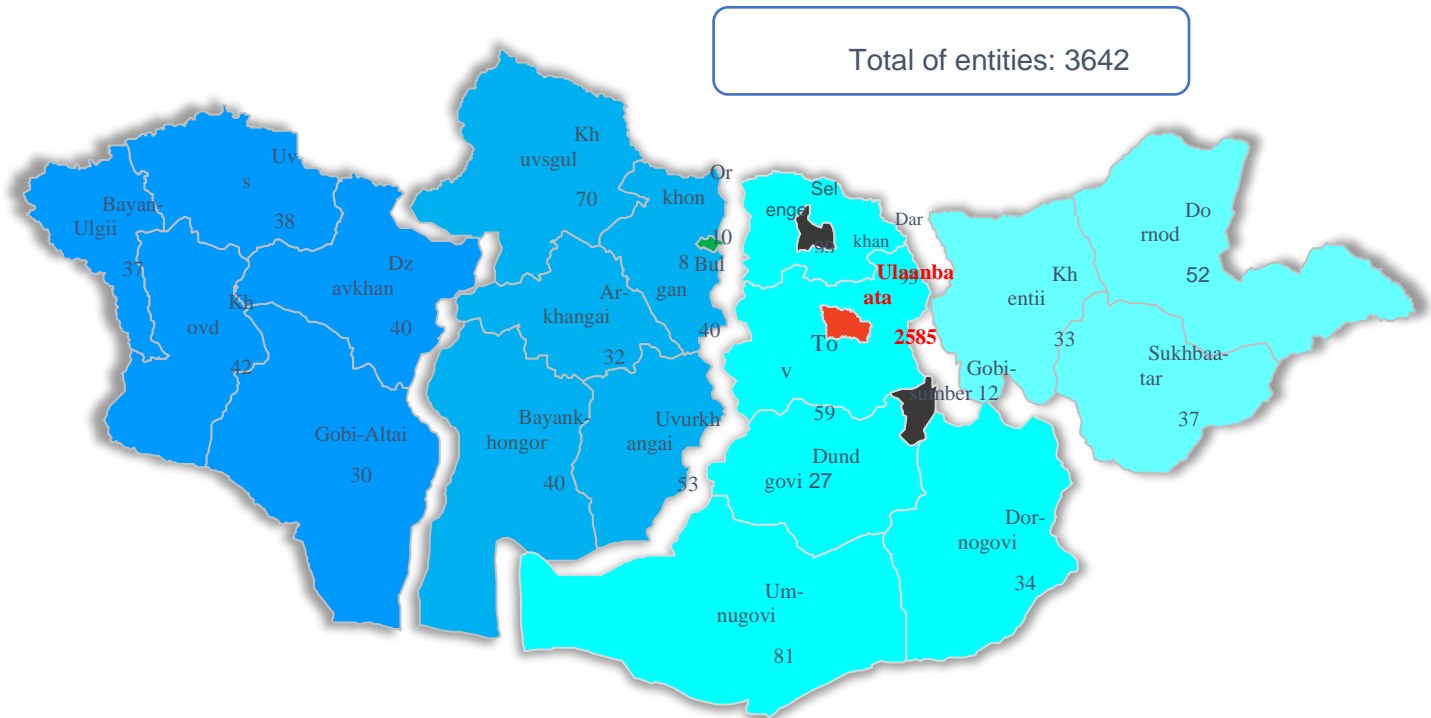
CHAPTER 2. BASIC SURVEY RESULT

2.1 GENERAL INFORMATION

This barometer survey on labor market demand encompasses 3642 entities and organizations operating in 18 economic sectors in 9 UB districts and 21 provinces, and thus the sample grew by 38.5 percent than that of the previous year.

2585 or 71.0% of all surveyed business entities are operating in Ulaanbaatar city, which increased by 53.8% than the entities covered in the previous year.

Figure 11. Entities and organizations covered by survey, by provinces



77.6 percent of them operate permanently, 15.8 percent operate seasonally, and remaining percent operate temporarily.

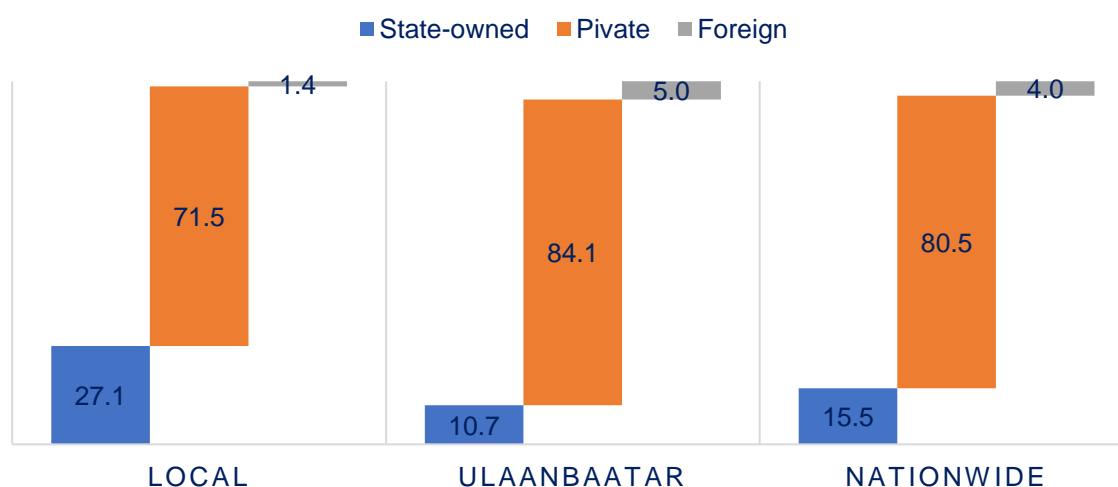
Table 12. Number of entities and organizations covered by the survey, by economic sectors and activities

Economic sectors	Total	Mode of operation		
		Permanent	Seasonal	Perma- nent
Agriculture, forestry, fishing, and hunting	202	79	103	20
Mining and extraction	165	75	69	21
Processing industry	345	243	77	25
Electricity, gas, steam, ventilation supply	70	54	12	4
Water supply, wastewater drainage system, waste management and treatment	67	55	6	6
Construction	294	141	120	33
Wholesale and retail: repairs of vehicle and motorcycle	313	264	29	20
Transport and warehousing	227	180	30	17
Hotel, accommodation, housing, catering service	272	242	19	11
Information and communication	115	99	4	12
Finance and insurance	124	114	4	6
Real estate	239	215	12	12

Professional, scientific and technical activity	135	107	18	10
Management and support activity	267	193	53	21
Education	270	261	7	2
Human health and social welfare	214	211	2	1
Art, entertainment, and gaming	76	70	3	3
Other services	247	225	7	15
Total	3642	2828	575	239

As for the worker number of organizations, 45.1 percent have up to 30 workers, while 17.7 percent have 40-150 workers and 16.7 percent have 150 or more workers. Four in every five entities that have 150 or more workers operate in Ulaanbaatar.

Figure 12. Percent of entities and organizations covered by survey, by ownership type and location



As for ownership type of entities and organizations, 80.5 percent is private, 15.5 percent is state-owned, and 4.0 percent is private joint and foreign entities.

Out of UB entities and organizations, 81.4 percent is private and 10.7 percent is state-owned entities, while 71.5 percent of local entities and organizations is private and 27.1 percent is state-owned entities.

Employees

At the time of the survey, a total of 613.5 thousand employees were employed by enterprises in 18 sectors of the economy.

By sector of economic activity, 18.9 percent (116.2 thousand) of total employees are in wholesale and retail trade, 17.3 percent (106.0 thousand) are in education, 8.4 percent (51.5 thousand) are in manufacturing, 7.5 percent (46.1 thousand) are in human health and social welfare activities, and 6.3 percent /38.4 thousand / are in the mining and quarrying sector, respectively.

Employment during the survey period increased by 1.7 percent compared to the same period of the previous year. However, employment has declined in some economic activity sectors. For example, employment in agriculture, mining, manufacturing, electricity, ventilation, and hotels, housing and catering has declined.

Table 13. Changes in employment, thousand people

Economic sector	Number of employees in previous year	Number of employees in this year	Changes in number of employees	
			Number	Percent
Agriculture, forestry, fishing, and hunting	10.2	9.4	-0.8	-7.7
Mining and extraction	39.2	38.4	-0.8	-2.1
Processing industry	52.0	51.5	-0.4	-0.9
Electricity, gas, steam, ventilation supply	17.3	16.9	-0.4	-2.3
Water supply, wastewater drainage system, waste management and treatment	6.9	6.9	0.0	0.2
Construction	49.2	50.2	1.0	2.0
Wholesale and retail: repairs of vehicle and motorcycle	111.2	116.2	5.0	4.5
Transport and warehousing	23.6	25.0	1.4	6.1
Hotel, accommodation, housing, catering service	20.9	20.4	-0.4	-2.1
Information and communication	13.2	13.9	0.7	5.0
Finance and insurance	16.3	16.9	0.5	3.3
Real estate	9.6	9.7	0.1	1.3
Professional, scientific and technical activity	23.4	24.2	0.7	3.2
Management and support activity	21.5	21.7	0.2	1.0
Education	103.2	106.0	2.8	2.7
Human health and social welfare	45.4	46.1	0.8	1.7
Art, entertainment, and gaming	9.8	9.9	0.1	1.1
Other services	30.3	30.1	-0.2	-0.7
Total	603.2	613.5	10.3	1.7

Permanent employment increased by 0.9 percent, while temporary employment increased by 12.4 percent, which is a matter of concern. The decision of the National Tripartite Committee on Labor and Social Consent to gradually increase the minimum wage to MNT 420.0 thousand per month may have contributed to the increase in temporary employment.

The employment has declined in the Khangai and Central regions, but increased in other regions. For example, it increased by 2.5 percent in Ulaanbaatar and 7.2 percent in the Western region. As for enterprises ownership type, employment has decreased only in private joint ventures.

Table 14. Entities and organizations covered by the survey by economic sectors and activities

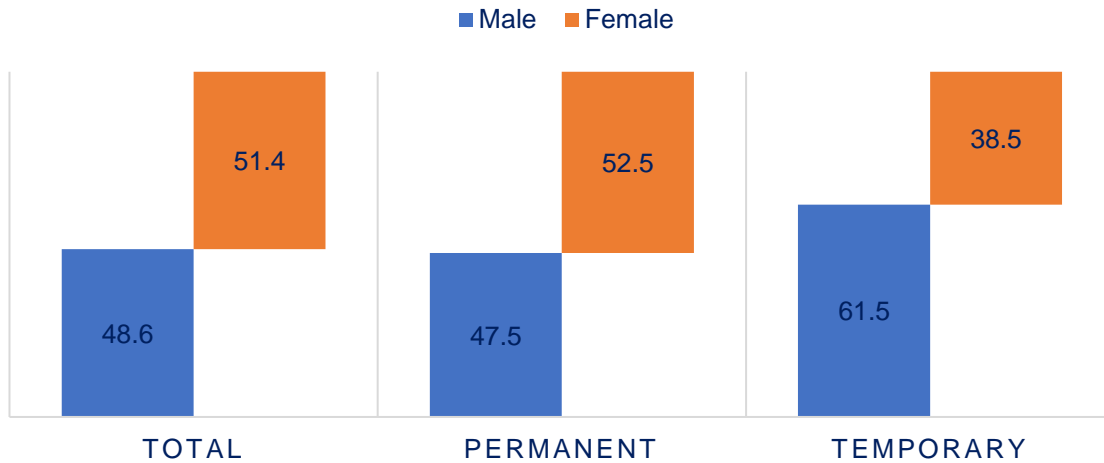
Economic sector	Number of employees		
	Total	Permanent	Temporary
Agriculture, forestry, fishing, and hunting	9.4	7.5	1.9
Mining and extraction	38.4	36.2	2.2
Processing industry	51.5	46.5	5.0
Electricity, gas, steam, ventilation supply	16.9	16.2	0.8
Water supply, wastewater drainage system, waste management and treatment	6.9	6.4	0.4
Construction	50.2	43.0	7.3
Wholesale and retail: repairs of vehicle and motorcycle	116.2	106.2	10.0
Transport and warehousing	25.0	23.5	1.5
Hotel, accommodation, housing, catering service	20.4	18.7	1.7
Information and communication	13.9	12.2	1.7
Finance and insurance	16.9	16.2	0.7
Real estate	9.7	9.3	0.4
Professional, scientific and technical activity	24.2	21.6	2.6
Management and support activity	21.7	19.5	2.2
Education	106.0	102.7	3.3
Human health and social welfare	46.1	44.5	1.6

Art, entertainment, and gaming	9.9	9.6	0.4
Other services	30.1	28.3	1.8
Total	613.5	568.0	45.5

Out of total workers of surveyed entities and organizations, 92.6 percent of workers have permanent job, and remaining percent have temporary job.

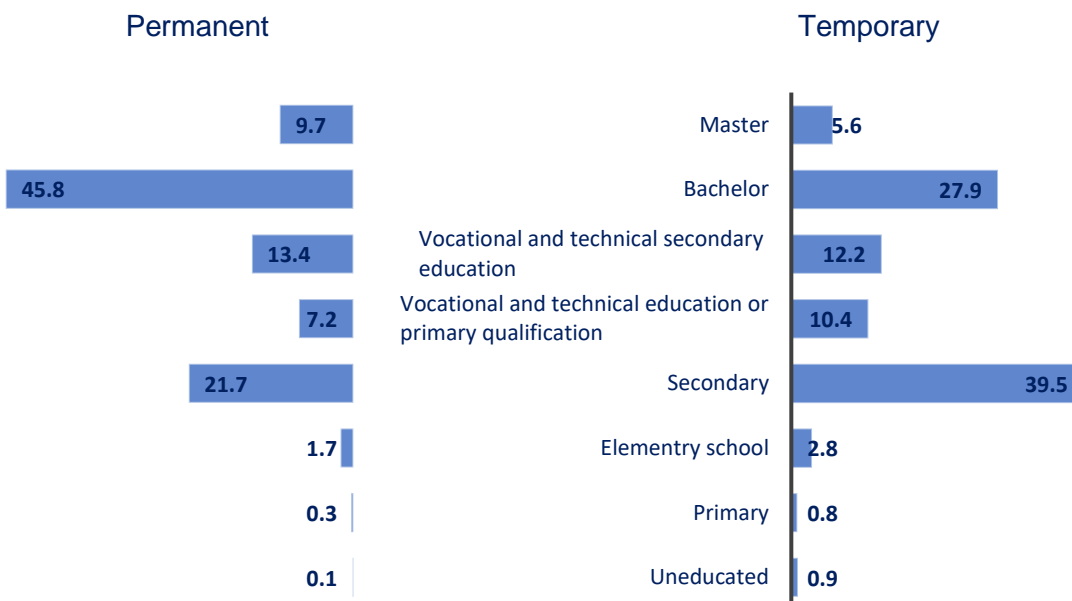
48.6 percent of total workers is male and 47.5 percent of permanent job is male, while 61.5 percent of temporary workers is male.

Figure 13. Percent of employees, by job types and gender



With regard to education of permanent workers, 55.5 percent have bachelor's degree or above, and 21.7 percent hold full secondary education. 60.9 percent of permanent workers who hold bachelor's degree or above is female, while 58.9 percent of workers who hold full secondary education is male. The number of workers who hold primary education or no education is least, totaling 2,300, who account for 0.4 percent of total full-time workers.

Figure 14. Percent of permanent and temporary workers, by educational level



Out of temporary workers, 39.5 percent or 18.0 thousand workers have completed secondary education, of which 65.9 percent are men. 27.9 percent or 12.7 thousand temporary workers have bachelor's degree, and 22.6 percent or 10.3 thousand workers hold vocational and technical education or primary qualification. On the whole, 66.6 percent of all temporary workers hold education below bachelor's degree or no education.

Occupation of employees

Out of total employees of the surveyed business entities, 92.6% or 568.0 thousand workers are permanently employed and the remaining 7.4% or 45.5 thousand are temporarily employed. Female employees account for 52.5 percent of the permanent staffs and 38.4 percent of the temporary staffs.

Of the permanent employees, 31.5% or 179.1 thousand were "Specialist", 15.8% or 89.6 thousand were "Manager", 11.4% or 64.6 thousand were 'Trade and service staff', and 11.8% or 67.0 thousand were 'Simple Jobs', respectively.

Of the temporary employees, 11.6 thousand (25.5%) were "Simple occupation", 9.8 thousand (21.5%) were "Specialist", 6.1 thousand (13.3%) were "Trade and service workers" and 5.5 thousand (12.1%) were "Operator of fitter of fixed equipment and machinery".

Table 15. Employees, by main category of classification of occupation and jobs /thousand person/

Main group number	Classification of occupation and jobs	Permanent employees		Temporary employees	
		Total	Female	Total	Female
1	Manager	89.6	44.9	2.0	0.6
2	Specialist	179.1	121.6	9.8	5.0
3	Technicians and Associate professionals	45.8	26.0	2.6	1.2
4	Office, service worker	27.5	16.3	1.9	0.7
5	Trade and service worker	64.6	38.7	6.1	3.8
6	Agriculture, forestry and fishing	1.1	0.5	0.9	0.2
7	Industry, construction, handcraft, relative works and service worker	39.1	11.2	5.1	1.3
8	Operator of fitter of fixed equipment and machinery	54.3	5.2	5.5	0.5
9	Simple job	67.0	33.4	11.6	4.2

As for jobs and occupation, it is considered according to the four-digit unit group of the "National Jobs, Occupational Classification and Definition": Out of permanent employees, 5.6 percent is "CEO and Deputy director", 4.6% is "Secondary Education Teacher", 3.8 percent is "Accountants", 2.0 percent is "Teacher of Higher Education", 2.4 percent is "Doctor of specialized or general practitioner", 1.9 percent is "Nursing Specialist", while 3.3 percent is "Heavy truck and heavy truck drivers", 2.0 percent is "Assistant and cleaner of hotel, office, and building", 1.9 percent is "Other employees not included in this category", 1.7 percent is "Car, taxi and cab driver", 1.6 percent is "Security officer", and 1.4 percent is "Chef", respectively.

As for temporary employees, workers in the following category of occupations accounted for not so small percent: "Heavy truck and heavy truck driver", "Other employees not included in this category", "Car, taxi and cab driver", "Security officer", "Bus, trolley bus and tram driver". /Appendix 7/

Due to the fact that the above group of workers is common in each industry, these labor force movements are likely to be more frequent than those of other occupations.

As for occupations of permanent employees by economic activity sector, they have structures depending on the specifics of the sector. Particularly, out of permanent workers in the construction sector, 24.2 percent is "Specialist", 20.3 percent is "Industry, construction, handcraft, relative works

and service worker”, 14.7 percent is “Manager”, 14.0 percent is “Operator of fitter of fixed equipment and machinery”, 13.7 percent is “Ordinary job and occupations”, which accounts for 86.9 percent of construction sector’s work force.

As for Wholesale and retail sector, out of total permanent workers, 26.7 percent is “Manager”, 22.9 percent is “Trade and service worker”, 16.7 percent is “Specialist”.

As for other sector, 56.7 percent of the permanent employees in Transport and warehousing sector are Operator of fitter of fixed equipment and machinery, 60.4 percent of the permanent employees in Human health and social welfare are “Specialist”, and 62.9 percent of permanent employees in Education are “Specialist”, respectively.

Table 16. Permanent employees, by sector and classification of occupation and jobs, percent

Economic activity	Classification of occupation and jobs								
	Manager	Specialist	Technicians and Associate professionals	Office and service worker	Trade and service worker	Agriculture, forestry and fishing	Industry, construction, handcraft, relative works and service	Operator of fitter of fixed equipment and	Simple job
Agriculture, forestry, fishing, and hunting	21.9	16.8	7.4	6.9	6.3	7.4	6.8	12.3	14.4
Mining and extraction	13.1	13.7	9.5	5.3	4.0	0.0	5.3	33.5	15.7
Processing industry	14.7	16.6	7.1	7.7	5.7	0.2	18.2	11.2	18.6
Electricity, gas, steam, ventilation supply	3.5	26.4	9.9	5.8	1.0	0.0	21.3	17.4	14.7
Water supply, wastewater drainage system, waste management and treatment	4.2	12.4	7.2	2.0	2.0	0.1	17.8	15.5	38.7
Construction	14.7	24.2	8.2	2.1	2.7	0.0	20.3	14.0	13.7
Wholesale and retail: repairs of vehicle and motorcycle	26.7	16.7	7.5	4.4	22.9	0.1	5.9	6.9	9.0
Transport and warehousing	15.3	7.0	4.3	4.1	2.9	0.0	4.9	56.7	4.8
Hotel, accommodation, housing, catering service	16.1	7.0	14.4	4.6	31.8	0.2	1.9	2.6	21.3
Information and communication	19.9	46.0	14.1	9.7	2.0	0.4	2.4	2.2	3.3
Finance and insurance	36.4	21.1	10.0	22.1	1.8	0.0	2.1	2.2	4.3
Real estate	17.2	27.6	5.3	3.7	14.1	0.1	3.5	6.0	22.5
Professional, scientific and technical activity	15.4	47.7	16.5	7.6	2.3	0.0	1.5	4.5	4.4
Management and support activity	16.3	13.3	5.6	4.5	33.2	0.4	3.3	7.5	15.9
Education	5.9	62.9	4.0	2.8	10.8	0.0	2.0	0.4	11.2
Human health and social welfare	7.8	60.4	11.9	1.6	7.9	0.0	1.7	1.7	7.1
Art, entertainment, and gaming	10.4	46.0	9.5	8.3	10.9	0.8	4.1	1.4	8.5
Other services	25.5	32.4	8.8	3.3	11.7	0.2	5.7	1.1	11.2
Total	15.8	31.5	8.1	4.8	11.4	0.2	6.9	9.6	11.8

Out of temporary employees, 64.3 percent of the construction sector is “Specialist”, “Industry, construction, handcraft, relative works and service worker”, 56.5 percent of electricity, gas, steam, ventilation supply sector is “Industry, construction, handcraft, relative works and service worker”, 57.2

percent of finance and insurance is “Ordinary job”, and 59.3 percent of Information and communication is “Specialist”, respectively. 73.6 percent of temporary employees in the transport and warehousing sector is “Operator of fitter of fixed equipment and machinery”, and 78.6 percent of education sector is “Specialist”.

Table 17. Temporary employees, by sector and classification of occupation and jobs, percent

Economic activity	classification of occupation and jobs								
	Manager	Specialist	Technicians and Associate professionals	Office, service worker	Trade and service worker	Agriculture, forestry and fishing	Industry, construction, handcraft, relative works and service worker	Operator of fitter of fixed equipment and machinery	Simple job
Agriculture, forestry, fishing, and hunting	0.9	6.4	15.6	0.2	3.8	31.2	4.6	8.9	28.4
Mining and extraction	0.8	7.1	8.8	21.9	1.6	5.6	3.5	31.1	19.6
Processing industry	2.2	3.7	1.7	6.2	7.4	0.0	23.3	11.7	43.7
Electricity, gas, steam, ventilation supply	0.0	5.9	0.2	7.3	2.4	0.0	56.5	12.9	14.8
Water supply, wastewater drainage system, waste management and treatment	0.0	1.1	6.2	0.3	3.7	5.5	4.8	41.4	37.0
Construction	0.0	34.0	5.3	0.5	0.4	0.0	30.3	10.1	19.4
Wholesale and retail: repairs of vehicle and motorcycle	14.2	0.4	3.4	2.7	26.7	0.0	4.9	12.5	35.1
Transport and warehousing	0.1	0.4	2.8	0.5	15.3	0.0	0.0	73.6	7.3
Hotel, accommodation, housing, catering service	4.2	4.7	1.9	3.1	47.1	3.0	2.4	1.9	31.7
Information and communication	1.0	59.3	13.7	1.3	5.4	2.7	1.8	1.7	13.2
Finance and insurance	14.6	5.6	4.6	13.0	0.0	0.0	2.8	2.3	57.2
Real estate	1.4	2.9	40.7	2.1	13.0	0.0	2.2	0.0	37.7
Professional, scientific and technical activity	1.7	47.7	6.3	18.0	0.5	0.0	7.2	3.9	14.7
Management and support activity	1.9	15.6	11.1	1.3	37.9	0.6	5.3	15.8	10.4
Education	0.4	78.6	1.4	0.8	5.5	0.0	0.0	0.3	13.0
Human health and social welfare	3.0	49.6	8.6	1.9	11.5	0.0	3.4	3.7	18.1
Art, entertainment, and gaming	0.0	27.6	3.9	2.0	13.4	0.0	6.6	19.9	26.6
Other services	6.7	39.6	9.1	1.1	21.5	0.0	5.9	0.0	16.1
Total	4.4	21.6	5.7	4.2	13.4	1.9	11.3	12.0	25.5

48.8 percent of the total workers in the wholesale and retail trade sector, which have a major impact on labor demand, are managers, trade and service workers, 47.3 percent of construction workers are specialists, workers in manufacturing, and workers in construction and related works and services, 39.7 percent of employees in the manufacturing sector are in manufacturing, construction, related works, services and ordinary occupations, respectively.

Workplace mobility

Over the last 12 months, 36.6% of all the business entities increased their workforce, and 72.2% of all new employees are employed at permanent job, while 65.1 percent are employed at open vacancies. Of these workers, 42.5 percent are female employees.

24.4% of total employees was hired in the last 12 months belongs to the wholesale and retail trade and motorcycle maintenance, of which 75.5% were permanent. 14.0% of all new employees was employed in the construction, 9.2% was employed in the processing industry and 8.9% was employed in the education sector. 56.5% of the total new employees employed in the last 12 months accounted

in the wholesale, retail, motorcycle maintenance, construction, manufacturing, and education sectors. In other words, one in two new employees was employed in one of that four industries.

During the last 12 months, 24.6% of all new employees was employed as a simple occupation, 22.9% was specialist, 13.7% was operator of fitter of fixed equipment and machinery, and 11.6% was trade and service workers.

All workers employed in occupations related to the “specialist” category constitute 35.5% of the total number of female workers, 26.9% of the permanent employees and 21.6% of the total number of open vacancies. As for a percentage of new employees, 84.8 percent were provided with permanent jobs and 61.4 percent with vacancies.

Table 18. Percent of new employees, by classification of occupation and jobs

Main group number	Classification of occupation and jobs	New employees			
		Total	Female	Employed at a permanent job	Employed at a vacant position
1	Manager	2.6	3.3	2.8	2.7
2	Specialist	22.9	35.5	26.9	21.6
3	Technicians and Associate professionals	7.6	9.6	7.9	7.6
4	Office, service worker	6.5	9.3	6.4	4.5
5	Trade and service worker	11.6	12.9	11.8	13.9
6	Agriculture, forestry and fishing	0.5	0.5	0.6	0.4
7	Industry, construction, handcraft, relative works and service worker	9.9	5.7	9.4	10.4
8	Operator of fitter of fixed equipment and machinery	13.7	1.2	14.9	12.6
9	Simple job	24.6	21.9	19.3	26.2
	Total	100	100	100	100

19.3% of all new employees was hired in the “Ordinary job” category, 14.9% was hired in the Operator of fitter of fixed equipment and machinery, and 26.9% was hired in the specialist category. As for a percentage in each group, 78.2% of all new employees in the “Operators of fitter of fixed equipment and machinery” category, 75.0% of the “Technician and assistant/sub-specialist” category and 73.3% of the “Trade service worker” category were permanent employees, respectively.

Considering these indicators in the first 20 occupations, 7.4% of new employees were hired as a construction assistant, 6.7% was driver, 5.1% was production assistant, 4.0% was contracted security staff, 1.6% was primary school teachers and 1.0% was accountant.

As for the number of employees employed in the last 12 months, 89.0% of baggage carrier, 84.9% of the service staff of cuisine, 86.8% of the security guards of contract service, 84.0% of the driver, and 82.6% of the tailor and soft furnishings have been hired in vacancies.

As for most occupations and jobs, more than 40% of the new employees’ work position were vacant. It shows that there are large number of workforce mobility.

Table 19. Percent of new employees, by jobs and occupation

Д/д	ISCO	Occupation	Per-cent	Д/д	ISCO	Occupation	Per-cent
1	931211	Assistant /construction assistant/	7.4	11	911211	Office cleanser	1.4
2	833213	Driver /truck driver/	6.7	12	522112	Trader of food and home goods	1.3
3	932912	Manufacturing laborer	5.1	13	513112	Service staff /cafeteria/	1.3
4	541411	Guard /contract service	4.0	14	962918	Watchman /keeper/	1.2
5	441412	Another clerk assistant	1.7	15	933315	Shipper /Warehouse/	1.2
6	234111	Teacher of elementary school or vocational school	1.6	16	832213	Driver /small cab, cabin/	1.1
7	911214	Cleaner /building/	1.6	17	513111	Waiter	1.1
8	343411	Chef	1.4	18	833111	Bus driver	1.0
9	524212	Seller	1.4	19	962113	Baggage carrier	1.0
10	753311	Tailor and soft furnishings	1.4	20	431113	Accountant	1.0

Over the last year, more than 50% of all occupations excepting the assistant workers were employed at permanent job. For example, 94.8 percent of primary school teachers, 92.1% of buggage carriers, 91.4% of watchman and keeper, 91.0% of salesman, and 90.3% of drivers hired as permanent employees in the last 12 months.

The employers provided 89.1 thousand people jobs in duplicate number and provided employment opportunities in the last 12 months, while 59.8 thousand workers separated from their job for some reason in last 6 months period. 62.4% of all the separated employees was quit the work at their own request, while 37.6% of those was ended their employment at the initiative of an employer, such as terminating an employment contract, firing or redundancy. 46.8% of those who left the work at their own request, and 41.2% of those who ended their job at the initiative of an employer were woman.

As for the economic activity sector, 22.5% of all separated employees was occurred in wholesale and retail trade, vehicle and motorcycle maintenance sector, 12.0% was occurred in construction sector, and 8.9% was occurred in processing industry sector. This indicates that the labor-force transition in these sectors was quite large last year.

The occupation of employees who separated from jobs coincides with the occupation of the newly hired worker in the last 12 months. It is a clear matter that the labor-force demand on those occupational jobs were created as a result of those occupational workers quit their jobs. Therefore, it was deemed unnecessary to give more explain the people who separated from job by occupation.

We clarified whether the employers have announced vacancies during the survey data collection. 23.9 percent of total entities have posted 34.4 thousand job vacancies. In particular, out of these advertised jobs, 10.2 thousand jobs for the wholesale and retail trade, motorcycle maintenance, 3.7 thousand jobs for the manufacturing industry, and 3.4 thousand jobs for construction. The labor-force demand in these three sectors accounted for 50.2% of all vacancies. Announcement of recruiting employees for vacancies accounts for 51.9% of all workplace post. The labor-force demand in these three sectors accounted for 50.2% of all vacancies. Announcement of recruiting employees for vacancies accounts for 51.9% of all workplace post, and vacancy rate is 5.3 percent.

Table 20. Job vacancy rate, by economic activity

Economic activity	Current vacancie			Job va-
	Total job	Of which:	Replace-	cancy rate
	place	Vacancies	ment rate	
	Number	Number	Percent	Percent
Agriculture, forestry, fishing, and hunting	0.69	0.32	45.9	6.9
Mining and extraction	0.86	0.52	60.8	2.2
Processing industry	3.72	2.13	57.3	6.7
Electricity, gas, steam, ventilation supply	0.14	0.07	53.5	0.8
Water supply, wastewater drainage system, waste management and treatment	0.10	0.06	59.1	1.5
Construction	3.36	2.24	66.6	6.3
Wholesale and retail: repairs of vehicle and motor-cycle	10.21	4.87	47.7	8.1
Transport and warehousing	0.95	0.60	62.8	3.7
Hotel, accommodation, housing, catering service	2.68	1.46	54.5	11.6
Information and communication	0.65	0.28	43.8	4.4
Finance and insurance	0.43	0.21	48.4	2.5
Real estate	0.76	0.26	34.7	7.2
Professional, scientific and technical activity	1.32	0.19	14.3	5.2
Management and support activity	2.37	1.04	44.1	9.8
Education	2.37	1.51	63.9	2.2
Human health and social welfare	1.97	1.00	50.9	4.1
Art, entertainment, and gaming	0.27	0.15	56.7	2.6
Other services	1.58	0.95	59.8	5.0
Total	34.44	17.88	51.9	5.3

As for economic activity, job vacancy rate accounts for 9.8 percent in the management and support activity, 8.1 percent in wholesale and retail activity, which is a high percentage. Although employment in the hotel, accommodation, housing and catering service sector has declined from the same period of last year, the job vacancy rate was 11.6 percent which is the highest rate compared to other sectors. In addition, 54.5 percent of job vacancies in the hotel, accommodation, housing and catering service sector, 47.7 percent in the wholesale and retail sector, and 44.1 percent in the management and support activity were vacancies replacing. As for activity of hotel, accommodation, housing and catering service, the above rates are high. In the last 12 months, 83.8 percent of the employees hired in the sector were replaced workers, while 68.7 percent resigned voluntarily, which is particularly noteworthy. The replacement rates among the job vacancies in all sectors except professional, scientific and technical activities, and real estate are over 43.0 percent, which suggest that labor turnover is higher than the net labor demand.

Table 21. New and fired employees, by economic activity

Economic activity	Recent hires past 12 months			Separations past 6 months			
	Total employees	Of which: hired in open vacancies	Replacement rate	Number of employees separated from job in the last 6 months	Employees who resign at the initiative of the employer	Employees who resigned at their own request	Voluntary resignation rate
	Number	Number	Percent	Number	Number	Number	Percent
Agriculture, forestry, fishing, and hunting	1.64	1.05	63.8	0.62	0.23	0.39	62.5
Mining and extraction	4.25	2.04	47.9	3.04	1.98	1.06	34.7
Processing industry	8.17	5.90	72.2	5.37	1.97	3.40	63.4
Electricity, gas, steam, ventilation supply	0.90	0.53	59.1	0.73	0.41	0.32	44.4
Water supply, wastewater drainage system, waste management and treatment	0.58	0.44	75.5	0.45	0.20	0.26	56.5
Construction	12.51	8.57	68.5	7.21	2.31	4.90	67.9
Wholesale and retail: repairs of vehicle and motorcycle	21.74	12.45	57.3	13.18	5.11	8.07	61.2
Transport and warehousing	5.28	3.75	71.0	3.02	0.86	2.15	71.4
Hotel, accommodation, housing, catering service	4.58	3.83	83.8	4.29	1.34	2.95	68.7
Information and communication	1.82	0.98	54.0	1.33	0.52	0.81	61.0
Finance and insurance	1.93	0.84	43.4	1.21	0.43	0.79	64.8
Real estate	1.83	1.01	55.4	1.67	0.68	0.98	59.0
Professional, scientific and technical activity	2.55	0.99	39.0	1.73	0.57	1.16	67.1
Management and support activity	5.18	4.02	77.6	4.02	1.17	2.85	70.9
Education	7.89	5.41	68.5	5.51	2.34	3.17	57.5
Human health and social welfare	4.57	3.30	72.2	2.88	1.03	1.85	64.2
Art, entertainment, and gaming	0.80	0.68	84.8	0.72	0.27	0.45	62.1
Other services	2.90	2.22	76.5	2.83	1.07	1.76	62.1
Total	89.1	58.0	65.1	59.8	22.5	37.3	62.4

The vacancy replacing rate for new employees in the arts, entertainment and gaming sector was 84.8 percent, while the rate of voluntary redundancies was 62.1 percent. The vacancy replacing rate for new employees in the management and support activities was 77.6 percent, and rate of voluntary quits among total separations are 70.9 percent. As for other service sector, vacancy replacing rate was 76.5 percent, and voluntary resignation was 62.1 percent, while the rate in the manufacturing sector was 72.2 percent and 63.4 percent, respectively.

As for the above rates and job vacancy rate at the occupational level, job vacancy rate, replacing rate and voluntary quits are relatively high in the advertising and marketing specialist, tourism

consultant, travel agency and related clerks, pre-press technician, draughtsman, technician, molder, metalworking equipment operator, graphic and multimedia designer.

Table 22. New and fired employees, by jobs and occupations

ISCO code	Jobs and occupations	Number of employees hired in the last 12 months			Job vacancy			Job vacancy rate (%)	Number of employees separated in the last 6 months		
		Total	Replacing rate	Replaced rate (%)	Total	Replacing rate	Replaced rate (%)		Dismissed at the initiative of the employer	Employees who resigned at their own request	Voluntary resignation rate (%)
7318	Handicraft workers in textile, leather and related materials knitter	136	99	72.8	442	409	92.6	57.1	29	27	48.1
4229	Client information workers not elsewhere classified	376	301	79.9	110	81	73.0	43.9	31	142	82.2
2431	Advertising and Marketing specialist	443	309	69.8	425	121	28.5	38.3	45	57	55.4
4221	Travel Agency and Related Clerks	5	5	100.0	111	5	4.7	37.7	0	14	100.0
1439	Services managers not elsewhere classified	828	598	72.2	835	337	40.4	36.2	455	951	67.6
7321	Pre-press technicians	78	46	58.5	87	16	18.6	35.5	43	72	62.6
3118	Draughts persons	93	51	54.6	51	49	96.1	32.9	1	1	50.0
2166	Graphic and Multimedia Designers	155	72	46.5	131	19	14.3	27.3	39	100	72.0
2643	Sign language interpreter	234	151	64.5	413	68	16.5	26.9	19	142	88.1
2512	Software developers	658	213	32.3	221	71	32.3	26.5	95	215	69.4
9312	Civil Engineering Laborer	6630	4910	74.1	1061	324	30.6	26.4	946	1136	54.6
2250	Veterinarians	376	111	29.4	457	23	5.0	25.1	22	59	72.7
4414	Scribes and related workers	1536	301	19.6	192	80	41.7	24.0	84	177	67.8
4311	Accounting and Bookkeeping Clerks	1537	850	55.3	1045	329	31.4	23.8	65	150	69.7
2165	Cartographers and surveyors	9	3	32.7	40	2	4.1	23.8	20	38	64.8

The above rates are high in occupations so-called high demanded every year such as sign language interpreter, civil engineering laborer, veterinarians, accounting and bookkeeping clerks, waiters, construction carpenter, which shows an unmet demand for labor within the occupation.

65.1 percent of new employees' job position and 51.9 percent of job vacancies are vacancies replacing, which is indicating a high mobility of labor in the labor market. It also affects short-term labor-force demand, as well as occupations within the vacancies replacing accounts for high percentage in the demand for occupations.

28.5 percent of the job vacancies were announced as "Specialist", 18.2 percent as "Ordinary occupation", 14.2 percent as "Trade and service worker", and 13.6 percent as "Production, construction, handicraft, related work and service worker".

Table 23. Percent of job vacancy announcement, main classification of jobs and occupation

Main category number	Classification of jobs and occupation	Percent
1	Manager	3.5
2	Specialist	28.5
3	Technicians and Associate professionals	7.7
4	Office and service worker	5.5
5	Trade and service worker	14.2
6	Agriculture, forestry and fishing	0.3
7	Industry, construction, handcraft, relative works and service worker	13.6
8	Operator of fitter of fixed equipment and machinery	8.6
9	Simple job Manager	18.2 100.0

As for each occupation, 3.1% of all job vacancy is construction assistants and guards, 3.0% is office cleanser of organization, 2.4% is employee of cash, and 2.3% is salespeople, sellers, manager of a shopping center and waiter, which accounted for more than 20.0% of all open jobs.

Table 24. Percent of job vacancy announcement, main classification of jobs and occupation

	ISCO code	Occupation	Per-cent	N	ISCO code	Occupation	Per-cent
1	931211	Assistant, construction as-sistant	3.1	11	712612	Plumber, pipe repairman	1.6
2	541411	Guard /contract service/	3.1	12	343412	Chef /general/	1.6
3	911214	Cleanser /Office/	3.0	13	222111	Nurse/general professional/	1.6
4	431111	Employee /cash/	2.4	14	932912	Industrial and Industrial As-sistant	1.5
5	524212	Seller	2.3	15	833213	Driver and truck driver	1.4
6	522112	Trader of food and home goods	2.3	16	513112	Catering staff	1.4
7	143914	Manager of a shopping cen-ter	2.3	17	933315	Shipper/Warehouse/	1.3
8	513111	Waiter	2.3	18	234111	Teacher /elementary school /professional/	1.2
9	343411	Chef	1.7	19	911216	Cleanser, restaurateur	1.2
10	721214	Welder	1.7	20	832214	Driver /cabin car/	1.2

The above occupations are common to both laid-off, new employees' position and open vacancies, suggesting that labor mobility is taking place only within these occupations. In other words, the influx of these occupations is highest in each sector.

The vacancies are announced publicly, with an average of 4 weeks, at least 7 days and a maximum of 56 weeks. The average duration of follow-up is 4.8 weeks and a maximum of 56 weeks. Some employers answered that they will continue to announce until they recruit the right employee.

As for job skills requirements, not only work experience and ability to work overtime, but also foreign language proficiency is required by employers.

2.2 LABOR-FORCE DEMAND ON LABOR MARKET

This survey has focused on labor market demand of 2020, as part of the goal to provide information regarding current trend and short-term demand of Mongolian labor market.

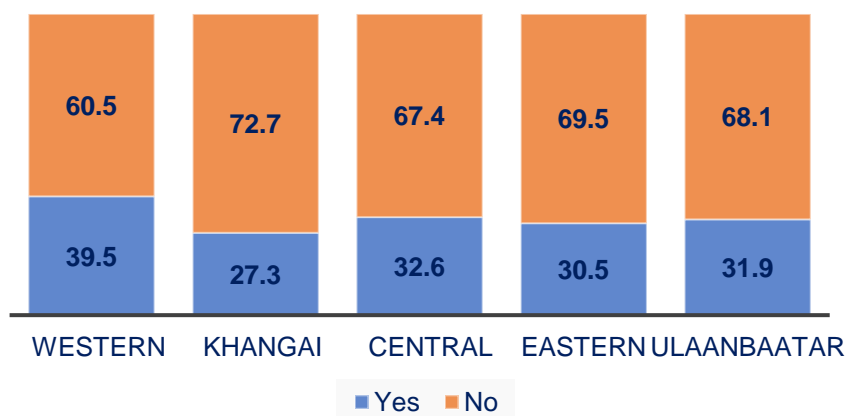
Subject of a barometer survey on labor market demand is employers' forecast as to job growth. This forecast is varied depending on economic sector, location, and time. Nevertheless, labor-force demand of several economic sectors presents a constantly positive change and labor-force absorption is expected to be high. These economic sectors have played a major role to grow annual labor market demand. As for some sectors, the demand for labor-force is lower depending on the industry specific and the size of the industry, which is shown by the annual survey. In particular, labor-force demand is least in water supply, drainage system, waste management and environmental recovery activities, electricity, gas and ventilation industries. Similarly, labor-force demand is varied in regions, which is proved by the findings of multi-year studies. It is likely to be less in local areas compared to cities.

Main results of the survey have been allocated to sample population, like the previous year's methodology. This part describes labor market demand which is classified as first and second halves of the year, job types, economic sectors and jobs or occupations.

31.8 percent of entities and organizations covered by this year's barometer survey has planned to hire people for new and open positions, which is up by 4.2 points than that of the previous year.

39.5 percent of Western region entities, 32.6 percent of Central region entities, 30.5 percent of Eastern region entities and 27.3 percent of Khangai region entities plan to hire new workers. As for regions, labor-force demand in all region entities is expected to increase compared to the preceding year. 31.9 percent of overall employers in Ulaanbaatar expressed their need to increase their workforce by next year, which increased by 0.9 units compared to the preceding year.

Figure 15. Legal entities and organizations that would hire new workers in 2019, by regions (percent)



This survey findings show that 72,700 labor-force demand is expected to occur on labor market in 2020. Labor-force demand tends to increase by 4.8 percent compared to the findings of previous year.

81.6 percent of labor-force demand is expected to occur in the first half and 18.4 percent is expected to occur in the last half of 2020.

2.2.1 LABOR-FORCE DEMAND IN FIRST HALF /2020.01-2020.06/

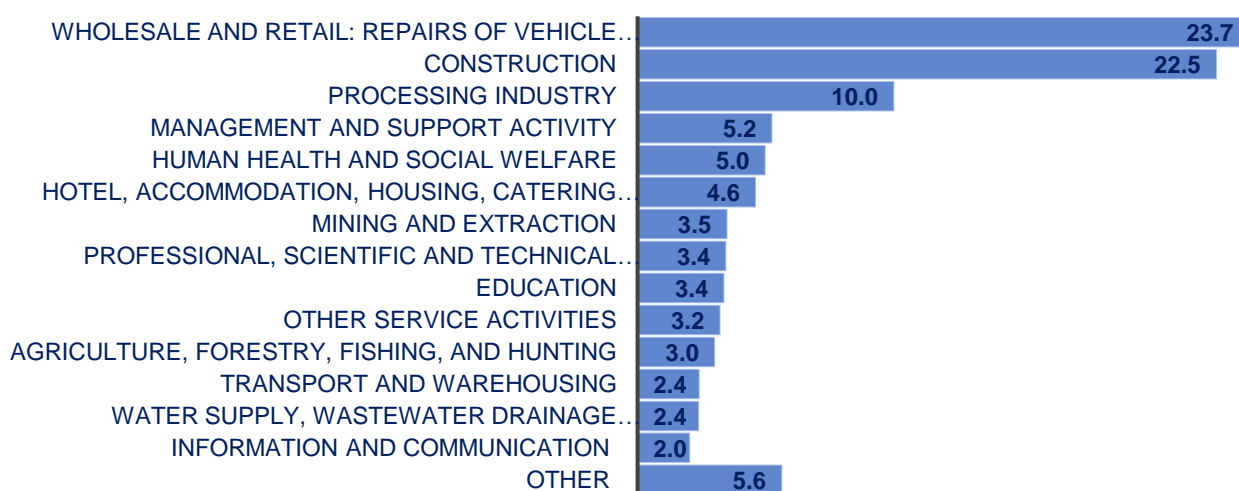
59,400 or 81.6 percent of labor-force demand is expected to occur in the first half of 2020.

Out of total labor-force demand to be occurred in the first half of 2020, 7,900 or 22.5 percent will occur in construction sector, 10,800 or 23.7 percent will occur in wholesale and retail sector, 5,000 or 10.0 percent will occur in processing industry, 2,200 or 5.2 percent will occur in management and support sector, and 2,900 or 5.0 percent will occur in human health and social welfare sector.

However, labor-force demand is expected to be low in electricity, gas, steam and ventilation, art and entertainment, real state, finance and insurance sectors.

48,200 or 81.1 percent of labor-force demand which is expected to occur in the first half of 2020 will be permanent jobs. 72.4 percent of labor-force demand is expected to occur in Ulaanbaatar and 11.6 percent is expected to occur in Khangai region.

Figure 16. Labor-force demand to be occurred in the first half of 2020, by economic sector and percent



2.2.2 LABOR-FORCE DEMAND IN LAST HALF /2020.07-2020.12/

13,400 jobs or 18.4 percent of labor-force demand is expected to occur in the second half of 2020. 82.2 percent of total labor-force demand to be occurred in the last half will be permanent jobs and the remaining percent will be temporary jobs.

As for location, 80.3 percent of labor-force demand pertaining to the last half is expected to occur in Ulaanbaatar and 8.0 percent is expected to occur in Khangai region.

Figure 17. Labor-force demand to be occurred in the last half of 2020, by economic sector and percent



Out of labor-force demand to be occurred in the last half of 2020, 8.9 percent is expected to occur in construction sector, 19.3 percent will occur in wholesale and retail sector and vehicle, motorcycle maintenance service sector, 9.3 percent will be occur in hotel, accommodation, housing, catering sector, 10.0 percent will occur in management and support active sector and 11.3 percent will occur in processing industry. They account for 58.7 percent of labor-force demand of the last half.

Labor-force demand pertaining to the last half of 2020 is expected to fall by 12.1 percent, compared to the last half of preceding year, while labor force demand pertaining to the first half of the 2020 is expected to up by 9.5 percent.

2.2.3 LABOR-FORCE DEMAND OF 2020

Information of annual labor-force demand is more important from which seasonal features can be seen.

Expectation of occurring 72,700 jobs in 2020, tending to go up by 4.8 percent than previous year indicates the increasing absorption of the labor market. However, it will allow increasing the number of workers by 6.3³ percent.

Labor-force demand in 2020 will be highest for one year in construction, wholesale and retail trade, processing industry, and management and support sector and it is same as the previous year.

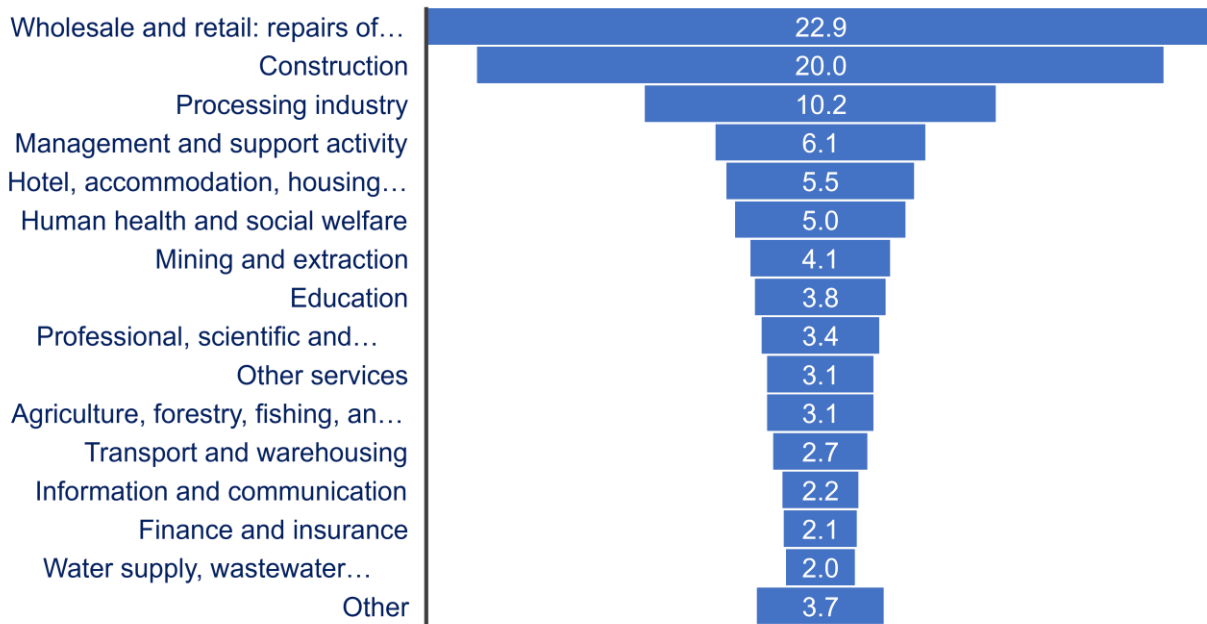
However, labor-force demand of construction, and preceding industry sectors are expected to decrease lower than previous year's result. For instance, 14,500 jobs will be created in construction sector, accounting for 20.0 percent of overall labor-force demand, and it will decrease by 17.9 percent than previous year's amount.

It is expected to occur 7,400 jobs in preceding industry sector, tending to occur 10.2 percent of overall labor-force demand, is expected to decrease by 27.7 percent compared to previous year. Although decrease in labor-force demand in these sectors are observed, the sectors still will have major positive effect on labor market.

Demand for wholesale and retail, vehicle and motorcycle maintenance, construction and preceding industries will be 53.1 percent of the out of overall labor-force by 2020.

³ The value compared to the number of employees Q3 of 2019, NSO

Figure 18. Labor-force demand of 2020 by economic sector and percent



6.1 percent of total labor-force demand will occur in management and support sector, 5.5 percent will occur in hotel, accommodation, housing, catering service, 5.0 percent will occur in human health and social welfare service sector, 4.1 percent will occur in mining and extraction sector, 3.8 percent will occur in education, 3.1 percent will occur in agricultural, forestry, fishing and hunting, 3.1 percent will occur in other service sector.

Labor-force demand will be least in water supply, drainage system, waste management and environmental restoration activities; electricity, gas, steam and ventilation supply; art, entertainment, and gaming; finance and insurance; other services; and real estate sectors, totaling 5,700 jobs or 7.9 percent of overall demand.

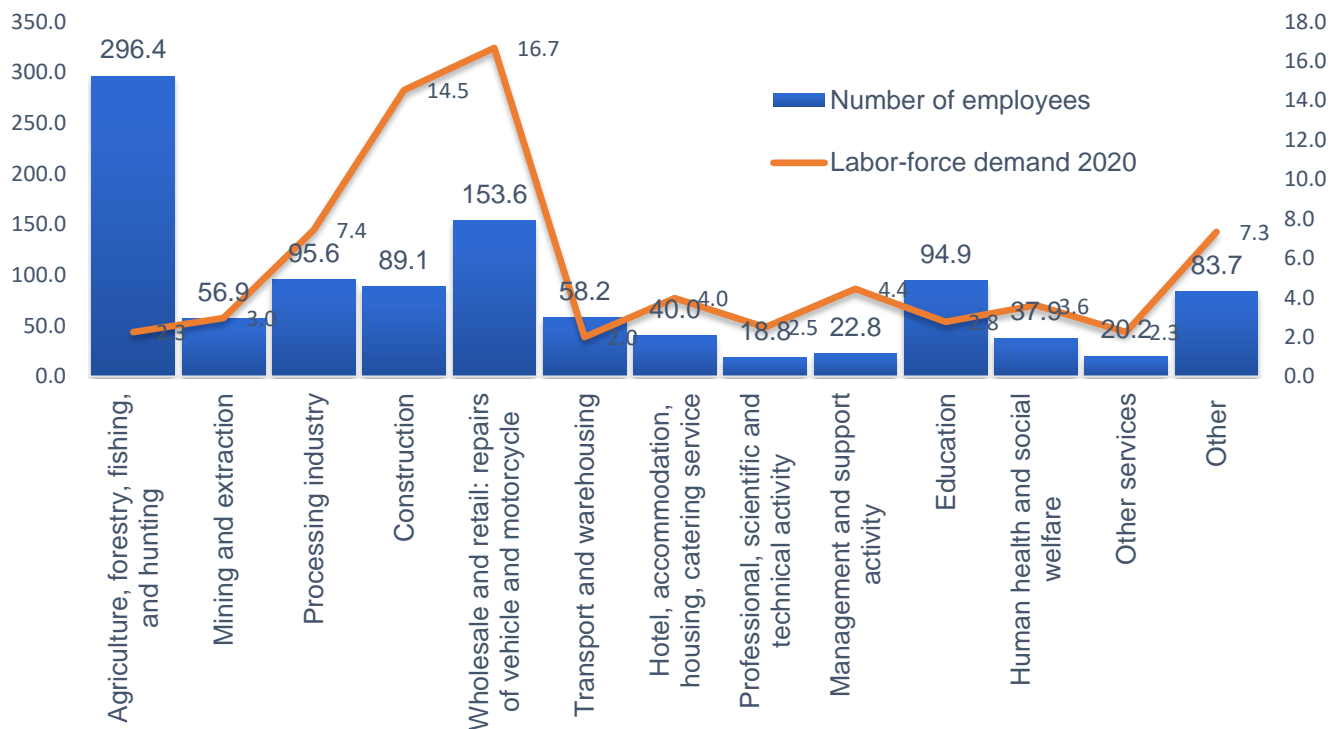
Labor-force demand in economic sectors is expected to fall by 25.8 percent in real estate sector, 38.7 percent in education, 28.7 percent in transport and warehousing sector, 22.8 percent in art and entertainment sector, 4.8 percent in finance and insurance and 1.1 percent in information and communication than that of previous year.

Even though, labor-force demand in some economic sectors is expected to fall, which is higher than that of the previous year.

For instance, labor-force demand is figured out to be increased by 62.6 percent in education, 35.5 percent in mining and extraction sector, 25.3 percent in electricity, gas, steam and ventilation sector, and 21.2 percent in agricultural, forestry, fishing and hunting than that of previous year.

Moreover, labor-force demand in human health and social welfare sector, and another sector service sector is expected to double raise.

Figure 19. Labor-force demand and number of employees, by economic sector and thousand people



When expected labor-force demand is compared with the the worker number⁴, it is equivalent with 19.5 percent of worker number in management and supporting sector, 16.3 percent of worker number in construction, 13.3 percent of worker number in professional scientific and technical activities sector, 11.2 percent of worker number in other service sector, 10.9 percent of worker number in wholesale and retail, vehicle and motorbike maintenance service sector.

Seasonal effect has also been observed in countrywide labor-force demand of 2020 like previous years. 81.6 percent of overall labor-force demand will occur in the first half of 2020 and it is 4.4 times higher than the last half's labor-force demand. It is dependent on seasonal temporary jobs, as can be seen from survey reports of different years. For instance, 82.5 percent of temporary labor-force demand in 2020 is expected to occur in the first half.

It is specific that the following percent of labor-force demand in economic sectors is expected to occur in the first half of 2020: 96.8 percent of overall labor-force demand to be occurred in water supply, drainage system, waste management and environmental restoration activities; 91.8 percent of overall labor-force demand to be occurred in construction sector, and art and entertainment; 84.8 percent of overall labor-force demand to be occurred in other services; 84.5 percent of overall labor-force demand to be occurred in wholesale and retail, and vehicle and motorbike maintenance service; 82.1 percent of overall labor-force demand to be occurred in professional, scientific and technical activity; 82.0 percent of overall labor-force demand to be occurred in real estate sector; 81.7 percent of overall labor-force demand to be occurred in human health and social welfare.

⁴ - Number of employees in the third quarter of 2019, NSO

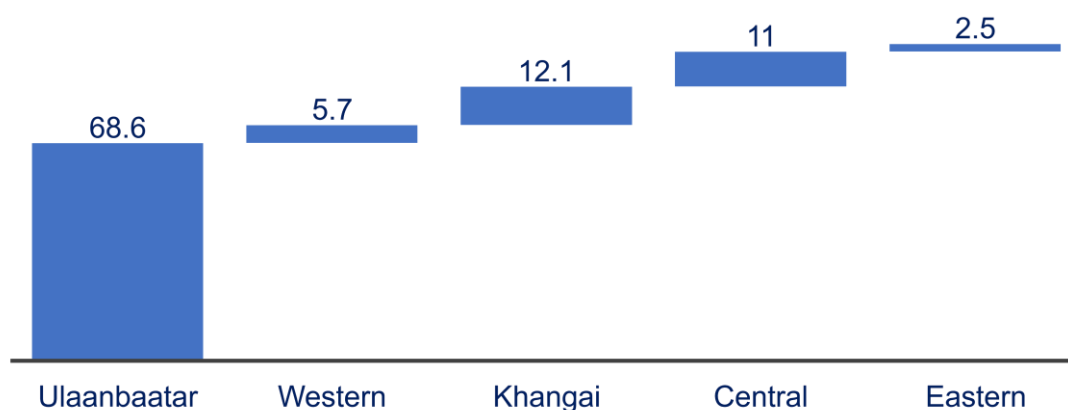
Table 25. Labor-force demand of 2020, by economic sectors and time

Economic sectors	Overall labor-force demand /thousand people/	First half		Last half	
		/thousand people/	Per-cent	/thousand people/	Per-cent
Agriculture, forestry, fishing, and hunting	2.3	1.8	79.3	0.5	20.7
Mining and extraction	3.0	2.1	69.9	0.9	30.1
Processing industry	7.4	5.9	79.6	1.5	20.4
Electricity, gas, steam, ventilation supply	0.7	0.5	79.4	0.1	20.6
Water supply, wastewater drainage system, waste management and treatment	1.5	1.4	96.8	0.05	3.2
Construction	14.5	13.3	91.8	1.2	8.2
Wholesale and retail: repairs of vehicle and motorcycle	16.7	14.1	84.5	2.6	15.5
Transport and warehousing	2.0	1.4	71.5	0.6	28.5
Hotel, accommodation, housing, catering service	4.0	2.7	68.7	1.2	31.3
Information and communication	1.6	1.2	75.2	0.4	24.8
Finance and insurance	1.5	1.0	67.1	0.5	32.9
Real estate	1.1	0.9	82.0	0.2	18.0
Professional, scientific and technical activity	2.5	2.0	82.1	0.4	17.9
Management and support activity	4.4	3.1	69.9	1.3	30.1
Education	2.8	2.0	72.2	0.8	27.8
Human health and social welfare	3.6	2.9	81.7	0.7	18.3
Art, entertainment, and gaming	0.9	0.8	91.8	0.1	8.2
Other services	2.3	1.9	84.8	0.3	15.2
Total	72.7	59.3	81.6	13.4	18.4

Moreover, 69-80 percent of overall labor-force demand to be occurred in agriculture, forestry, fishing, and hunting; processing industry; electricity, gas, steam, ventilation supply; transport and warehousing; information and communication; education; mining and extraction, Hotel, accommodation, housing, catering service are expected to occur in the first half, too

With regard to location of labor-force demand of 2020, 68.7 percent or 49,900 would occur in Ulaanbaatar, 12.1 percent or 8,800 would occur in Khangai region, 11.0 percent or 8,000 would occur in Central region, and remaining percent would occur in Western and Eastern regions.

Figure 20. Percent of Labor-force demand of 2020, by regions (percent)



The highest number of jobs are expected to be created in Ulaanbaatar, totaling 50,000. Of these, 59.3% are demanded for a new job position.

Wholesale and retail, construction, processing industry sectors have a major drive to this high labor-force demand of Ulaanbaatar. Specifically, 20.3 percent of labor-force demand is expected to occur in wholesale and retail, 19.6 percent of labor-force demand is expected to occur in processing industry, 9.4 percent of labor-force demand is expected to occur in processing industry sector.

Although, there are economic sectors, which account for less percent of labor-force demand of the region, there are also sectors that have higher labor force demands in the sector. 94.8 percent of labor-force demand of water supply, drainage system, waste management and environmental restoration activities, 94.1 percent of labor-force demand of finance and insurance sector, 91.5 percent of labor-force demand of real state are expected to occur in Ulaanbaatar, which have a positive effect on the growth of the labor-force.

88.2 percent of sector wide labor-force demand of other services, 87.5 percent of sector wide labor-force demand of transportation and warehousing, 86.4 percent of sector wide labor-force demand of information and communication sector, 84.5 percent of sector wide labor-force demand of education, 83.6 percent of sector wide labor-force demand of hotel, accommodation, housing, catering service, 83.4 percent of sector wide labor-force demand of art, entertainment, and gaming, 82.5 percent of sector wide labor-force demand of human health and social welfare and 82.0 percent of sector wide labor-force demand of Electricity, gas, steam, ventilation supply are expected to occur in Ulaanbaatar.

31.4 percent of overall labor-force demand of 2020 is expected to occur in local areas where the following major economic sectors play an important role. 60.9 percent of these is new work position, which can show the local labor market may also expand.

The following economic sectors have a major impact on local labor-force demand. Particularly, 30.4 percent of the local labor-force demand is expected to occur in the wholesale and retail sector, 21.0 percent is in the construction industry, and 12.4 percent is in the manufacturing industry, respectively.

As for labor-force demand in the sectors, 44.2 percent of agriculture, forestry, fisheries and hunting, 34.6 percent of wholesale and retail, vehicle and motorcycle maintenance, 30.9 percent of professional, scientific and technical activity and 30.5 percent of management and support activity are expected to occur in the local area.

Labor-force demand in Khangai and Central area is predicted to be higher than other regions, and 16.8 thousand new or vacant job position is speculated to occur in those areas. Especially in the

Khangai region, 8.8 thousand labor-force demand is expected to occur, and the processing industry, the wholesale and retail and the construction sector will have a major impact on the local labor-force demand.

In the Central region, labor-force demand in construction, wholesale and retail sectors, agriculture, forestry, fisheries, and hunting constitute high percent.

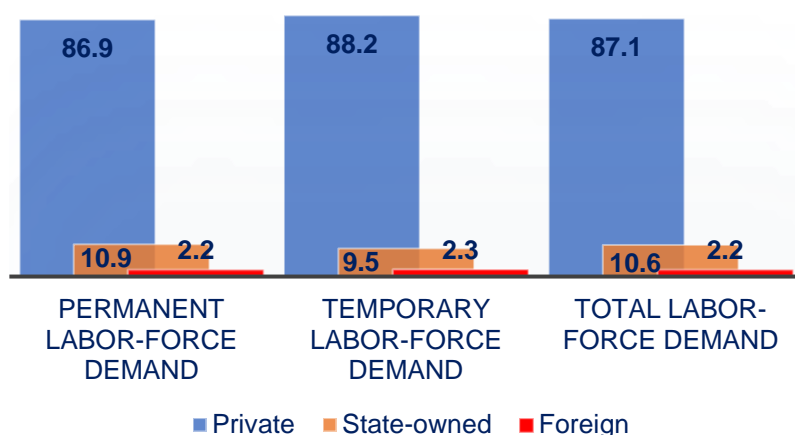
Although, labor-force demand in the Western and Eastern regions is expected to be relatively low compared to other regions, and 6.0 thousand new or vacant jobs are projected to occur in these areas.

Labor-force demand of wholesale and retail trade, construction and processing industry is expected to be high in Western region, which accounts for 76.5 percent of the region's overall labor-force demand would be occurred in.

Although, labor-force demand is expected to be low in Eastern region compared to the other regions, labor-force demand of wholesale and retail sector, processing industry, and management and support activity is expected to be higher within the Eastern region, which account for 47.5 percent of the region's overall labor-force demand.

Labor-force demand of electricity, gas, steam and ventilation supply and art, entertainment and gaming, and water supply drainage system, waste management and treatment is expected to be low in this region while labor-force demand is expected not to occur in transport and warehousing and real state. In other regions, the labor-force demand in these sectors is expected to be low.

Figure 21. Percent of labor-force demand, by ownership types of entities and job types



87.1 percent of labor-force demand to be created by 31.8 percent of entities and organizations are expected to be created by private sector, 10.6 percent will be created by public organizations, remaining percent will be created by foreign entities.

Thus, it indicates that 9/10 of total labor-force demand will be created in the private entities.

81.3 percent of labor-force demand or 59,200 are permanent jobs. In other words, eight in every ten expected jobs will be permanent jobs. The index increased by 11.2 points compared to the previous year. On the other hand, 18.7 percent or 13,600 are expected to be temporary jobs, which is expected to decreased comparing to the previous year.

Out of 59,200 permanent jobs to be created in 2020, 86.9 percent or 51,400 will be created in private sector entities, 10.9 percent or 6,500 will be created by state-owned entities, and 2.2 percent or 1,300 will be created by joint and foreign-invested entities. For temporary jobs, 88.2 percent will be created in private sector entities and the rest is expected to be created by employers of other ownership types.

81.4 percent of permanent jobs and 82.5 percent of temporary jobs are expected to be created in the first half of the year.

The major sectors in the demand for permanent job are wholesale and retail, as well as construction and processing industries. These two sectors will create 50.4 percent of total permanent job demand and 65.1 percent of total temporary job demand.

Table 26. Labor-force demand by job types and economic sectors

Economic sectors	Labor-force demand (thousand persons)		Percent	
	Perm.	Temp.	Perm.	Temp.
Agriculture, forestry, fishing, and hunting	1.5	0.7	2.6	5.2
Mining and extraction	2.7	0.3	4.6	1.9
Processing industry	6.2	1.3	10.4	9.2
Electricity, gas, steam, ventilation supply	0.3	0.4	0.5	2.8
Water supply, wastewater drainage system, waste management and treatment	1.5	0.0	2.5	0.0
Construction	8.9	5.6	15.1	41.2
Wholesale and retail: repairs of vehicle and motorcycle	14.7	2.0	24.8	14.6
Transport and warehousing	1.8	0.2	3.1	1.3
Hotel, accommodation, housing, catering service	3.5	0.5	5.9	3.5
Information and communication	1.0	0.6	1.7	4.4
Finance and insurance	1.5	0.0	2.6	0.2
Real estate	0.9	0.2	1.6	1.5
Professional, scientific and technical activity	2.3	0.2	3.9	1.5
Management and support activity	3.2	1.2	5.4	9.1
Education	2.6	0.2	4.3	1.5
Human health and social welfare	3.4	0.2	5.8	1.4
Art, entertainment, and gaming	0.8	0.1	1.4	0.5
Other services	2.2	0.0	3.8	0.2
Total	59.2	13.6	100.0	100.0

Need to hire permanent workers is higher in water supply, drainage system, waste management and treatment, other service sector, human health and social welfare, transportation and wholesale, real estate, finance and insurance, education, art, entertainment, and gaming and mining and extraction sector. Particularly, permanent jobs account for 99.8 percent of labor-force demand of water supply, drainage system, waste management and treatment, 98.9 percent of other service, 98.3 percent of finance and insurance sector. Moreover, permanent labor force is more than 80.0% of the labor-force demand in the other service sector, except construction, electricity, gas, steam and ventilation sector, information and communications, agriculture and forestry sectors. For example, demand for permanent labor-force will occur 91%-94% of the labor-force demand in the human health and social welfare, transportation and warehousing, real estate, education, arts, entertainment, games, mining and extraction, professional, scientific and technical activity and education sector. 81%-88% percent of the wholesale and retail, vehicle and motorcycle maintenance, hotel, accommodation, housing, catering service, processing industry, real estate sector labor-force will be occurred in permanent work place.

Although temporary labor-force demand in this year will be lower than the previous year, it still accounts for a small percentage of labor-force demand. 41.2% of overall temporary labor-force demand is expected to occur in construction, 14.6% is occurred in vehicle and motorcycle maintenance and 9.2% is occurred in processing industry.

As for the economic activity, 56.3 percent of electricity, gas, steam, ventilation supply sectors, 38.5 percent of construction, 36.6 percent of information and communication, 31.2 percent of agriculture, forestry, fisheries, and hunting sectors will be temporary labor-force.

Let us examine expected labor-force demand to occur on labor market and job supply by new and open job types. Of total labor-force demand in 2020 projected by this survey, 43,500 or 59.8 percent will be demand of new jobs, which indicates that labor market can expand by the extent of such demand of new jobs. On the other hand, there are 29,200 or 40.2 percent is open positions.

Table 27. Labor-force demand, by economic sectors and job types

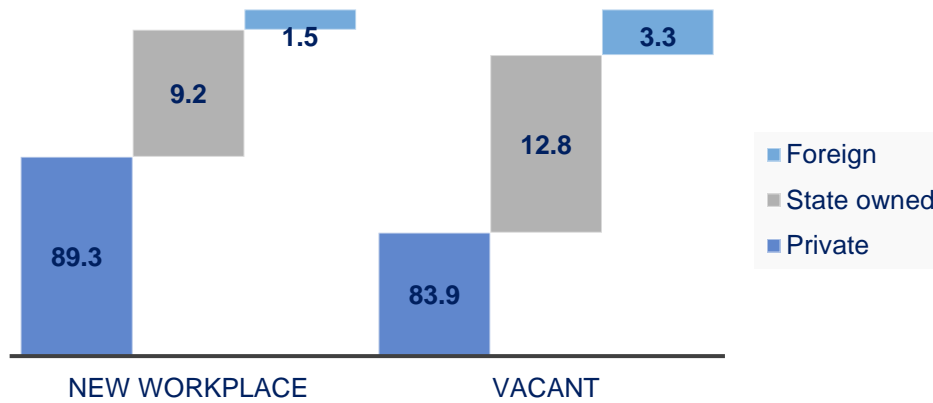
Economic sectors	Labor-force demand (thousand person)			Percent	
	Total	New	Vacant	New	Vacant
Agriculture, forestry, fishing, and hunting	2.3	1.3	0.9	3.1	3.1
Mining and extraction	3.0	1.5	1.4	3.5	4.9
Processing industry	7.4	4.3	3.1	9.9	10.7
Electricity, gas, steam, ventilation supply	0.7	0.1	0.6	0.2	2.0
Water supply, wastewater drainage system, waste management and treatment	1.5	1.4	0.1	3.2	0.3
Construction	14.5	9.4	5.1	21.6	17.6
Wholesale and retail: repairs of vehicle and motorcycle	16.7	10.4	6.3	23.9	21.5
Transport and warehousing	2.0	0.7	1.3	1.5	4.6
Hotel, accommodation, housing, catering service	4.0	1.9	2.1	4.3	7.2
Information and communication	1.6	1.0	0.6	2.3	2.1
Finance and insurance	1.5	0.9	0.6	2.2	2.1
Real estate	1.1	0.7	0.4	1.6	1.5
Professional, scientific and technical activity	2.5	1.6	0.9	3.7	3.0
Management and support activity	4.4	2.5	1.9	5.9	6.5
Education	2.8	1.8	1.0	4.1	3.3
Human health and social welfare	3.6	2.4	1.2	5.5	4.2
Art, entertainment, and gaming	0.9	0.4	0.6	0.8	1.9
Other services	2.3	1.2	1.0	2.8	3.5
Total	72.7	43.5	29.2	100.0	100.0

Of new jobs to be created in 2020, 23.9 percent will be in wholesale and retail sector, 21.6 percent will be in construction, and 9.9 percent will be in processing industry, respectively, while 49.8 percent of all vacant positions will be in the same sectors.

As for economic sectors, 93.6 percent of labor-force demand in the water supply, wastewater drainage system, waste management and treatment sector will be new workforce demand, while 65.1 percent of labor-force in the field of professional, scientific and technical activity, 64.8 percent of the education, 64.7 percent of the construction, 62.7 percent of the information and communication, 62.3 percent of the wholesale and retail and 61.3 percent of real estate sector will be demand for new labor force. This indicates that the number of employees in these sectors can also increase in same size. In addition to the above sectors, demand for new labor-force accounts for 50.0%-60.0% of the labor-force demand in the agricultural, forestry, fisheries, hunting, mining and extraction, processing industry, management and support activity, and other sectors.

On the other hand, demand for the vacant workforce is highest in the fields of electricity, gas, steam, ventilation, arts, entertainment and games, transportation and warehousing. In particular, it accounts for 88.3% of demand in the electricity, gas, steam and ventilation and 67.4% of demand in the transportation and warehousing sector.

Figure 22. Percent of labor-force demand, by job types and ownership types

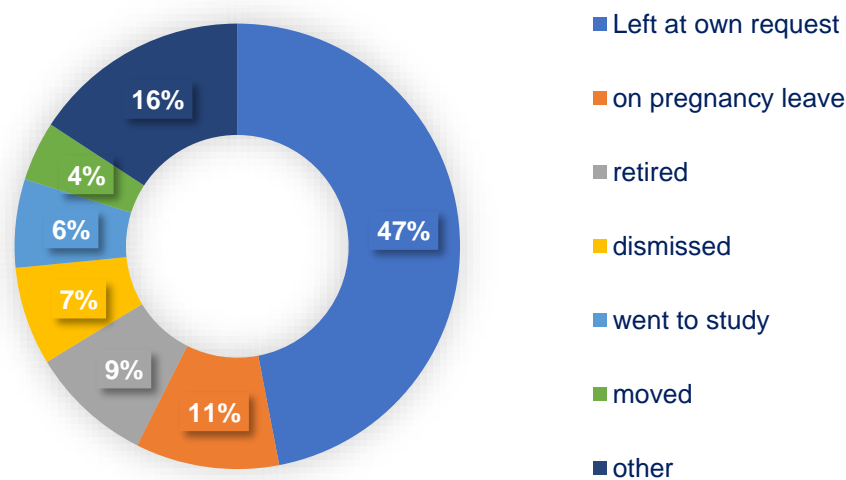


89.3 percent of new job position and 83.9 percent of vacant position are expected to occur in the private sectors. 51.6 percent of jobs to be created by state-owned entities, 61.3 percent of jobs to be created by private sector entities, and 40.0 percent of jobs to be created by foreign-invested employers will be new jobs.

According to last year’s survey result, labor-force that would fill vacant positions reached 24,100, while it will 29,200 in accordance with this survey result. Multi-year surveys show that labor-force demand to fill vacant positions is not so low. On the other hand, it indicates a large displacement of labor-force.

Following to employers, the reasons for the creation of vacancies are still ethically linked to the personal organization and attitude of the citizen involved in labor. In other words, they mentioned that personal irresponsibility, lack of desire to work are the main reasons. In particular, the most common reasons told by employers is the dismissal of employees at their own request, dismissal for unclear reasons, and the inability to work permanently, which accounts for 60.0% of the reason for the creation of vacancies.

Figure 23. Reasons of occurring vacant positions, by percent



According to the law of Mongolia, cases of retirement benefits and maternity leave account for 19.3% of the total, and cases of dismissal of an employee at the initiative of the employer accounts for 7.1% of the total number of reasons.

Employers take certain measures with purpose of keeping stable working conditions for their employees, 33.8 percent of employers increased wages and promotion for their employees, 23.5 percent of employers involved their employees in capacity building trainings, and 23.3 percent of employers have not done any work at the time.

One of the barometer survey results is a calculation of demand of occupations or jobs. It is important information as to labor market balance.

When labor-force demand of 2020 has been considered by fundamental classification of jobs and occupations, Group IX ‘Ordinary works and services worker’ account for 25.2 percent, Group II ‘Specialist’ account for 23.8 percent, Group VII jobs or occupations ‘Workers of production, construction, handcraft, and relevant works and services’ account for 14.5 percent, Group V ‘Trade and service workers’ account for 12.2 percent of total labor-force demand, respectively. The proportion of labor-force demand in the group of “Workers of production, construction, handcraft, and relevant works and services” decreased from the previous year, while the proportion of labor-force demand in the group of ‘Ordinary works and services worker’ and ‘Specialist’ is expected to increase.

Table 28. Occupations in demand, by classification of jobs and occupations and percent

Category number	Classification of jobs and occupation	Percent
1	Manager	3.1
2	Specialist	23.8
3	Technicians and Associate professionals	7.5
4	Office, service worker	4.1
5	Trade and service worker	12.2
6	Agriculture, forestry and fishing	0.8
7	Industry, construction, handcraft, relative works and service worker	14.5
8	Operator of fitter of fixed equipment and machinery	8.8
9	Simple job	25.2
	Manager	100.0

Every year, the most demanded occupations are determined based on the research sample size potential. With regard to job classification, 20 occupations shown below will be of high demand. They constitute 45.7 percent of total labor-force demand in 2020. As for occupation and jobs, occupation in the field of high labor-force demand is expected to be high in this year. For example, 11.0 percent of overall labor-force demand pertains to assistant builder and 1.2 percent pertains to plumber and pipe repairman, 1.1 percent respectively pertains to jobs of construction sector such as electrician, welder, plumber, pipe assembler.

Besides, other predominant labor market demand still includes ordinary jobs that do not require special occupation such as security officer, driver, cleaner, cashier, and washer, as well as jobs and occupations that are offered by technical and vocational education institutions, such as tailor, cook, carpenter, and electrician.

Table 29. Occupations in demand, by percent

No	ISCO code	Jobs or occupations	Per-cent	No	ISCO code	Jobs or occupations	Per-cent
1	931211	Assistant, construction assistant	11.0	11	215111	Electrical engineer	1.4
2	932912	Industrial and Industrial Assistant	4.8	12	833215	Driver /dump truck/	1.3
3	524212	Seller	3.9	13	751111	Butchers, fishmongers and related food preparers	1.3
4	911214	Cleanser /official/	3.1	14	523011	Cashier at the store	1.3
5	343412	Chef /general/	2.2	15	712612	Plumber and pipe repairman	1.2
6	241113	Chief accountant	2.1	16	221111	Generalist medical practitioners	1.1
7	833213	Driver and truck driver	1.9	17	832213	Driver/small cab, cabin/	1.1
8	222111	Specialist medical practitioners	1.6	18	741111	Electrician	1.1
9	541411	Guard/contract service/	1.6	19	721214	Welder	1.1
10	513111	The waitress	1.4	20	712611	Plumber, pipe fitter	1.1

According to labor-force demand, occupation requiring tertiary education such as accountant, electrical engineer, and general specialist doctor and nurse are expected to have higher demand.

The information of the registered unemployed people who can be mediated workplace toward the occupation in high demand in 2020 according to the survey result was found from Unified database of employment records and information of Mongolia.

Table 30. Percent of registered unemployed, by occupations and jobs in demand

ISCO code	Occupations and jobs in demand	Percent
931211	Assistant /construction assistant/	1.8
932912	Industrial assistant	0.1
524212	Seller	0.007
911214	Cleanser /Office/	0.6
343412	Chef /general/	3.3
241113	Chief accountant	2.9
833213	Driver and truck driver	0.2
222111	Nurse /general professional/	0.2
541411	Guard /contract service/	0.1
513111	The waitress	0.1
215111	Electrical engineer	0.08
833215	Driver /trash truck/	0.01
751111	Meat processing industry worker	0.1
523011	Cashier at the store	0.1
712612	Plumber and pipe repairman	0.3
221111	Great doctor /general specialist/	0.2
832213	Driver /small cab, cabin/	0.01
741111	Electrician	0.8
721214	Welder	1.2
712611	Plumber, pipe fitter	0.4

Source: General office for labour and social welfare service

As of the end of 2020, 3.3 percent of registered unemployed population is cooker, 2.9 percent is accountants and 1.8 percent is construction assistant worker. In other words, these registered unemployed population are eligible for demand of labor market.

Within the scope of this study, the researchers clarified the communication skill, the professionalism and personal attitude that employers require and take into account when recruiting worker. It still remains that employers require soft skills from new workers including positive personal attitude and behavior rather than require occupational skills. In other words, personality traits, background, attitudes, and ethics were considered as the most important indicators by employers.

Figure 24. Skills and attributes that employer requires



As for terms of importance, when employers hire new workers, main preference on employee's skills are reliability, personal responsibility, communication, independent work skill, working under pressure, high morality, positive attitude and good time management, which repeats the results of previous years' research. Also, communication skills, teamwork, a positive attitude and time use are still important and demanding skills requiring by employers. Furthermore, workplace safety, hygienic knowledge and related skills were highlighted as one of the most important skills by the employers.

Employers are less expected from workers to have knowledge on science and technology, mathematician and analytical thinking and foreign language. This requirement is observed to multi-year survey findings, and employers view that occupational skills can be acquired by other trainings and practical experience for new workers who have positive communication and behavior. This is evidenced by the information given by one in two businesses with a demand for labor is "training new employees with their own capital."

The skills criteria and requirements by employers is identified within the scope of the indicators set out in the survey, and clarified the required labor-force by each occupation. When looking at this

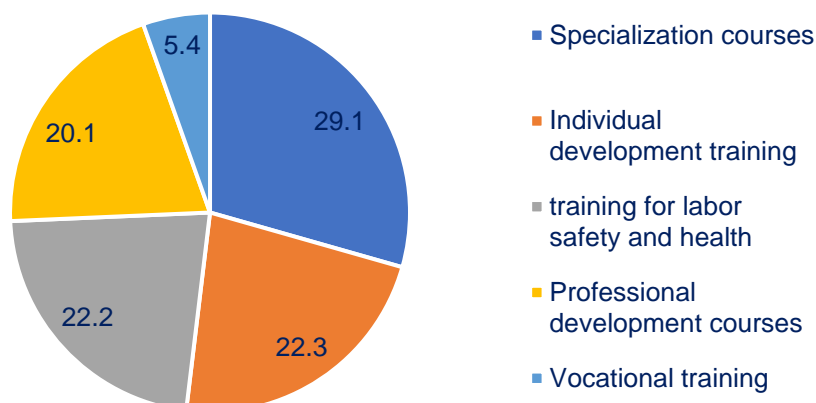
indicator across the 20 most demanded occupation, the requirement to have work experience is the main criterion for each occupation that will be more demanded, regardless of the occupation.

The employers answered that the main requirement for a construction and production assistant is having work experience, and it would be advantageous if he/she is graduated from a specialized school depending on the direction of the enterprise. Employers required a professional ID to the waiters, electrician, plumber and pipe fitter, while requiring a professional ID and driver license of category, professional degrees to the chef, driver and welder. Due to the specifics of occupation, employers required some specific skills related to the jobs. For example, the employers required to accountant should be able to work in financial software and to doctor should be specialized /traumatic, internist, pediatric, neurological, cosmetic etc./. Also, as for sellers, in most cases, having a driver's license was preferred, and in some cases, having a university degree in marketing was preferred by employers.

Training

This year, the researchers clarified whether enterprises with labor-force demand will train their new employees, and 51.9% of all enterprises answered they would train with their own funds. Over the last 12 months, 33.9% of the employers focused on improving the skills and knowledge of their employees by providing training and activity at local or international levels. For example, as for types of training, 49.2% of the total number of organized training at local or international courses was professional training for employees, 22.2% was labor safety and hygiene and 22.3% was training activities aimed at personal development.

Figure 25. Training and activities for employees, by percent



Further plans of the employer

In the frame of determining labor-force demand, the survey asks employers about their projections of the near future and future plans for the organization. 16.0% of all the employers answered they planned to expand and invest in their activities over the next three years. 40.8% answered they had no plans to invest and 43.3% said they had no idea about it.

Employers in the wholesale and retail sector, vehicle and motorcycle maintenance, processing industry, and construction sector are planning to expand their activity and increase their investment over the next three years. It is estimated that new job positions and more than 50,000 labor-force demand will be created, when the economic and social conditions are stable and the employers' plans are fulfilled in the next three years. The three main sectors mentioned above are expected to play a key role. It is worth noting that as for the large employers, these have a preliminary estimate of the strategic

plan, the amount of investment and its labor-force that will arise in the future, while small and medium-sized enterprises is have no plan for future activity.

Taking a look at the amount of investment, it is expected an average of MNT 90.0 million MNT is planned to be invested per entity in 2021, 190.0 million MNT is planned for large employers and over 60 million is planned for small employers.

According to the data of retirement for the next three years, it is estimated that 9.0 thousand workers will be retiring in 2020, and 4.0-5.0 thousand workers in in 2021, 2022 and 2023, respectively.

Employers is faced to not only demand for labor-force but also cut vacancy. When clarifying this, 0.6% or a small percentage of employers answered that they will reduce their employees. In other words, 99.4% of the all enterprise have no cut vacancy plan. Although there is a small number of enterprises that plan to reduce staffing, 0.6 thousand employees are expected to be fired.

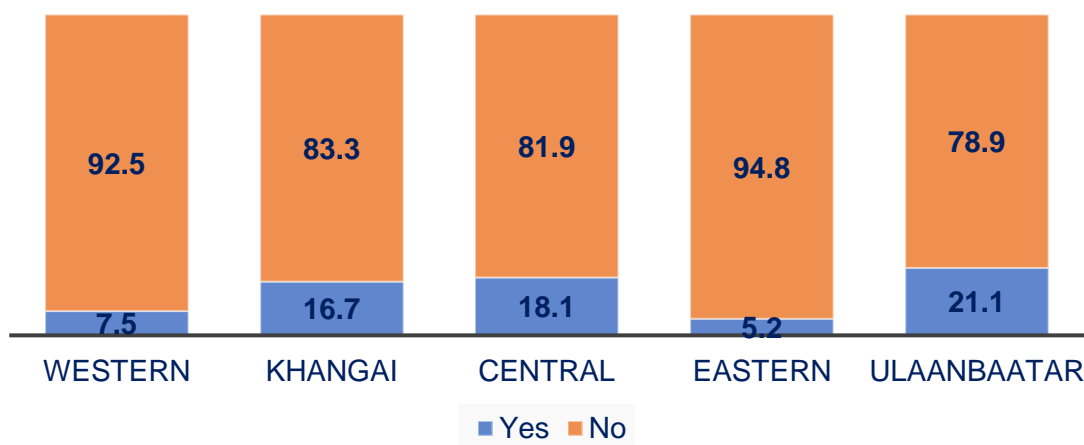
As for cut vacancy reason, 40.2% is the difficulties related to investment and financial problem, and 35.6% is stagnation issue. Which accounts for 75.8% of the reasons for the reduction of employees.

2.3 LABOR-FORCE SHORTAGE

One of the barometer survey objectives is to identify labor-force shortage on labor market for the survey year and its distribution in economic sectors and regions.

Out of the entities and organizations covered by this survey, 18.5 percent could not recruit new workers in last year because they could not find suitable professional people, facing labor-force shortage. When labor-force shortage is assigned to population, labor-force shortage reached 17,700 for a year, which is a 2.7% decrease compared to the previous year (2018).

Figure 26. Inability to recruit workers due to shortage of professional people, by regions (percent)



As for the location, 21.1 percent employers in Ulaanbaatar was affected by labor-force shortage and 13,200 jobs were vacant and they accounted for 74.8 percent of overall labor-force that were of shortage.

18.1 percent of Central region's employers, 7.5 percent of Western region's employers, and 5.2 percent of Eastern region's employers were affected by labor-force shortage, while 16.7 percent of Khangai region's employers were affected by the same. The labor-force shortage percent in Khangai and Ulaanbaatar increased compared to the previous year's study. By that amount, they lost the ability to work at full capacity. labor-force shortage increased in Khangai region and Ulaanbaatar, compared to the preceding year.

In the last year, 4.5 thousand or 25.2 percent of overall labor-force shortages occurred in nationwide was in local area. 1.7 thousand or 9.4% of overall labor-force shortage was occurred in Central, 0.6 thousand or 3.6% was occurred in the Western region and 0.2 thousand or 0.9% was occurred in Eastern region, which is decrease from the previous study. In the Khangai region, labor-force shortages increased to 2.1 thousand, which accounted for 11.7% of the nationwide workforce shortage and 46.3% of the local labor-force shortage.

Table 31. Labor-force shortage by regions, gender, present

Region	Number of labor-force shortage (thousand persons)		Percent	
	Total	Female	Total	Female
Western	0.6	0.2	3.3	2.2
Khangai	2.1	1.4	11.7	15.1
Central	1.7	1.0	9.4	11.4
Eastern	0.2	0.1	0.9	0.6
Ulaanbaatar	13.2	6.4	74.8	70.7
Total	17.7	9.1	100.0	100.0

Out of 17,700 jobs that were of shortage in entities and organizations, 51.4 percent or 9,100 were for female.

25.2 percent of the entities and organizations that were affected by labor-force shortage was in wholesale and retail sector, and shortage of this sector occurs for 24.4 percent of out the labor-force shortage. As well as this highest rate was repeated in the last 5 years. In addition, employers in the processing industry and construction sectors accounted for 19.9 percent of the all enterprises experiencing labor shortages, and the labor shortages in these sectors account for 25.1 percent of the total labor-force shortages. Last year, there were 8.8 thousand vacancies in the above three sectors, due to labor shortages. On the other hand, the labor-force shortage was less occurred in the electricity, gas and water supply, sewerage and waste management and recycling systems, which repeats the results of the previous year. This could be explained by the low labor-force demand, and occupations of these economic sectors are not able to be transferred among the sectors.

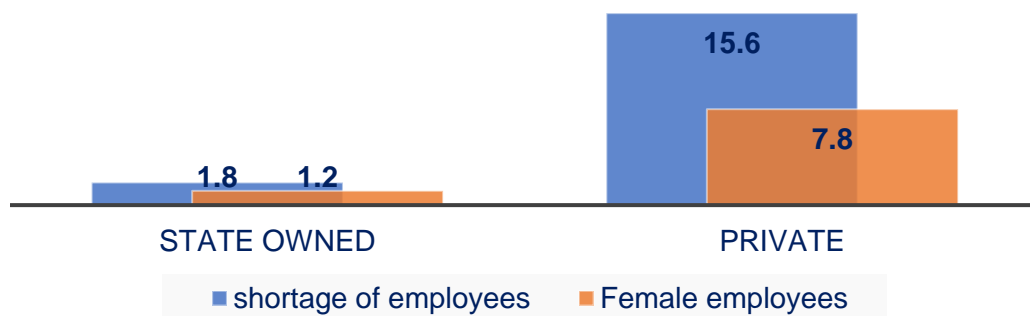
Table 32. Labor-force shortage, by economic sectors

Economic sectors	Labor-force shortage		Female	
	Number	Percent	Number	Percent
Agriculture, forestry, fishing, and hunting	0.5	2.8	0.2	2.4
Mining and extraction	0.3	2.0	0.0	0.3
Processing industry	2.3	13.1	1.2	12.8
Electricity, gas, steam, ventilation supply	0.1	0.3	0.0	0.0
Water supply, wastewater drainage system, waste management and treatment	0.0	0.3	0.0	0.1
Construction	2.1	11.9	0.4	3.9
Wholesale and retail: repairs of vehicle and motorcycle	4.3	24.4	2.8	30.7
Transport and warehousing	0.7	3.8	0.1	0.8
Hotel, accommodation, housing, catering service	1.3	7.2	1.0	10.6
Information and communication	0.4	2.5	0.1	1.3
Finance and insurance	0.2	1.2	0.1	0.8
Real estate	0.3	1.8	0.2	2.1
Professional, scientific and technical activity	0.8	4.3	0.2	2.0
Management and support activity	0.7	3.8	0.2	2.7

Education	0.9	5.2	0.7	7.9
Human health and social welfare	1.5	8.4	1.2	13.7
Art, entertainment, and gaming	0.2	1.3	0.1	1.2
Other services	1.0	5.6	0.6	6.7
Total	17.7	100.0	9.1	100.0

83.6 percent of total labor-force shortage pertained to human health and social welfare, 77.3 percent pertained to education sector, 74.8 percent pertained to hotels, housing and catering service sector, 64.8 percent pertained to retail and warehouse sector needed female workers.

Figure 27. Labor-force shortage, by ownership types (thousand people)



Last year private sector entities and organizations were affected by labor-force shortage highly; they could not hire 15,600 required workers, who accounted for 88.6 percent of overall shortage. 50.0 percent of them were jobs which needed female.

As for fundamental classification of jobs and occupation, labor-force shortage of Group II or “Specialist” accounted for 31.0 percent, labor-force shortage of Group VII or “Workers in production, construction, handcraft and relevant works and services” accounted for 18.1 percent, labor-force shortage of Group V or “Trade and service workers” accounted for 15.4 percent and labor-force shortage of Group “Ordinary jobs and occupations” accounted for 15.4 percent, and this was the highest rate in labor-force shortage in 2020, which accounting for 79.9 percent of overall labor-force shortage.

Table 33. Labor-force shortage, by classification of jobs and occupations and percent

Number	Classification of jobs and occupations	Percent
1	Manager	1.7
2	Specialist	31.0
3	Technicians and Associate professionals	8.9
4	Office, service worker	2.7
5	Trade and service worker	15.4
6	Agriculture, forestry and fishing	1.1
7	Industry, construction, handcraft, relative works and service worker	18.1
8	Operator of fitter of fixed equipment and machinery	5.7
9	Simple job	15.4
	Manager	100.0

When labor-force shortage is considered in relation to jobs and occupations, shortage of ordinary jobs such as shop assistant, assistant worker of manufacturing, salesman, security officer, kitchen assistant, cleaner and carpenter jobs that are offered by TVET institutions such as the waiter, the tailor, the fine carpenter, the cook, the welder, the bartender was highest. In addition, there was a shortage of elementary teacher, nurse, accountant, pharmacist. As there was a labor-force shortage occurred on these occupations in the preceding year, which accounted for high percentage in labor-force demand of this year.

Table 34. Jobs and occupations in shortage, by percent

No	ISCO code	Occupation	Per-cent	No	ISCO code	Occupation	Per-cent
1	521111	The counter /counter seller/	3.8	11	752222	Cabinet-makers	1.8
2	932912	Industrial Assistant	3.3	12	931311	Assistant, Construction	1.6
3	911214	Cleanser /Office/	3.3	13	513211	Barmen	1.6
4	513111	Waiter	2.7	14	321313	Pharmaceutical technicians	1.5
5	222111	Specialist medical practitioners	2.7	15	524212	Seller	1.5
6	226215	Pharmacist /Pharmaceutical Trad /	2.1	16	234111	Teacher /elementary/vocational school/	1.4
7	343412	Chef /general/	2.0	17	941212	Kitchen assistant	1.4
8	541411	Guard /contract service/	1.9	18	241113	Chief accountant	1.3
9	753311	Sewer	1.9	19	711413	Road Ironworker	1.3
10	721214	Welder	1.9	20	721515	Cable driver	1.2

According to the database of job orders registered at Labor and Welfare Service Divisions and private labor exchanges, the above-mentioned general situation is seen. Specifically, over 70,000 jobs were registered at the database and announced in 2019; 0.8 percent of job orders was tailor, 3.6 percent was driver, 2.0 percent was cook, and 0.9 percent was accountant.

Summarizing the above, the movement of labor-force in certain specific occupations is much more likely to affect the labor market. In this regard, we can see that the respective occupant employees are always mentioned in both the list of demanded and labor-force shortage and accounts for a high percentage. This is a noteworthy piece of information.

2.4 THE MAIN OBSTACLE TO RECRUITE NEW EMPLOYEE, INFORMATION SOURCE

In addition to identifying labor-force demand and shortage, the survey focuses on the information sources used by entities and organizations to hire new workers, challenges they face to recruit new workers.

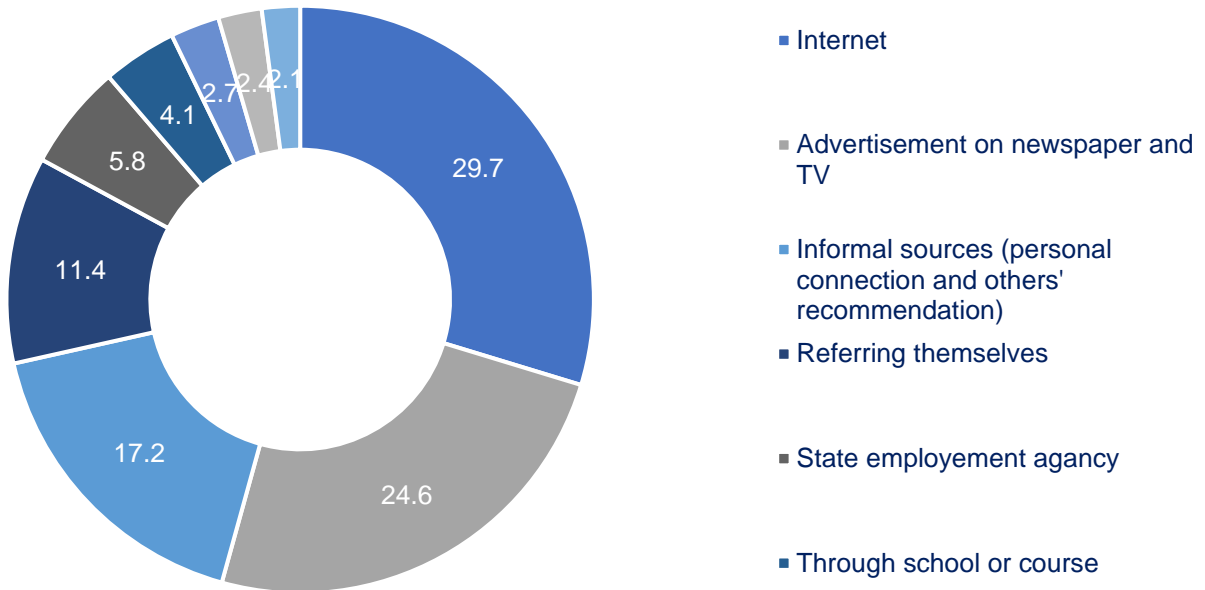
Sources of information used by employers to recruit new employees

According to the survey, most of companies and organizations make up their human resources through publishing in the newspaper and TV ads, and announcing on internet. Prevailing part (55.1 percent) of entities and organizations recruit workers using newspaper and TV ads, and announcing on internet. As the Internet and e-commerce evolve, so it continues to be a widely used source. Besides, it is still common on labor market that job searchers apply for positions or refer to employers for job, recruit workers by other's verbal information and it takes 32.0 percent by this survey.

Surprisingly, only 6.0 percent of employers use information registered at public recruiting agencies or Labor and Welfare Divisions. With regard to local employers, information sources that use information registered at public recruiting agencies or Labor and Welfare Divisions is occurring higher

percentage. In local, it is still common on labor market that job searchers directly apply for positions or refer to employers for job.

Figure 28. Information source used for recruiting new workers, by percent



In addition to using electronic information in the capital city, the workforce information is often collected from personal employment services and job vacancies.

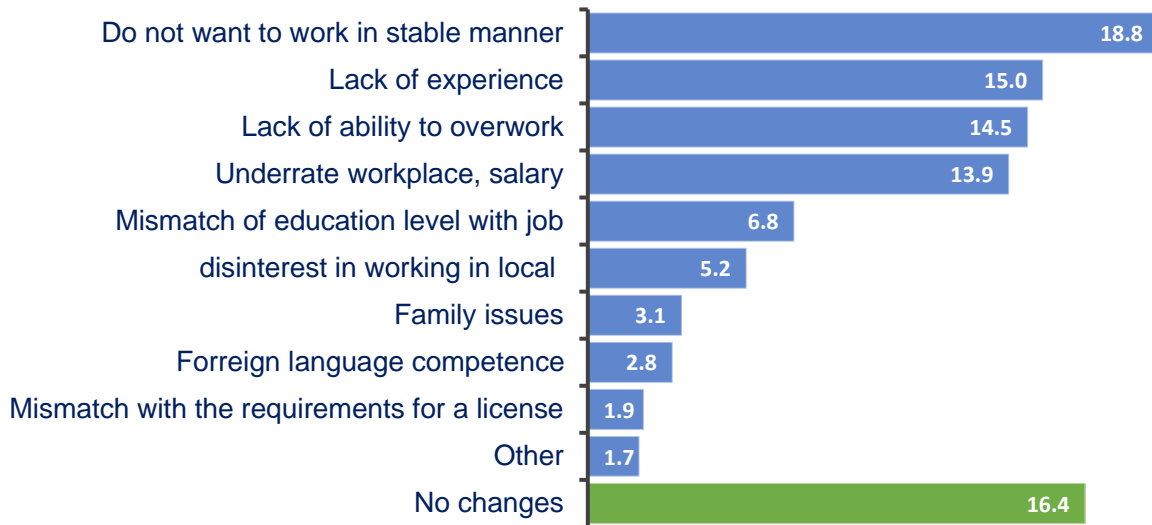
Obstacles to recruit new employees

The researchers clarified the challenges faced by employers to hire new workers. Employers, as labor market participants, face some challenges to hire people and resolve human resource issues.

This survey has found out that the most common challenge is applicants' lack of experience and desire to work stable, which were the most common challenges last year as per the survey findings. Out of challenges named by the employers, 16.4 percent is answered there is no challenges to hire employees, 18.8 percent is workers' reluctance to work in a stable manner, 15.0 percent is lack of experience, 14.5 percent is inability to handle workload, 13.9 percent is undervalue of working condition and salary by candidates, accounting for 62.2 percent of total challenges faced.

The main difficulty in recruiting new employees, as mentioned above, is the individual's personal attitude and responsibilities.

Figure 29. The main obstacle to recruit new employee, by percent



Age, appearance and body-build account for the least percent. Thus, it can be considered that employers do not see such indicators as challenges.

2.5 COMPARISON OF PREVIOUS YEAR’S FINDINGS

We have been doing barometer survey of labor market for 10 consecutive years, and a comparison of the key findings of the surveys is shown in this section.

Approximately 60 percent of the actively operating entities and organizations have over 50 workers. The business entities and organizations with 100-149 employees constitutes 19.1% and business entities and organizations with more than 150 employees constitute 5.5% of overall.

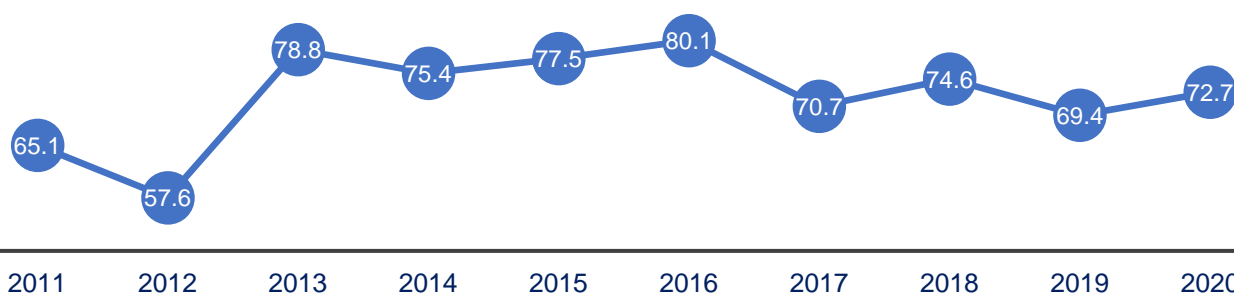
Survey result shows positive or negative changes owing to annual social and economic conditions of the country and multi-year survey findings. But looking at the general trend in labor-force demand and the employers' plans, we can recognize that the domestic labor market has the potential for further expansion and growth.

According to the results of the annual survey, there is a seasonal effect on the labor market, which also reflected in the demand for labor-force calculated by the results of this study. For example, annual surveys show that 2 out of 3 jobs occurs in the first half of the year.

Countrywide labor-force demand ranged from 57,600 to 80,100 through multi-year survey findings. The average for 10 years was 72.2 thousand, which decreased to 70.7 thousand in 2017 and decreased to 69.4 thousand in 2019.

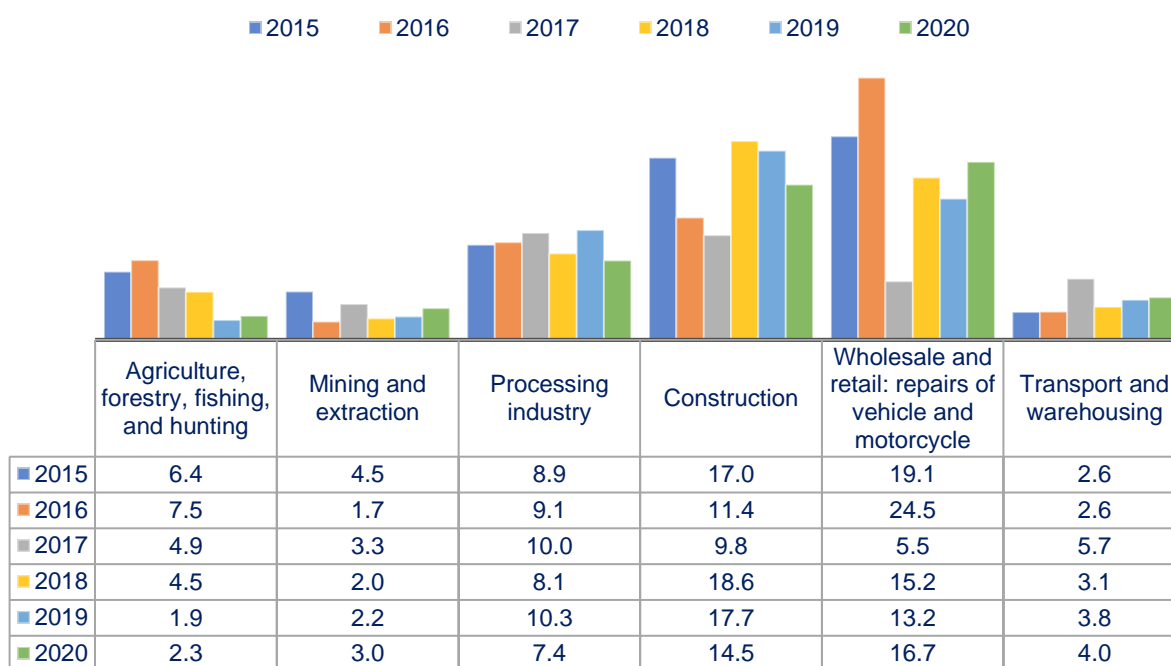
As for 2020, labor-force demand is an average amount compared to the recent 5 years survey findings and it decreased by 4.8 percent than that of the preceding year.

Figure 30. Labor-force demand, by thousand people, 2011-2020



According to the annual survey by sector of economic activity, Despite, labor-force demand is high in the wholesale and retail, construction and processing industries, and accounts for most of the labor-force demand, this fluctuates every year. Demand for construction and processing industries is expected to decrease compared to the previous year, while labor-force demand for wholesale and retail, vehicle and motorcycle maintenance sectors is projected to increase.

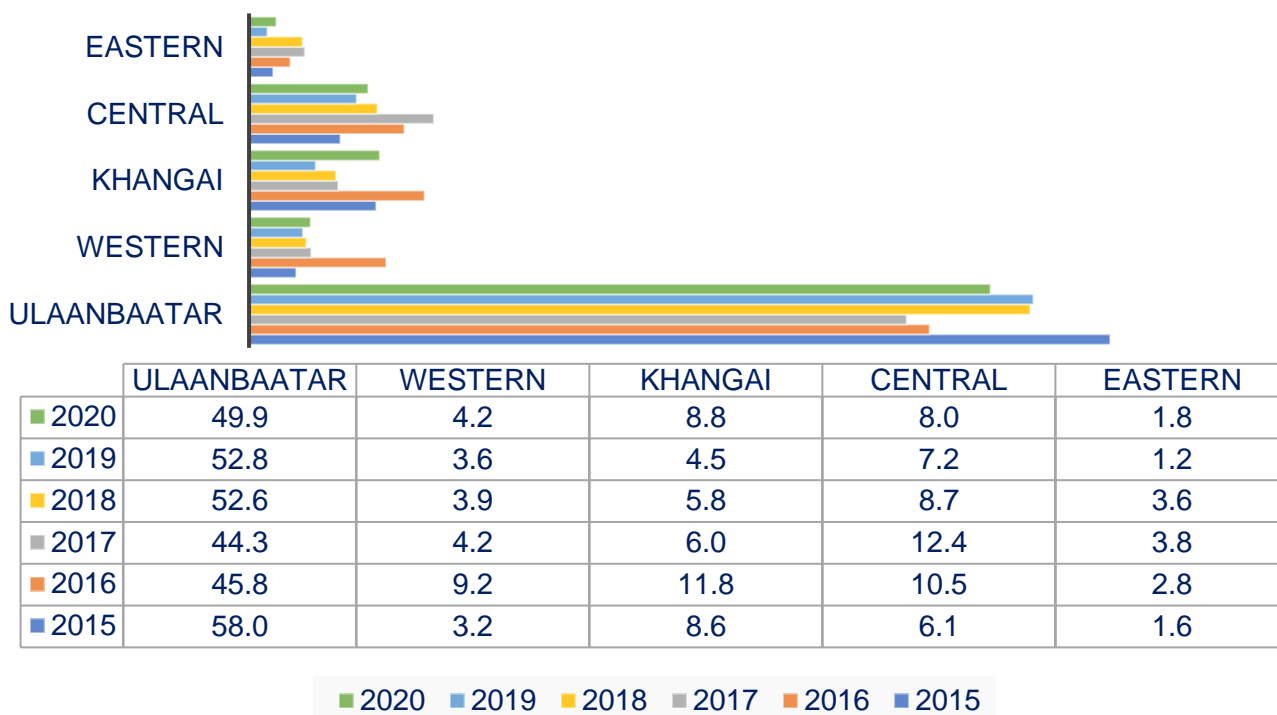
Figure 31. Labor-force demand, by economic sectors (thousand people)



Labor-force demand has decreased in the last 3 years in agriculture, and it is still expected to go up in 2020 than that of previous year.

The labor-force demand in the processing industry sector over the last 6 years has grown to 8.9-10.3 thousand. However, in 2018, it declined from the previous year. Even this year, which is down from the previous year. The situation in the wholesale and retail sector is quite unstable. Even though, which was likely to grow up until 2016, it decreased in 2017 and was the lowest in the last six years. According to this survey, it is projected to grow 26.5 percent from the previous year.

Figure 32. Labor-force demand, by regions (thousand people)



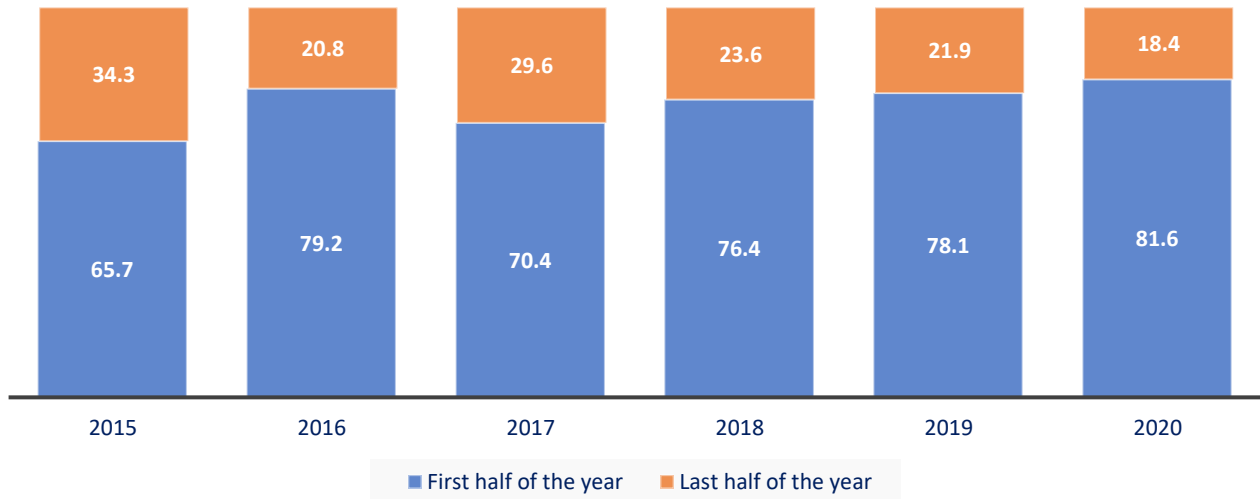
Labor-force demand of Ulaanbaatar and Central region makes up majority percent of nationwide demand, which accounting for more than 70 percent. There was a fact that the demand that will occur in these locations accounted for more than 90.0% of overall labor-force in some years.

With the survey findings until 2017, labor market capacity has shrunk in Ulaanbaatar, however, for the last two years findings, it was expected to expand. As for this year survey result, it is expected to go down.

In Central region; it was tending to go up, but the last two years it was expected to fall. As for this year survey result, it is expected to increase. Labor market capacity fell for 4 consecutive years in Khangai and Western regions, however, it is expected to increase in 2020.

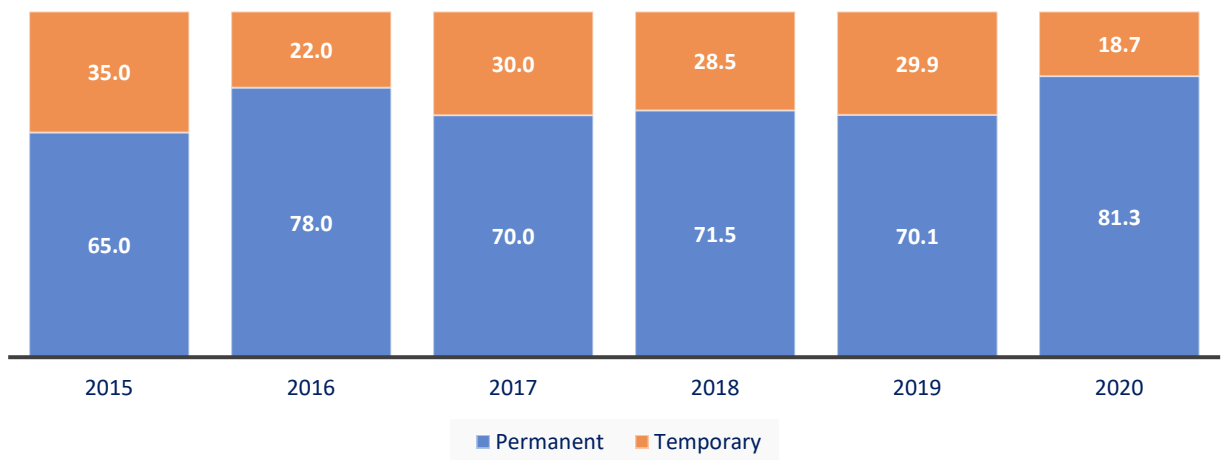
Seasonality has influence on annual labor-force demand. According to average of the last 8 years' survey, more than 65 percent of labor-force demand occurs in the first half of a year. In recent years, this trend has been on the rise, with more than 80% of the workforce expected to occur by the first half of 2020.

Figure 33. Labor-force demand, by time and percent



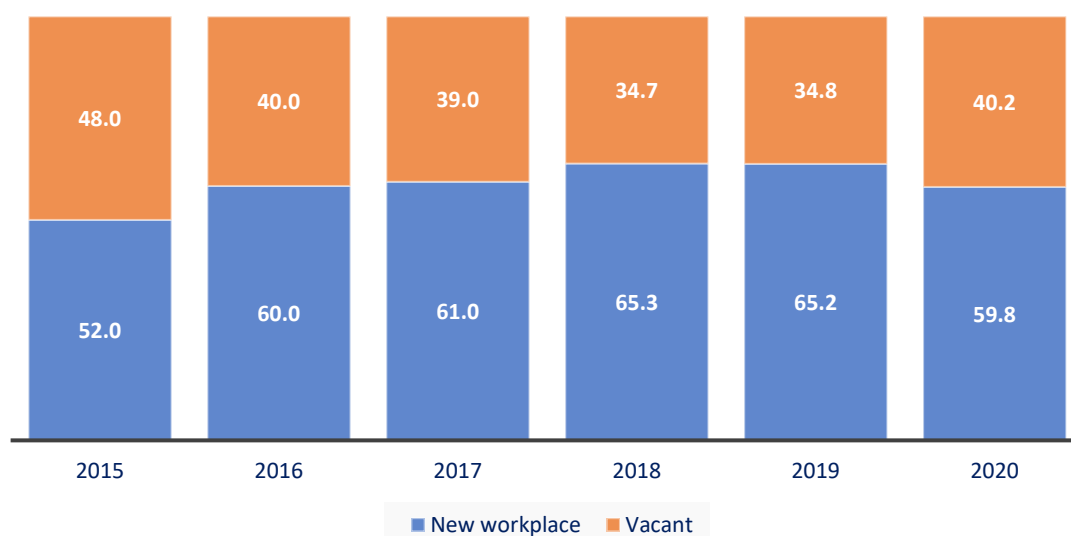
The findings of all surveys indicate that demand of permanent jobs is always high, constituting two third of overall demand, which is a positive aspect of labor market. According to the findings of last four surveys, more than 70 percent of overall labor-force demand is for permanent jobs. This indicator is expected to grow every year, and by 2020 it will constitute more than 80% of the total occupational labor-force demand.

Figure 34. Labor-force demand, by job types and percent



The study found that labor force demand by type of job started to be calculated in 2014, with approximately 50% of jobs that have been on the rise for 7 years on average is newly created jobs. This proves that there is a potential to occur such amount of net growth on labor market, which will enable the domestic labor market to expand to such an extent. In that regard, new job information becomes one of the important data in the survey results.

Figure 35. Labor-force demand by type of jobs /percent/



Labor-force demand in new position in 2014 accounted for 37.0 percent of overall and in 2018 it was 65.3 percent. By 2020, it is expected to account for 59.8 percent of labor force demand.

Based on this research, it provides the opportunity to compare occupations that are demanded in short term of the labor market.

Table 35. Jobs and occupations in demand, by years

Occupations and jobs in demand, 2020		Occupations and jobs in demand, 2019	
ISCO	Jobs and occupations	ISCO	Jobs and occupations
931211	Assistant /Construction/	712311	Concrete placers
932912	Assistant /Industrial/	932912	Manufacturing labourers /assistant/
524212	Seller	931211	Construction and maintenance labourers
911214	Cleanser /Office/	753311	Sewers
343412	Chef /General/	832211	Driver
241113	General accountant	711511	Carpenters
833213	Driver /Truck/	711411	Concrete Placers
222111	Nurse / General profession/	541412	Guard
541411	Security /Contract service/	741111	Electrician
513111	Waiter	833213	Truck driver
215111	Engineer /electric/	431216	Finance clerk
833215	Driver /Trash car/	214438	Mechanical engineers
751111	Butchers, fishmongers and related food preparers	753118	Tailors
523011	Store cashier	343411	Cooker
712612	Plumbers and pipe fitters	241113	Accountant
221111	Generalist medical practitioners	522112	Shop supervisor
832213	Car, Taxi and Van Drivers	524212	Seller
741111	Electrician	311513	Assistant technician
721214	Welder	214524	Food technologist
712611	Plumbers and pipe fitters	541411	Security

Several typical properties are maintained when labor-force demand is considered by classification of jobs and occupations, which is same as in this year. Including:

- ✓ Group II or “Specialist” and Group IX or “Ordinary jobs” constitute majority of labor-force demand.
- ✓ Ordinary jobs or occupations are highly demanding as per the findings of all surveys. They include service worker, cleaner, and assistant workers of construction, manufacture and farming. On the other hand, accountant, vehicle driver, cook, and waiter has been identified as in-demand jobs, which is directly relevant to the fact that they are needed in each economic sector.
- ✓ Many years of research has preserved the fact that occupation which is in a high percentage of occupational labor-force demand, on the other hand accounts for less percentage in the labor-force shortage. In additionally, the participants in the labor-force movement pay special attention on the workforce of the particular occupations.
- ✓ There is a high labor market potential to absorb supply of vocational education holders, in addition to tertiary education holders. Skills offered through primary professional education and specialized education account for a substantial part among the in-demand jobs or occupations as defined by the surveys.

According to the survey finding, particular jobs or occupations still accounts for higher percentage in overall demand of labor-force, which is still been in main consideration.

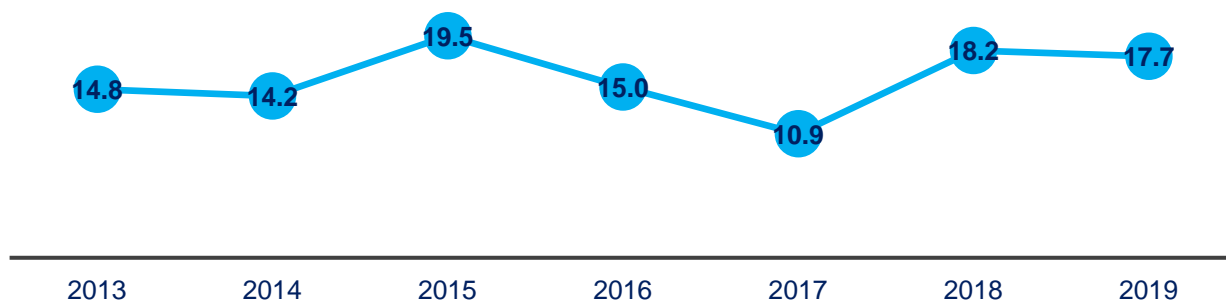
For example, ordinary jobs such as cleaner, securities and assistant worker for construction, jobs for construction including decorator, plasterer, and electrician has been identified as in-demand jobs and occupations such as salesman, driver, tailor and cook prepared by institutes of vocational trainings and education has been identified as in-demand jobs for 8 consecutive years.

Besides, main reason for identified as in-high demand jobs for the above occupations is directly relevant to the fact that are needed in each economic sector, it is also directly relevant to the mobilization of workers at particular workplace.

As for occupation requiring higher education, demand of accountant, doctor and nurse still remain in- high demand according to multi-year survey finding. In addition, the above-mentioned occupations account for not less percentage in labor-force shortage and it is revealed repeatedly for the last six year’s findings.

The labor-force shortages have generally been declining in the previous years. The highest labor-force shortage was 19.5 thousand in 2015 and at least 10.9 thousand in 2017.

Figure 36. Labor-force shortage, by thousand people, 2013-2020



Looking at the shortage of labor-force, there is a shortage of doctors, nurses, accountants, fitters, cooks, drivers and plumbers every year.

Table 36. Jobs and occupations in shortage, by year

Labor-force shortage in 2019		Labor-force shortage in 2018	
ISCO	Jobs and occupations	ISCO	Jobs and occupations
521111	Stall and marker salesperson	712311	Concrete placers
932912	Manufacturing labourers	221114	Generalist medical practitioners
911214	Cleaner /Office/	343412	Cooker
513111	Waiter	931211	Construction assistant
222111	Specialist medical practitioners	752221	Cabinet-makers
226215	Pharmacists	832211	Driver
343412	Chef /general/	712612	Plumbers
541411	Guard /contract service/	522311	Sales
753311	Sewing, embroidery	753311	Sewer
721214	Welder	711411	Concrete Placers
752222	Cabinet-makers	214440	Refrigeration engineer
931311	Construction assistant	711511	Carpenters and Joiners
513211	Barmen	721214	Welder
321313	Pharmaceutical technicians	911214	Cleaner /Office/
524212	Seller	932912	Manufacturing labourers
234111	Primary school teacher	524212	Seller
941212	Kitchen helper	523011	Cashier
241113	Accountant /general/	241113	Accountant
711413	Road ironing worker	214524	Food technologist
721515	Cable splicers	515312	Security

CONCLUSION

The 2020 labor-force demand on countrywide labor market has been identified, involving 18 economic sectors. This year 72,700 labor-force demand is expected to occur on the labor market. 81.6 percent of them is expected to occur in the first half, and remaining 18.4 percent is expected to occur in the second half of 2019.

Out of overall labor-force demand, 22.9 percent pertains to wholesale and retail, 20.0 percent pertains to construction, 10.2 percent pertains to processing industry, 6.1 percent pertains to management and support, 5.5 pertains to hotel, accommodation, housing, catering service, and 5.0 percent pertains to human health and social welfare, respectively.

Out of overall labor-force demand, 81.3 percent is for permanent jobs, 18.7 percent is for temporary jobs, while 59.8 percent is for new jobs and 40.2 percent is for vacant jobs. Construction sector demand constitutes majority of the temporary jobs demand, which is 41.2 percent of overall.

National economic condition and business growth of entities and organizations have a direct effect on the supply of new jobs, while labor-force movement to overseas, unstable employment, and job searchers' inability to meet job requirements are major factors to create vacant positions.

It is common among employers that they prefer work experience, personal responsibility, and attitude, in addition to technical skills. They believe that it is possible to recruit and train the job searchers who have such positive personal development and behavior.

There is still high demand of ordinary jobs or occupations.

Occupational labor-force demand and shortages data, as well as other outcomes estimated by occupation, suggest that several types of the occupational workforce are frequently referred to in any indicators. It is noteworthy that this result has been repeated in recent years. As a result, there is a need to pay attention to the supply of labor-force for the occupation and to determine the reasons for the mobility.

Last year labor-force shortage reached 17,700 among the entities and organizations. The highest labor-force shortage occurred in wholesale and retail trade, vehicle and motorcycle repairs, processing industry, construction, hotel, housing and catering, and human health and social welfare sectors, which accounts for 65.1 percent.

The employers use newspaper, TV and internet ads more to recruit new workers as usual. In Ulaanbaatar, they are significantly recruiting employees through private and public recruiting agencies.

On top of the above-mentioned key challenges such as lack of education and experience, there are still issues related to personal development, attitude, communication, and responsibility. It should be focused on that these challenges are reiterated in every year's survey.

RECOMMENDATIONS

The following recommendations are developed based on this survey findings.

- ✓ Year after year growth of new jobs demand shows that labor market capacity is able to expand.
- ✓ Year after year growth of new jobs demand shows that labor market capacity is able to expand.
- ✓ Year after year growth of new jobs demand shows that labor market capacity is able to expand.
- ✓ Service quality, accessibility and monitoring of public and private recruitment agencies should be improved on a regular basis. It is needed to promote permanently operations of recruiting agencies among young and public. Close collaboration and extension with entities and organizations that occur high demand of labor-force in the year is essential.
- ✓ Behavior or personal development and soft skills preferred by employers should be taught or offered by secondary schools, tertiary and vocational schools, and pre-employment programs should be implemented effectively.
- ✓ Professional and soft skills preferred by employers should be studied in-depth to reflect in curriculum of all levels of education.
- ✓ It is highly essential to develop 5 days training modules of post recruitment for people who recruited for new jobs in order to provide an opportunity of working in stable and adapting to new organizational culture among them.

TECHNICAL NOTES

SURVEY METHODS AND ORGANIZATION

1. INTRODUCTION TO SURVEY

Background

The Ministry of Labor and Social Protection carries out a regular baseline survey as to labor market demand and supply in order to optimize the government policy and projects on employment and labor relations. In relation to this, the Research Institute of Labour and Social Protection has undertaken the survey to identify short-term labor market demand.

Goal

The purpose of the survey is to determine labor-force demand in 2020 by each qualification, sector and location, and provide policy developers and decision makers of tertiary and vocational education and employment as well as researchers with information.

Objective

The following objectives are set in the framework of the goal:

- Determine labor-force demand in 2020 by economic sectors, occupations and location;
- Determine last year's shortage of labor-force on domestic labor market by economic sectors and qualifications; and
- Prepare dynamic data using each year's study findings in order to identify a trend of labor market demand.

Limitation of Survey

The survey contains the following limitations:

1. Labor demand of unofficial sectors has not been identified as the number of legal entities entered in the business register has been applied in the survey.
2. The legal entities and organizations, newly incorporated in 2019, have not been included in the sampling.
3. International organizations, country offices, and public administration, defense and official social welfare organizations have been excluded out of random selection.

General organization of Survey

We collected data through interviews with managers or executive officers of legal entities and organizations. For doing so, the survey team followed the following principles:

- ✓ Apply science-based holistic methodology;
- ✓ Ensure confidentiality of respondents' information;
- ✓ All definitions and perceptions should be understandable to stakeholders (questionnaire developers, interviewers, respondents, and analyzers);
- ✓ Collected data should be consistent with the survey goal and true; and
- ✓ Survey findings and report should be clear, understandable and demanded.

We organized the data collection from August 13 to December 13, 2019 and selected actively operating legal entities and organizations randomly from the Business Register Fund. With the support and assistance of the Mongolia Employment Support Project, World Bank, the sample size of the study is expanded to 3813 legal entities and organizations in this year.

2. SAMPLING AND SCOPE OF SURVEY

Sample of legal entities and organizations was determined by the number of operative legal entities and organizations that are entered in the Business Register Fund of National Statistics Office (NSO) as of the end of 2018. The legal entities and organizations pertaining to 18 sectors, that reported “operating” in the financial statements submitted to the Tax Authority and Ministry of Finance, were included in setting the size of sample.

Sampling size:

We processed previous survey database and calculated the key findings for domain with sample errors in order to set the size of sample. This method was applied in the barometer survey of the previous years, too. In international practice a repetitive sample design is set by randomly selecting from similar surveys if it is the first ever survey, while sample design is reset by randomly selecting from the previous survey database. In other words, fact-based assumption is more effective than practice-based assumption. According to sample set, error limit, and relative standard error used for identifying the legal entities and organizations that would hire new workers, last year’s survey result was fully able to represent.

Table 1. Sampling size and percent of legal entities and organizations that need labor-force by economic sector

ID	Economic sectors	Entities that would hire new workers	Standard error	95% confidence interval		Variation coefficient	Margin error
				Lower	Upper		
A	Agriculture, forestry, fishing, and hunting	32.3	1.4	29.4	35.2	0.0	2.9
B	Mining and extraction	30.1	1.9	26.3	34.0	0.1	3.8
C	Processing industry	38.0	1.0	36.0	40.0	0.0	2.0
D	Electricity, gas, steam, ventilation supply	29.8	3.3	23.2	36.5	0.1	*
E	Water supply, wastewater drainage system, waste management and treatment	29.4	4.3	20.8	38.0	0.1	*
F	Construction	46.0	0.9	44.2	47.8	0.0	1.8
G	Wholesale and retail: repairs of vehicle and motorcycle	28.9	0.4	28.1	29.7	0.0	0.8
H	Transport and warehousing	32.3	1.6	29.1	35.4	0.0	3.1
I	Hotel, accommodation, housing, catering service	34.3	1.3	31.6	36.9	0.0	2.7
J	Information and communication	34.1	1.7	30.8	37.5	0.0	3.4
K	Finance and insurance	19.7	1.2	17.3	22.2	0.1	2.4
L	Real estate	22.4	1.7	18.9	25.8	0.1	3.5
M	Professional, scientific and technical activity	32.3	1.0	30.3	34.3	0.0	2.0
N	Management and support activity	39.2	1.3	36.6	41.8	0.0	2.6
P	Education	26.7	0.8	25.1	28.4	0.0	1.7
Q	Human health and social welfare	44.8	1.1	42.5	47.1	0.0	2.3
R	Art, entertainment, and gaming	24.2	1.7	20.8	27.5	0.1	3.3
S	Other services	24.3	0.8	22.8	25.9	0.0	1.6

Source: RILSP, Barometer survey-2019, sampling size- 3642

Sample distribution was undertaken according to the afore-mentioned combination, in which the sample design of previous survey was maintained unchanged. In this survey, we tried to include all 531

entities that have 150 or more workers. Worker number of entities has been considered to have a normal distribution by the sample distribution of this survey and Newman's distribution method was applied.

Table 2. Sampling size, by economic sectors and number of employees /thousand people/

ID	Economic sectors	Group of employees' number					
		1-9	10-29	30-49	50-100	101-149	150+
A	Agriculture, forestry, fishing, and hunting	74	73	33	13	5	2
B	Mining and extraction	12	21	32	33	76	11
C	Processing industry	44	86	63	59	82	16
D	Electricity, gas, steam, ventilation supply	7	13	15	8	22	9
E	Water supply, wastewater drainage system, waste management and treatment	18	9	13	14	8	8
F	Construction	28	55	63	52	121	12
G	Wholesale and retail: repairs of vehicle and motorcycle	89	62	35	21	115	8
H	Transport and warehousing	35	36	50	23	59	37
I	Hotel, accommodation, housing, catering service	55	97	55	32	24	17
J	Information and communication	27	31	25	14	15	8
K	Finance and insurance	49	28	18	9	17	9
L	Real estate	49	105	57	19	10	6
M	Professional, scientific and technical activity	36	37	26	21	23	5
N	Management and support activity	57	73	70	46	24	10
P	Education	15	34	82	60	61	28
Q	Human health and social welfare	25	62	53	16	53	10
R	Art, entertainment, and gaming	10	29	16	13	6	6
S	Other services	68	92	48	25	9	8
	Total	698	943	754	478	730	210

When the number of entities pertaining to a particular group is relatively few or it is too close or lower than the planned sample size, the entities of such groups have been considered whole and included all of them in the survey. In this case, their representative weight is 1. Random selection was applied to choose entities that would be covered by the survey out of sample scope.

3. DATA COLLECTION AND PROCESSING

Data collection and processing

Data collection was undertaken in 2019 using the tablets on which special software of questionnaire was installed. In some cases, questionnaire was taken by paper. Trained researchers conducted data collection in 21 provinces and 9 districts. The survey covered 3642 entities and organizations and data collection coverage was 95.6 percent.

This year, a new questionnaire in revealing shortages in skills of labor-force has been added, however, survey questionnaire and its structure are similar with the previous ones which are now divided into the following 3 parts:

1. General information of entities and organizations
2. Labor-force demand and labor-force shortage of 2020
3. Human resource

In order to ensure quality of data, progress of questionnaire survey was controlled regularly, entered data was matched with audio recording of the interviews, coherence of responses was checked, and

inputs were clarified from respondents to correct and confirm. This year, a monitoring survey was conducted in the provinces and Ulaanbaatar, as well as a quality control of the survey data collection is conducted.

CSPro 7.3 (census and sample data processing system) software was used to enter the survey data, and Stata software was used to process the data and summarize the main results.

ANNEXES

Annex 1. Labor-force demand, by sector and thousand people, 2012-2020

Economic sectors	Labor-force demand								
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Agriculture, forestry, fishing, and hunting	4.4	12.9	5.5	6.4	7.5	4.9	4.5	1.9	2.3
Mining and extraction	2.8	3.1	2.3	4.5	1.7	3.3	2.0	2.2	3.0
Processing industry	8.4	10.9	12.3	8.9	9.1	10.0	8.1	10.3	7.4
Electricity, gas, steam, ventilation supply			0.7	0.2	1.7	1.2	0.3	0.5	0.7
Water supply, wastewater drainage system, waste management and treatment				0.4	0.2	0.4	0.2	0.2	1.5
Construction	9.1	14.8	22.4	17.0	11.4	9.8	18.6	17.7	14.5
Wholesale and retail: repairs of vehicle and motorcycle	14.1	14.3	12.6	19.1	24.5	5.5	15.2	13.2	16.7
Transport and warehousing	4.0	7.0	2.6	2.0	2.3	3.2	2.8	2.8	2.0
Hotel, accommodation, housing, catering service	2.6	3.6	2.7	2.6	2.6	5.7	3.1	3.8	4.0
Information and communication				1.9	1.2	2.2	1.9	1.6	1.6
Finance and insurance			0.8	1.4	1.5	0.9	0.8	1.6	1.5
Real estate				0.9	0.4	2.1	1.2	1.8	1.1
Professional, scientific and technical activity				3.6	2.7	2.0	4.8	2.5	2.5
Management and support activity				3.2	2.4	4.9	5.4	4.1	4.4
Education			0.5	1.0	2.8	5.5	2.3	1.7	2.8
Human health and social welfare			1.4	1.4	1.8	6.6	2.1	1.5	3.6
Art, entertainment, and gaming			0.0	0.4	1.9	1.5	0.6	1.2	0.9
Other services	12.2	12.3	10.3	2.5	4.3	0.9	0.8	0.8	2.3
Total	57.6	78.8	75.4	77.5	80.1	70.7	74.6	69.4	72.7

Annex 2. Jobs or occupations in-demand, 2013-2020

Jobs and occupations 2020	Jobs and occupations 2019	Jobs and occupations 2018	Jobs and occupations 2017	Jobs and occupations 2016	Jobs and occupations 2015	Jobs and occupations 2014	Jobs and occupations 2013
Assistant worker (construction)	Decorator, plasterer	Assistant worker (construction)	Driver	Driver	Assistant worker (factory)	Assistant worker (construction)	Salesman
Assistant worker (production, farming)	Assistant worker (production, farming)	Decorator, plasterer	Service worker	Security officer	Assistant worker (construction)	Driver (truck)	Assistant worker (construction)
Seller	Assistant worker (construction)	Security officer	Security officer	Assistant worker (construction)	Equipment operator	Demonstrator salesman	Farmer, vegetable grower
Cleaner (company or organizations)	Tailor	Assistant worker (production, farming)	Assistant worker	Cook	Armature worker	Assistant worker (production, farming)	Assistant worker (production, farming)
Chef	Driver	Assistant worker (shop)	Nurse	Assistant worker (factory)	Nurse	Decorator, plasterer (interior)	Security officer
General accountant	Carpenter	Salesman	Technologist	Physician	Driver	Cook	Driver (taxi, van, truck)
Driver /truck/	Armature worker	Shop assistant	Common jobs of construction	Nurse	Construction carpenter	Builder	Cook
Nurse	Security	Tailor (soft textile)	Cook	Accountant	Interior decorator	Security officer	Waiter
Security officer	Electrician	Cleaner (company or organizations)	Waiter	Business administrator	Assistant worker in mining	Nurse, common treatment	Heavy vehicle operator
Waiter	Driver /truck/	Cook	Doctor	Financial analyst	Food technologist	Shop cashier	Decorator, plasterer
Electrician engineering	Financier	Driver	Distributor	Loader	Knitter	Policeman	Construction carpenter
Driver, dump truck	Mechanic engineer	Pharmacist	Cleaner	Teacher	Warehouse loader	Electrical engineer	Bricklayer, other workers
Meat processing industry worker	Cutter	Carpenter	Civil engineer	Cleaner	Tailor	Waiter	Road roller worker
Cashier at store	Cook	Accountant	Repairmen	Engineer	Bricklayer, plasterer	Armature worker	Armature worker
Plumber	Accountant	Civil engineer	Electrician	Operator	Concentrator operator	Stone cutter	Welder
Doctor	Grocer	Bricklayer (fitter)	Salesman	Builder	Welder	Electrician	Salesman, retailer
Driver (taxi, van, truck)	Salesman	Gas piping engineer	Accountant	Carpenter	Accountant	Accountant chief	Electrician
Electrician	Assistant worker (technical)	Electrician	Cashier	Civil engineer	Cook	Teller, bank	Sales & marketing manager
Welder	Food technologist	Operator telecommunication	Teacher	Waiter, barman	Office cleaner	Construction carpenter	Food and beverage technologist
Plumber	Security officer	Cleaner	Boiler room fireman	Plumber	Electrician	Bricklayer (brick bridge)	Accountant

Annex 3. Occupations and jobs in shortage, 2014-2020

2019	2018	2017	2016	2015	2014
Salesman of store					
Assistant farm worker/industrial	Doctor	Carpenter	Carpenter	Doctor	Assistant worker (construction)
Cleaner (company or organizations)	Cook	Cook	Cook	Cook	Decorator, plasterer
Waiter	Assistant worker (construction)	Driver	preservationist	Electrician	Grocer
Nurse	Carpenter /wood/	Teacher (day care)	Platter	Decorator, plasterer	Food technologist
Pharmacist / Pharmaceutical trade /	Driver	Pharmacist	Music teacher	Plumber	Information Officer
Chef	Plumber	Butcher	Security officer	Carpenter	reinforcer
Guards and contract officers	Salesman	Decorator, plasterer	Electrician	Welder	Welder
Tailor, soft furnishings	Tailor	Equipment repairman	Repairman of vehicle	Driver	Security officer
Welder	Armature worker	Tailor	Civil engineer	Assistant worker (production, farming)	Киттелчин
Salesman of store	Engineer /refrigeration/	Security officer	Doctor	Nurse	Caster
Assistant farm worker/industrial	Carpenter	Hairdresser	Plumber	Mechanic engineer	Electrician
Cleaner (company or organizations)	Electrician	Food technologist	Mechanic engineer	Foreign language teacher	Marketing sales
Carpenter	Cleaner /company or organization/	Armature worker	Announcer	Assistant worker (construction)	Nurse
Assistant worker (production)	Assistant worker (production)	Special sewing machine worker	Waiter	Өндрийн буулт хийгч	Road Engineer
Barmen	Shop assistant	Waiter	Plumber	Armature worker	Salesman
Pharmacist	Cashier	Mechanic (agriculture)	Cleaner	Engineering	Assistant worker (production, farming)
Seller	Accountant	Nurse	Nurse	Newborn nurse	Driver
Teacher, Primary / Professional /	Food technologist	Cleaner	Soroban teacher	Vegetable cultivator	Plumber
Kitchen Assistant	Sentry	Civil engineer	Accountant	Software engineer	Decorator, plasterer
Salesman of store	Decorator, plasterer	Shop assistant	Driver	Waiter	Knitting