



Kurdistan Region

2018-2022

Indicators

April 2023

Kurdistan Region Government
Ministry of Planning
Kurdistan Region Statistic Office



Kurdistan Region 2018-2022 Indicators

April 2023

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Statement from Minister

Due to the economic crisis and spread of the corona virus, different aspects of life in Kurdistan region faced many changes in 2018-2022. Therefore, Kurdistan region statics office (KRSO), in collaboration with international organizations and the Iraqi Central Statistics organization, conducted several surveys to provide the most relevant indicators.

This report (Kurdistan region indicators) would be the second report published by the Ministry of Planning / KRSO following the first one published in 2018, where it has been attempted to cover as many indicators as possible.



Similar to the previous report, and for easier access of users to the results of various surveys conducted by KRSO, indicators have been presented in one report at the levels of governorates.

I would like to thank the staff of the KRSO for their efforts in preparing this report and their continuous work to carry out surveys and provide timely statistics.

Dr. Dara Rasheed

Minister of planning

Introduction

Kurdistan Region Statistics Office (KRSO) as the only official source of statistical data and indicators in Kurdistan Region, is continuously working to obtain relevant and reliable information from all sectors in order to make them available to policy makers in the Kurdistan Region government and other parties who need this data, such as international organizations.

Between 2018-2022, KRSO conducted the National Youth and Adolescent Survey 2019, Women's Health and Social Survey 2021 (IWISH), Employment and Unemployment Survey 2021 (SFS), Economic Enterprises Survey (Micro, Small, and Medium-sized Enterprises Survey) 2022, Population Estimation for Kurdistan Region 2021-2040, Monthly Consumer Prices Index, Gross Regional Production 2018, Industrial Establishments (Large and Medium) 2020, Government Measures Combating Coronavirus Poll 2020, Tourism Establishments survey 2019-2020, in addition to collecting data from the ministries of the Kurdistan region government, such as information and data on Cultivated Land and Agriculture and Animal Products, Climate, Number of Flights, Number of Traffic Accidents, Numbers of Registered Vehicles, Construction and Building licenses and many other indicators related to the citizens' daily life which support data-based decision making. Proving these indicators is the most important responsibility of KRSO and we always work to achieve this goal. It is worth mentioning that the indicators are at the level of all four governorates of Kurdistan Region. For some indicators, due to the lack of results at the government level, Halabja governorate is counted with Sulaymaniyah governorate.

The data and indicators obtained from these surveys were useful to identify changes in these sectors and also useful for users to feed into the KRG Vision 2030, which the Ministry of Planning worked on jointly with the ministries of Kurdistan region government (KRG).

We hope this report will be useful for Stakeholders in Kurdistan region to develop their plans and strategies based on reliable most recent information.



Serwan Mohamed

President of KRSO

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List of abbreviations

KRG	Kurdistan Region Government	حكومەتی هەریمی كوردستان
KRSO	Kurdistan Region Statistics Office	دهستهی ئاماری هەریمی كوردستان
UNHCR	United Nations High Commissioner for Refugees	كۆمیساری باڵای پهنا بهرانی سهه به نهتهوه یهگرتووهمكان
IOM	International Organization for Migration	ریكخراوی نیودهولتهی كۆچ
ICLS	Int. conference for labor statisticians	كونفرانسی نیودهولتهی بو نامارناسانی هیزی کار
IWISH	Iraq_Woman Integrated Social and Health survey	روویوی بارودۆخی نهندروستی و کومه لایهتی ئافرهتان له هەریمی كوردستان
CPI	Concumer Price Index	ژمارهی پێوانهیی نرخه بهکار بهر
GDP	Groos Domustic Product	کۆی بهر ههمی ناوخۆیی
GRP	Gross Regional Product	کۆی بهر ههمی هەریمی
IHSES-2	Household Socio-Economic Survey round tow	روویوی باری ئابووری-کومه لایهتی خیزان گههه دووهم
ISIC4	Interenational Standerd Industrail Classification 4	پۆلێنی پێشهسازی ستاندهردی نیودهولتهی هههواره چوارهم
MSME	Micro, Small and Medium Enterprises	دامهزراوهی ئابووری زور بچووک, بچووک و مامناوهند
UNDP	United Nationas development program	ریكخراوی نهتهوه یهگرتووهمكان بو پهههپیدان
USAID	United states Agency for international development	ئازانسی ویلایهته یهگرتووهمکانی ئەهریکا بو پهههپیدانی نیودهولتهی
KRI	Kurdistan Region of Iraq	هەریمی كوردستانی عێراق

Population and Labor Force Statistics

Population

One of the biggest challenges facing governments in planning and developing the country is the lack of accurate data and information on population composition and its characteristics in terms of gender, age, geographical location and many other characteristics. After the establishment of the Iraqi government, eight censuses were conducted between 1927- 1997, the results of some of which were rejected (1965 census) or did not include the whole of Iraq (1997 census). No doubt, the aspects and the methods of census implementation have changed according to the stages and system of the governance in the country. According to the first census conducted in 1927, the population of Iraq was about 2.7 million people, and according to the census 1987, the population was about 16.3 million people. The last census in Iraq was conducted in 1997, where Kurdistan region was not included.

Following the fall of the Baath party in 2003, successive Iraqi governments attempted to conduct population census, however, due to political disputes about the purpose of the census, the census has not been conducted so far. In 2009, the efforts were done towards conducting the census. The preparation process was at the final stage, the process of counting and numbering was completed, but a few days before the date, the census was postponed to an unknown time. According to the results of the counting and housing numbering process conducted in 2009, the population of Kurdistan region was 4,662,266, and according to the estimation reported by KRSO, the population of Kurdistan region projected to reach 6,171,083 in 2020. The latter two figures include Makhmur district in Erbil governorate, Shekhan district, Zilkan district, and Fayda district in Duhok governorate

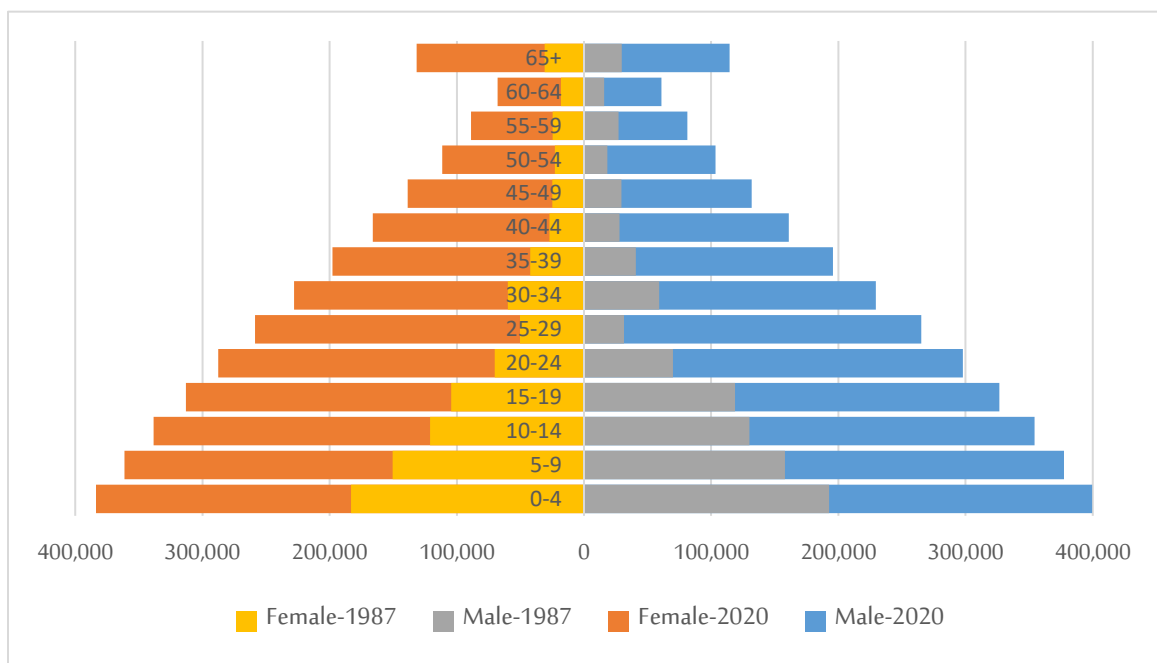
Table 1 shows the population of Kurdistan Region and Iraq based on the census of 1957-1997. Here, two points need to be noted. First, the borders of Iraqi Kurdish governorates have frequently changed under different reasons, where a district or sub-district of a governorate had been separated and attached to another governorate in order to change the population and composition of these governorates. Second, the 1997 census did not include the governorates of Kurdistan region, and the statistics that published by the Central Statistics Organization (CSO) is an estimation and not resulted from a census.

Table1: Population of Iraq and Kurdistan region according the censuses conducted in the previous years

	1957	1965	1977	1987	1997
KRI	776,780	901,895	1,482,588	2,015,466	2,861,701
Iraq	5,522,196	7,145,520	10,517,909	14,319,733	19,184,543

In addition to the numerical and geographical changes, the population composition of Kurdistan region shows significant change in terms of age. The decrease in the number of births in the recent years has caused a significant change to the foundation of the demographic pyramid of the Kurdistan region. Figure 1 shows the changes in the population pyramid of Kurdistan region for the years 1987 and 2020 regardless of the geographical changes in the administrative boundaries of governorates in the past and the effects they had on the population composition of Kurdistan region. A population pyramid is the most common and clearest way to show the distribution of a population by age groups.

Figure 1: Population pyramid of Kurdistan region in 1987 and 2020

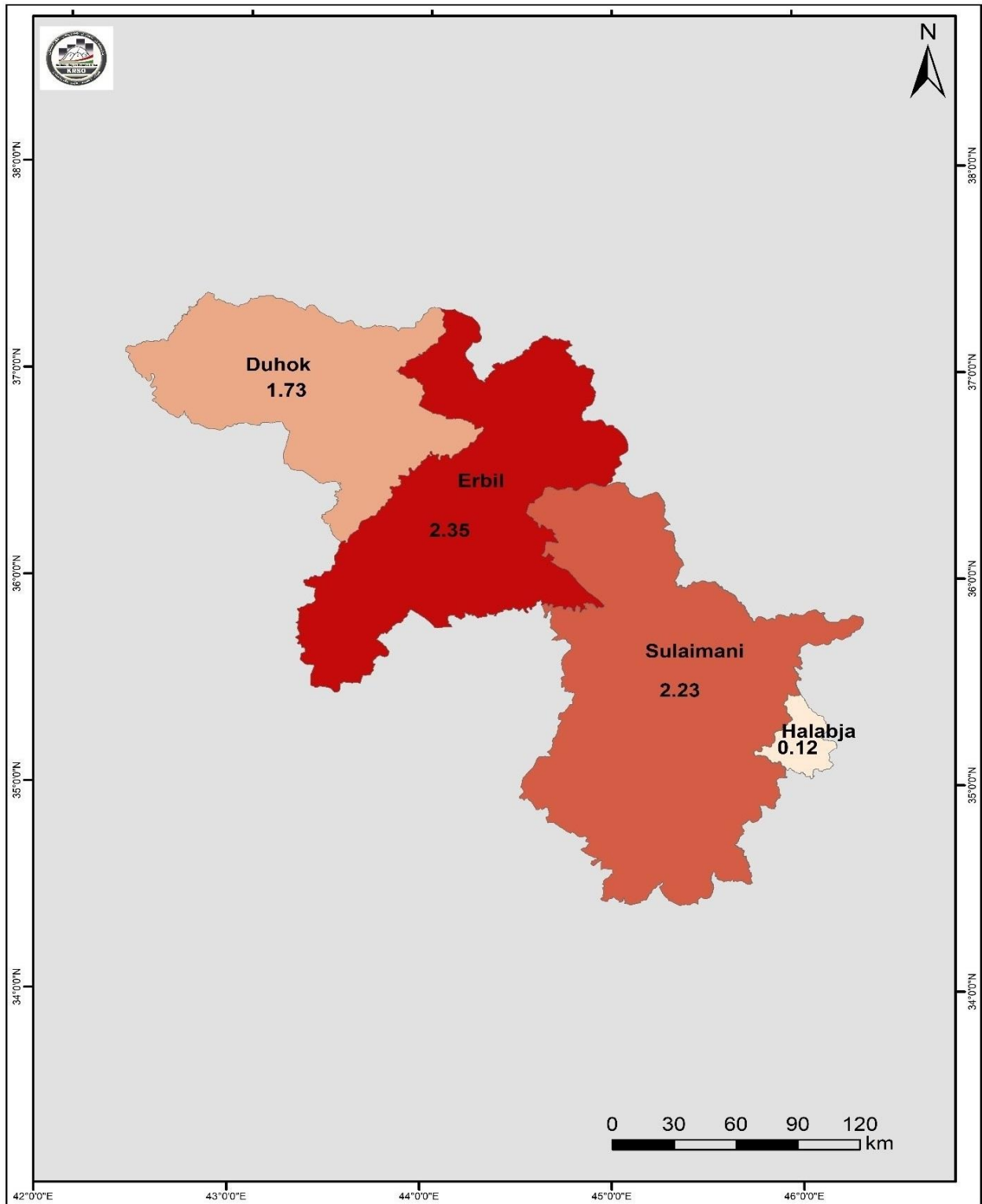


Due to the lack of a comprehensive population census in Iraq, supporting by UNFPA, KRSO attempted to project the population in a scientific way. According to results of the prediction, the population of the region has been doubled, the first time in 2013 for the years 2010-2020 and the second time in 2022 for the years 2021-2040. According to the latest report for population prediction, the population of Kurdistan Region in 2021 was 6.3 million and in 2022, it was 6.43 million. The population prediction for the governorates of Kurdistan region for 2021 and 2022 is shown in the following Table.

Table 2: Population projection in 2021 and 2022 (million) at the level of KRI and governorates

	KRI	Erbil	Sulaymaniyah	Duhok	Halabja
2021	6.30	2.30	2.19	1.69	0.118
2022	6.43	2.35	2.23	1.73	0.120

Map 1: population prejection



Gender ratio

Normally, gender ratio for new borns is defined as the ratio of males to females in one year. Gender ratio is 105 in Kurdistan region. In other words, for 100 new born females in a given year, there are 105 males. In general, at birth, male outnumber female, but at older ages, due to higher mortality rate, migration, and other factors among male, the number of females gradually exceeds the number of males. According to KRSO, the gender ratio in Kurdistan region is projected to be 101% in 2022. At the governorates level, Erbil recorded 102.1%, Sulaymaniyah 100.3% and Duhok recorded 100.7%.

Population distribution

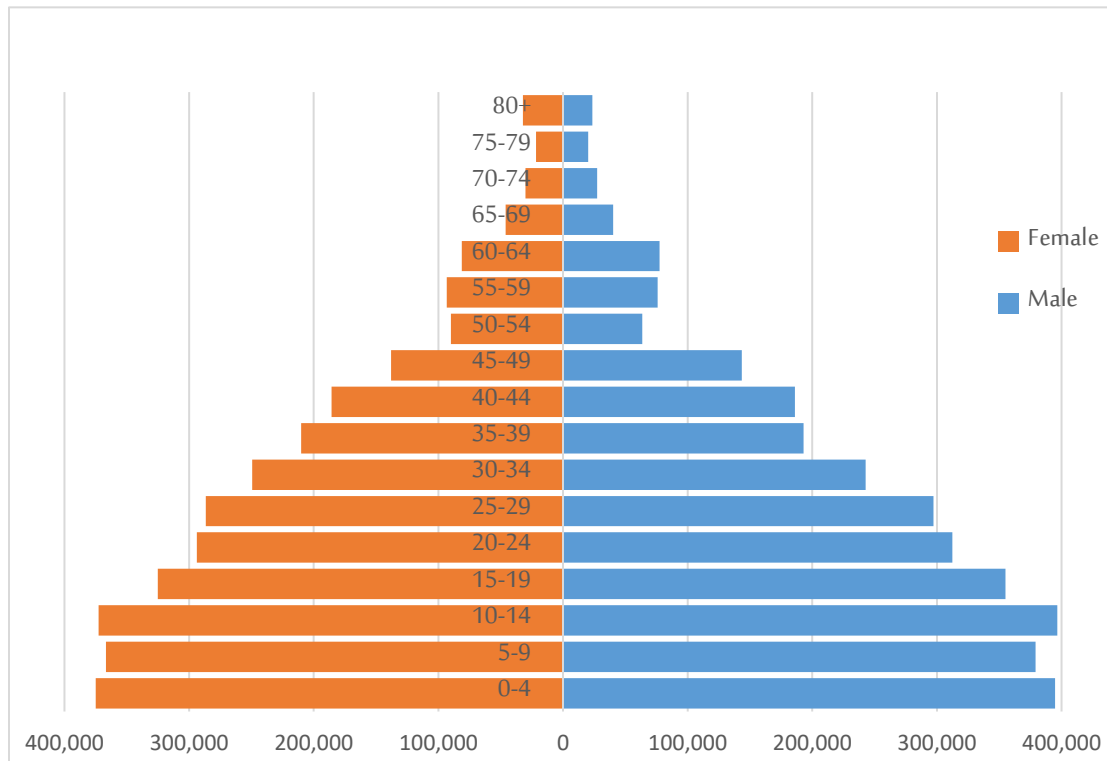
The population projection would be more effective and useful when it provides more details in terms of age, gender, and geographical location. Such details are important for planning and the ministries' work plan in government. The gender and age distribution of Kurdistan region's population in 2022 is presented in Table 3. The table presents the population distribution by two different divisions. The first shows the gender division by age groups, and the second shows age groups division by gender.

Table 3: population distribution by age group and gender in KRI for 2022 (%)

Age group division by gender	Gender division by age group			Age group division by gender		
	Male	Female	Total	Male	Female	Total
0-4	12.0	12.2	11.7	51.3	48.7	100
5-9	11.6	11.7	11.5	50.8	49.2	100
10-14	12.0	12.3	11.7	51.6	48.4	100
15-19	10.6	11.0	10.2	52.2	47.8	100
20-24	9.4	9.7	9.2	51.5	48.5	100
25-29	9.1	9.2	9.0	50.9	49.1	100
30-34	7.7	7.5	7.8	49.4	50.6	100
35-39	6.3	6.0	6.6	47.9	52.1	100
40-44	5.8	5.8	5.8	50.0	50.0	100
45-49	4.4	4.4	4.3	51.0	49.0	100
50-54	2.4	2.0	2.8	41.4	58.6	100
55-59	2.6	2.4	2.9	44.9	55.1	100
60-64	2.5	2.4	2.5	48.8	51.2	100
65-69	1.3	1.3	1.4	46.8	53.2	100
70-74	0.9	0.8	0.9	47.8	52.2	100
75-79	0.6	0.6	0.7	48.3	51.7	100
80+	0.9	0.7	1.0	42.2	57.8	100
Total	100.0	100.0	100.0	50.3	49.7	100

To more clarify the share of age groups from the total population, the Figure 2 presents the the population pyramids of the population of the Kurdistan region by gender.

Figure 2: Population pyramid of KRI by gender, 2022



Another type of population division is division by working age group and dependent age group. According to this division, people who are at working age group (15-64) is placed in one group, and dependent age group is divided into two groups, which are the ages before the working age (0-14) and the ages after working age (65+). This type of population distribution is shown in Table 4.

Table 4: population distribution by working age, sex and dependent age, 2020

Governorate	Age group	Male	Female	Total
Erbil	0-14	37.0%	35.6%	36.3%
	15-64	59.7%	60.4%	60.0%
	65+	3.4%	4.0%	3.7%
Sulaymaniyah	0-14	32.9%	31.3%	32.1%
	15-64	63.0%	64.0%	63.5%
	65+	4.1%	4.7%	4.4%
Duhok	0-14	39.9%	38.7%	39.3%
	15-64	57.5%	58.1%	57.8%
	65+	2.7%	3.2%	2.9%
Halabja	0-14	32.9%	31.3%	32.1%
	15-64	63.0%	64.0%	63.5%
	65+	4.1%	4.7%	4.4%
KRI	0-14	36.3%	34.9%	35.6%
	15-64	60.3%	61.1%	60.7%
	65+	3.4%	4.1%	3.8%

Internally displaced persons (IDPs) and refugees

What should be taken in to consideration is the internally displaced persons (IDPs) and refugees. After uprising in Kurdistan region in 1991, there was a small number of refugees in Kurdistan region, and following the fall of the Ba'ath regime, the number of refugees increased, where a large number took refuge in Kurdistan region. The influx of refugees to Kurdistan region began after the Arab Spring incidents in Syria and the influx of displaced people came after emerging ISIS and occupying a large area in several northern and western Iraqi governorates. In September 2014, the number of refugees and displaced people reached 1,100,000 people (about 881 thousand Iraqis and 226 thousand Syrian refugees), comprising 21% of the native population of Kurdistan region at that time (about 5,333,000). The major share of this number goes to Duhok governorate (50.7%), followed by Erbil (31.7%) and Sulaymaniyah (17.0%).

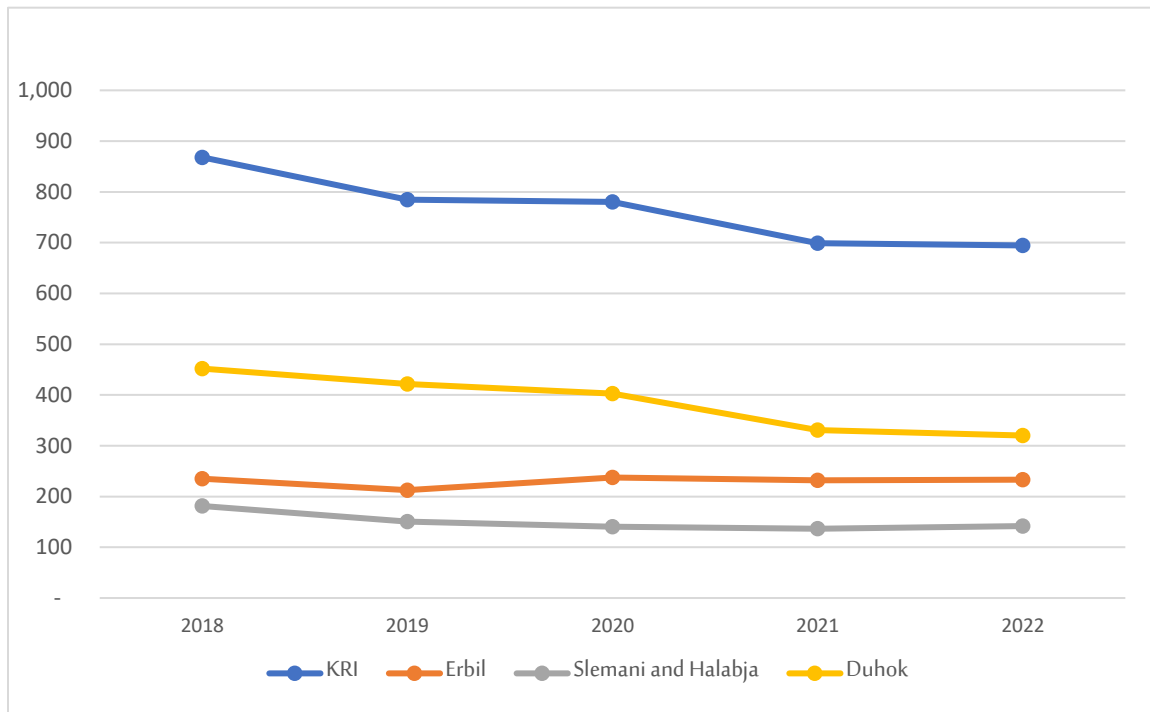
Over the past years, the number of internally displaced persons (IDPs) and refugees declined. According to the International Organization for Migration (IOM) and the United Nations High Commissioner for Refugees (UNHCR), in 2022, the number of IDPs was about 695 thousand and the refugees were about 248 thousand people. Table 5 shows the number of IDPs and refugees in the governorate of Kurdistan region in 2018-2022.

Table 5: the number of IDPs and refugees in Kurdistan region by governorates in 2018-2022

		KRI	Erbil	Sulaymaniyah / Halabja	Duhok
2018	*IDPs	868,032	234,846	181,302	451,884
	** Refugees	249,329	128,675	32,151	88,503
	Total	1,117,361	363,521	213,453	540,387
2019	IDPs	784,548	212,562	150,336	421,650
	Refugees	242,944	124,182	30,511	88,251
	Total	1,027,492	336,744	180,847	509,901
2020	IDPs	780,492	237,408	140,304	402,780
	Refugees	238,574	122,912	31,511	84,151
	Total	1,019,066	360,320	171,815	486,931
2021	IDPs	698,975	231,694	136,496	330,785
	Refugees	247,422	128,927	32,339	86,156
	Total	946,397	360,621	168,835	416,941
2022	IDPs	694,491	232,860	141,522	320,109
	Refugees	247,523	130,210	34,058	83,255
	Total	942,014	363,070	175,580	403,364
*source: International Organization for Migration (IOM)		**source: United Nations High Commissioner (UNHCR)			

As figures show (above table), there is some movement and changes in the number of IDPs and refugees across governorates of Kurdistan region, but the changes tend to be declined in number due to the returning of refugees to their original places. Returning of IDPs and refugees does not mean that their presence will come to the end in Kurdistan region as their presence or leaving depends on many factors. We can see the changes more clearly in Figure 3.

Figure 3: The number of IDPs and refugees in KRI for the years 2018-2022



According to the projection, for the next 20 years, 33%-48% of the refugees who were in Kurdistan region in 2022 will remain with more concentration in Erbil governorate and more decline in Duhok governorate in future.

Labor force

Conducting Labor force survey and providing labor force indicator in 2012 was KRSO's first experience with technical and scientific support provided by American RAND Corporation. Methodology of the survey prepared according to the programs and definitions of the conference of the International Labor Organization (ILO number 13) based on which, the questionnaire was prepared and the survey was conducted and continued for the years 2013, 2014 and 2015. Except for 2015, where only one round of the labor force survey was conducted, for the other years, two rounds were conducted. Also, in the demographic survey (2017), a small part of the survey dedicated to the working conditions of the participants, where the unemployment rate and several other indicators, such as labor force participation, occupation, income, etc., were extracted. Later in 2018, KRSO contacted the International Labor Organization (ILO) for technical and financial support to conduct the Labor Force Survey. Then, in 2019, a contract was signed by two parties to conduct the labor force survey in 2021. The survey was simultaneously conducted in Iraq and Kurdistan region which was the first labor force survey to be conducted across Iraq since 2008.

The International Labor Organization (ILO) is the main source of concepts and definitions related to labor and unemployment. Every few years, the concepts and definitions are updated and new guidelines and rules are adopted on how to use them. In the labor force surveys 2012-2015, KRSO used the concepts and definitions of the 13th International Conference of Labor Statisticians (ICLS) in 1982. In the labor force survey conducted in 2021, KRSO used the concepts and definitions of labor and unemployment agreed upon at the 19th International Conference of Labor Statisticians (19th ICLS) in 2013, which are accepted as the latest definitions of the labor force in the world.

In some ways, there are significant differences between the definitions of the 13th ICLS and the 19th ICLS, some of which have been presented here. It should be also noted that, the definitions and concepts listed here are those defined based on the standards of the 19th International Conference of Labor Force Statisticians.

One of the definitions that has been changed is that of working people. In the definitions of the 13th Conference, those who worked in the field of producing the materials used for their own use were known as workers or employees, but according to the new definition of the 19th conference, these people are not workers. According to the new definition, if these people are not looking for work and are not willing to work, they are not known as unemployed and are out of the labor force. Hereby, there will be a significant change in the number of unemployed and who are outside the labor force and will change both the labor force and unemployment rates.

At the 19th Conference, a new definition has been introduced known as the potential Labor Force. Potential Labor Force refers to those who are not in the labor force or are unemployed and seeking for job while are not ready to work, or it refers to those who are not seeking for job but willing to work if there is a job. Because of the strong possibility of joining these people to the labor force, another new concept has emerged known as extended labor force, which includes all workers, unemployed people, and potential Labor Force.

Before going into the topics, a few points need to be mentioned:

First: due to using the old definition of labor force (13th ICLS) in the previous surveys, in this report, in the cases of making comparison with the last years, it has been attempted to measure the indicators of Kurdistan region for the year 2021 base on the old definitions to have a logic and scientific comparison. Also, due to the lack of labor force indicators for 2016-2020, the results of 2012-2015 have been necessarily selected for comparison with the new results.

Second: The standard working age is 15-64 years, but because of the characteristic of the people in Kurdistan region, in most surveys, KRSO considers the age of 15 and above to be the working age as many people are working at age above 64 years or may seeking for job. Also,

according to the international standards, the age of 15-24 years is defined as young age, which has been taken into account in this report.

Third: in previous surveys, Halabja was not independent and as a district it was affiliated to Sulaymaniyah governorate. Therefore, for comparing with previous years, Halabja was counted with Sulaymaniyah.

Participation in the labor force

Economically, the population can be divided into two groups, active and inactive, or in other words, the labor force and outside the labor force.

Labor force: it refers to people who are at working age and are either employed or unemployed (unemployed according to the definition of unemployment). The labor force rate has been noticeably changed among the population of the Kurdistan Region between 2012 and 2021.

Outside the labor force: it is defined as people who are not included in the labor force, under and above the age of 15, which are not included in the definition of labor force.

Table 6 shows the labor force participation rate in Kurdistan region in the recent years. As it can be observed, despite the rising and falling in the labore force participation in 2012-2015, but changes are not significant and are somewhat close to each other. However, in 2021, a significant change can be observed in the labor force participation rate, which of course, is partly because of changes in concepts and definitions as mentioned earlier. According to the results of the 2021 Labor force survey, the average labor force participation rate in Kurdistan region is 45.0%, and at the governorates level, Erbil stand first with 47.0%, followed by Sulaymaniyah, Halabja and Duhok with 46.4%, 44.5% and 39.6% respectively.

Table 6: Percentage distribution of labor force in KRI's governorates, 2012-2021

	Erbil	Sulaymaniyah	Duhok	KRI
2012	38.1	40.3	35.6	38.4
2013	40	41.9	35.9	39.8
2014	39.6	41.9	34.7	39.3
2015	40	41.2	34	39
*2021	47.0	46.4	39.6	45.0
**2021	53.3	52.5	48.4	51.8
*According to 19 th ICLS				
** According to 13 th ICLS				

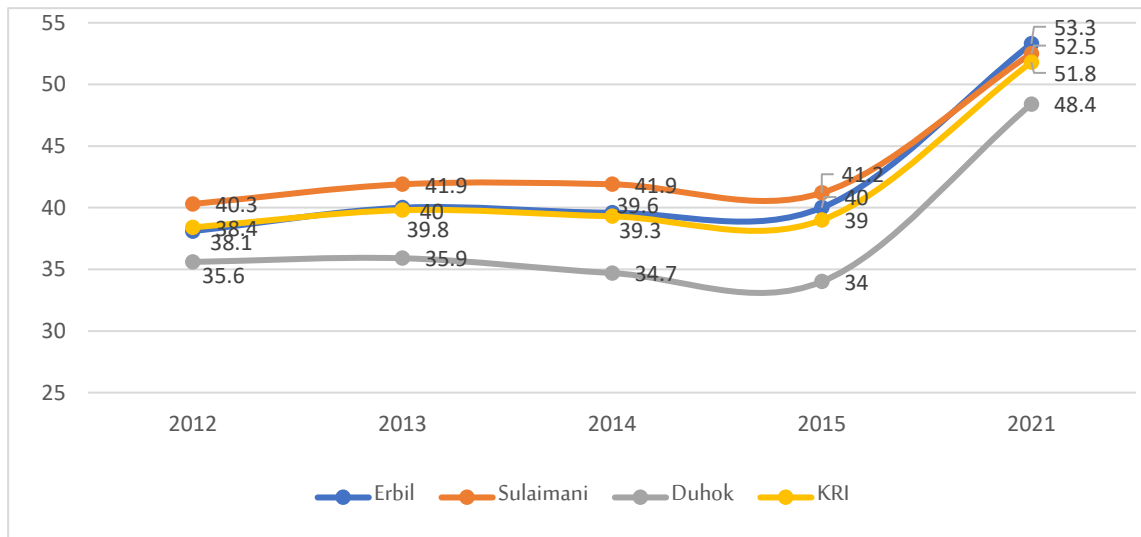
To better see the changes, Figure 4 shows the changes of labor force participation in a line Figure in all governorates of Kurdistan region, where the lines are almost close to each other except that of Duhok governorate, where changes are higher compared to other governorates. The change in the age composition of the population in Kurdistan region and the increase in the age group of 15 years and

Kurdistan Region 2018-2022 Indicators

above compared to under aged 15 can be a reason for increasing labor force rate in Kurdistan region. Unlike Table 6 (above table), the following Figure, only the labor force participation rate for 2021 has been measured according to the definition of 13th ICLS.

Figure 4: comparison of labor force participation in KRI for the years 2012-2021 (%)

If we look at the labor force participation rate at the level of governorate in 2021, it can be seen that Erbil and Sulaymaniyah are almost at the same level followed by Halabja with a lower rate and duhok with the lowest level comes next. Women’s participation in labor force is one of the most important economic indicators and a criterion for societal development. Women’s participation in labor force is low in Kurdistan region and comparing to other countries, there is a big difference between sexes. According to the 2021 labor force survey, in Kurdistan region, women’s participation rate in the labor force is close to each other in all governorates except Dohuk, where it shows significantly lower rate compared to other governorates. The interesting point here is the women’s participation rate in Halabja governorate, which has the



highest rate compared to other governorates in Kurdistan region. The following table shows the labor force participation rate by sex according to the labor force survey 2021.

Table7: labor force participation rate in KRI (%) by gender - labor force survey 2021

	Erbil	Sulaymaniyah	Duhok	Halabja	KRI
male	75.4	74.5	69.5	70.3	73.5
Femal	18.6	18.6	9.4	19.0	16.5
Total	47.0	46.4	39.6	44.5	45.0

Having a quick look at the labor force participation rate in the last years (Table 8), it can be observed that labor force participation rare show increase among both male and female

despite the changes in the definition of labor force participation in the 2021 survey and its impact on the number of people who are in the labor force.

Table 8: labor force participation for population aged 15+ in KRI (%) by sex

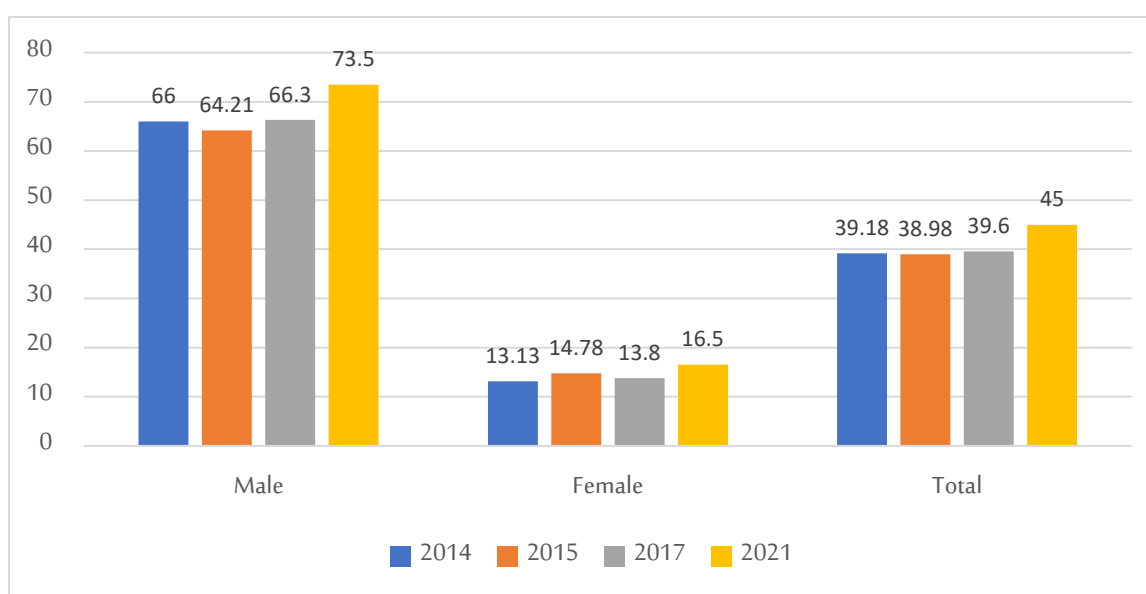
Gender	2014	2015	2017	* 2021
Male	66.0	64.21	66.3	73.5
Female	13.13	14.78	13.8	16.5
Total	39.18	38.98	39.60	45.0
*According to 19th ICLS				

Figure 5 better shows the annual changes for both sexes. As it can be seen, the changes are bigger in 2021 to some extent compared to the previous years, specially among males.

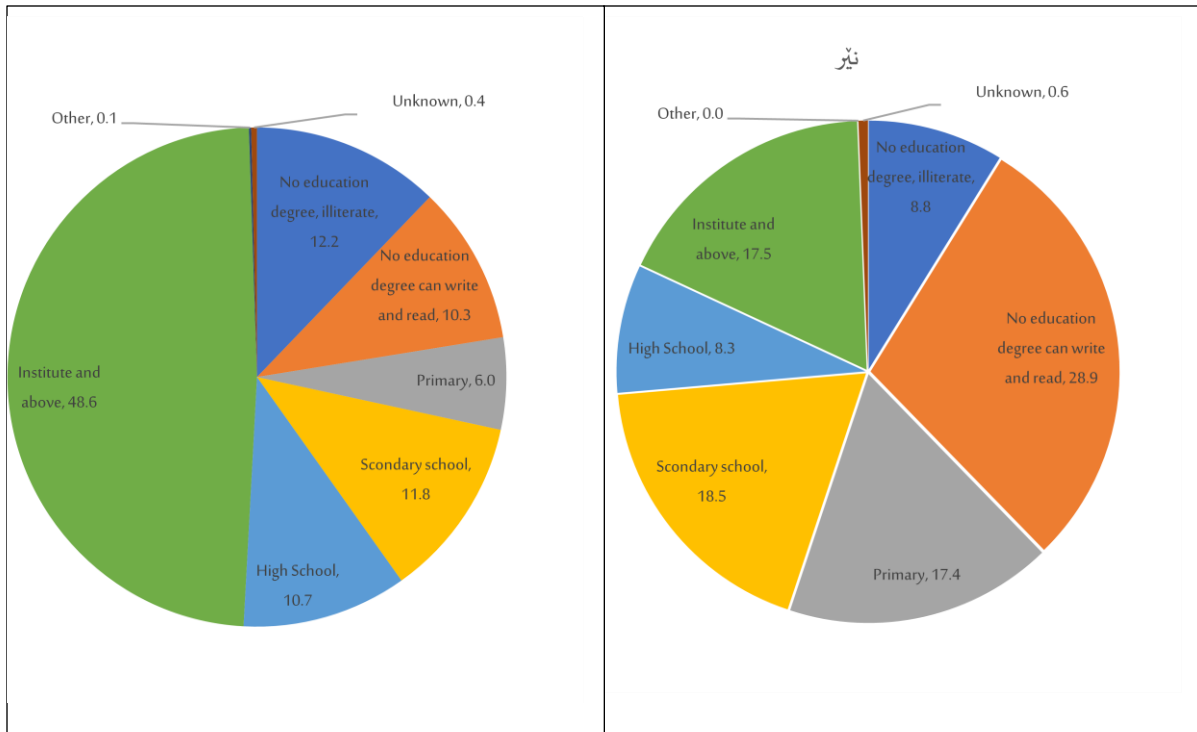
Figure 5: Labor force percentage participation for population aged 15+ in KRI by gender, 2014-2021

Concerning the labor force composition for both sexes, there is a significant difference in term of education level (Figure 6), which can be due to the low number of women who are in the labor force or those women with education degree who are seeking for job. According to the following Figure, about half of the women who are in the labor force are holding high school degree and higher education, while among men, the highest rate is goes for those without education degree who can read and write which is about a third of men in the labor force.

Figure 6: Labor force composition in KRI by gender and education degree (%)



Kurdistan Region 2018-2022 Indicators



Outbreak of Covid-19 across the world in 2020 affected all aspects of the human life for the following years, of which we can refer to the labor markets that have not been protected from these effects and have been affected in different ways. To compare women's participation in labor force before and after the Covid-19, Table 9 shows labor force participation rates in several countries. As table shows, the changes are not that significant and effective in many countries, but in some countries, the changes are significant for female participation in the labor force in 2017 - 2021, for example Sweden shows about seven points and South Africa shows about three points decrease.

Table 9: Comparison between Women's participation in labor force in KRI and several countries in 2014, 2015 and 2017 (%)

Country	2017	2021
KRI	13.3	16.5
Iraq	11.18	10.77
United Arab Emirates	52.82	52.57
Turkey	33.53	32.82
Germany	55.88	55.46
Sweden	70.22	63.25
United States of America	57.04	56.09
Canada	61.48	60.63
South Korea	53.16	53.7
Hong Kong	55.16	54.19
New Zealand	65.52	66.11
South Africa	52.19	49.56

The branch of economic activity is another issue that is considered in the labor force and its changes are evaluated to further clarify the process of economic changes. Based on the results of the labor force survey in 2021, 20.9% of workers are engaging in wholesale and retail trade, car and motorcycle repairs, followed by general administration, defense and compulsory social security with 17.9%, education with 10.7%, agriculture, forest, fishing and manufacturing with 7.9%, construction with 7.0%, and transportation and storage with 6.6%.

Unemployment

One of the most demanded indicators in labor force is the unemployment rate. According to the results of the labor force survey 2021, which was based on the definitions of the latest conference of labor statisticians (19th ICLS), unemployment rate in Kurdistan region was 16.5%. Despite the low rate of women in the labor force, Unemployment among women is high. As shown in following Table, Dohuk recorded the highest rate of unemployment for women (35.1%) and Halabja recorded the lowest rate (26.2%).

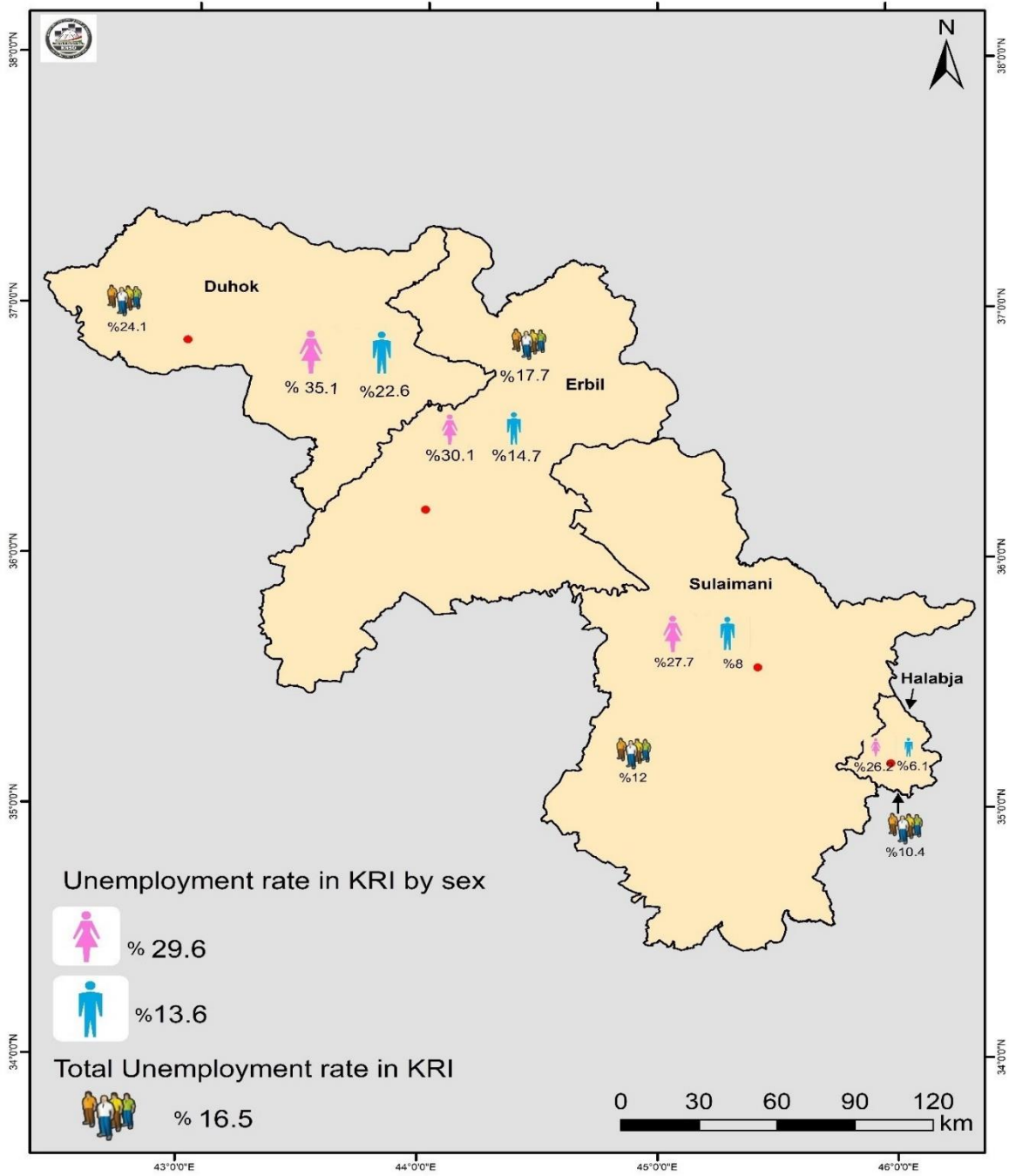
Table 10: unemployment percentage rate in KRI by gender and governorates, labor force survey 2021

	Male	Female	Total
KRI	13.6	29.6	16.5
Erbil	14.7	30.1	17.7
Sulaymaniyah	8	27.7	12
Duhok	22.6	35.1	24.1
Halabja	6.1	26.2	10.4

Unemployment has significantly fluctuated in Kurdistan region in the last 10 years. In the years before the financial crisis and ISIS invasion, the unemployment rate decreased, then it increased for a while and decreased again. Before unemployment reaching its previous level, it rose again due to the outbreak of COVID-19. At the level of governorates, Unemployment rate shows significant decrease and increase in the governorates of Erbil and Sulaymaniyah (together with Halabja) in the years after 2012, while it continuously shows increase in Duhok governorate following the financial crisis and ISIS invasion.

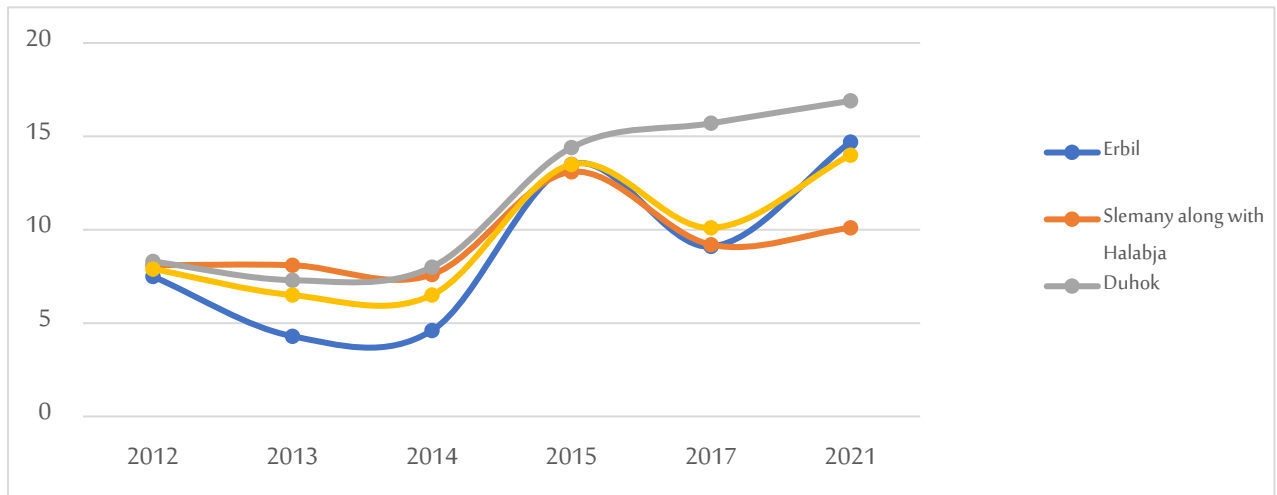
Figure 7 shows the changes in unemployment rate in the governorates of Kurdistan region since 2012. It should be noted that, in order to compare the unemployment rate in 2021 with the previous years, unemployment rate for 2021 has been measured based on the old definition (13th ICLS).

Map 2: unemployment percentage rate in KRI and governorate, labor force survey 2021



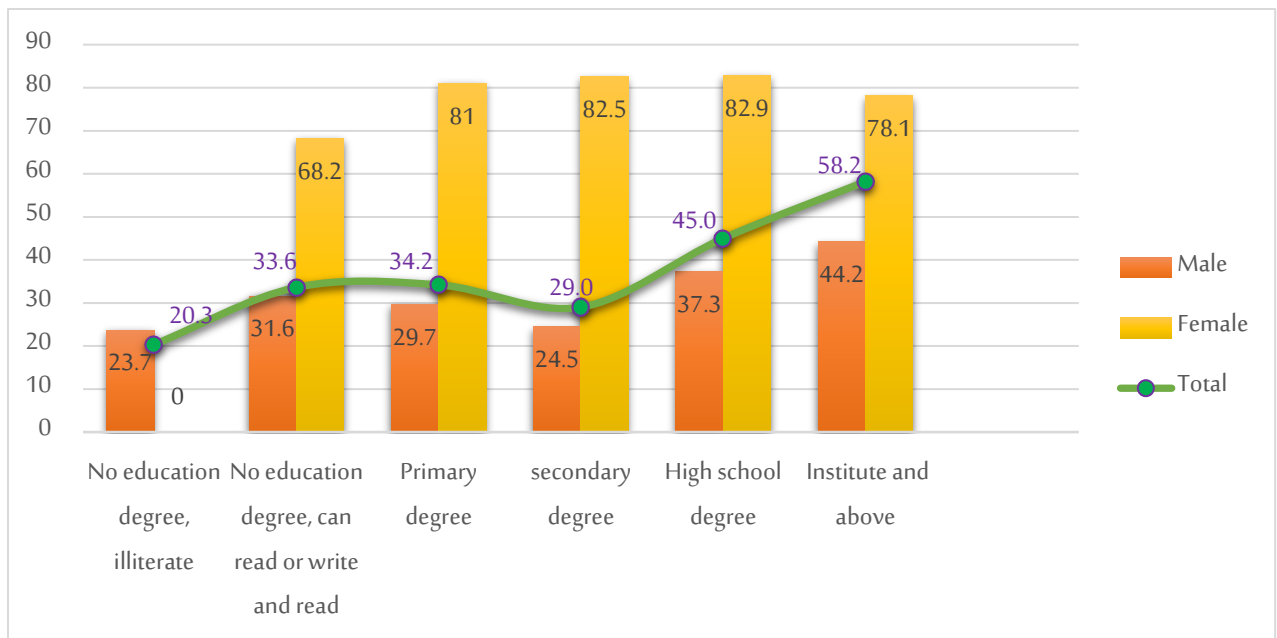
Kurdistan Region 2018-2022 Indicators

Figure 7: Unemployment percentage rate at KRI and governorates level in 2012-2021 (based on 13th ICLS definition)



What is important in labor force is the unemployment between youths. According to the results of labor force survey 2021, unemployment rate among youths aged 15-24 years is in a high level compared to other age groups which is relatively normal due to the characteristics of this age group (such as being new in the labor market and not having experience, not being employed by employers, not willing to do all kinds of work, etc.). The interesting point is the high unemployment rate among young females, especially those with education degrees, even for those with low education degrees, Figure 8.

Figure 8: Unemployment percentage rate among young people by sex and education level, Labor force survey 2021



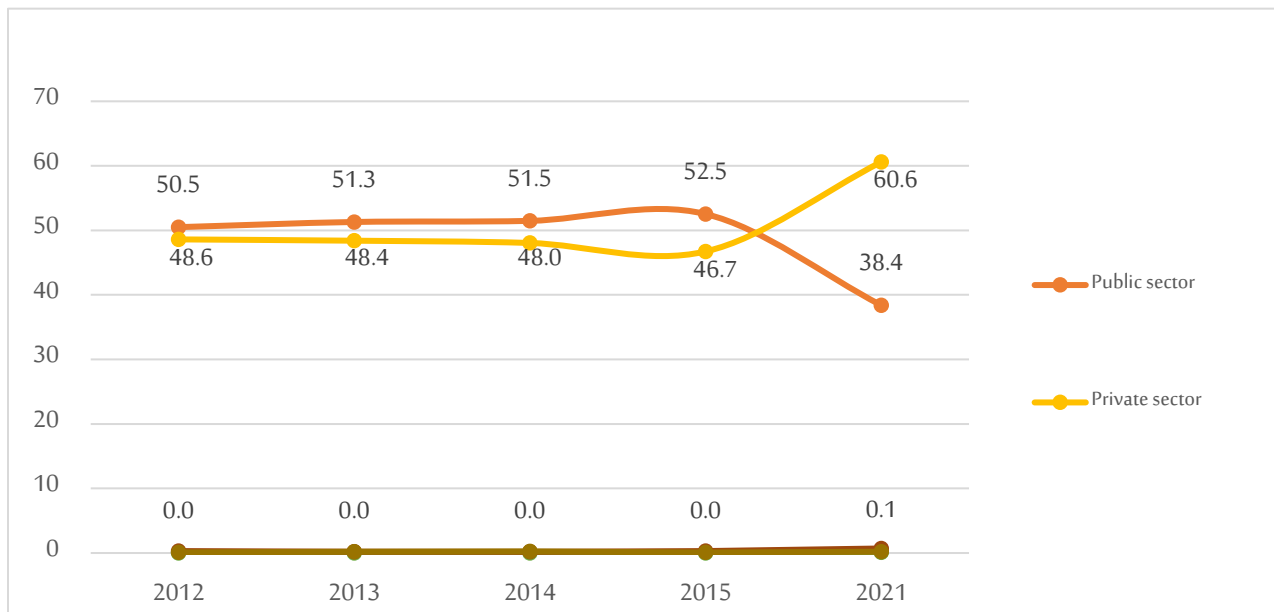
Job Sector

Typically, to be employed in the public sector is one of the goals of young and unemployed people. Having a big size of employed in government sector has burden government in term of finance and public satisfaction. The situation in Kurdistan region has changed in many aspects after 2014. The most important one is economic changes, which may lead for other changes. In order to deal with unwanted economic situation, KRG's stepped to avoid the negative effects of these changes for both itself and for the public.

The current strategy of KRG is towards developing the private sector and reducing the government size. Engaging people in private sector and encouraging them to develop this sector is one of the efforts KRG persists and has taken serious steps towards.

The labor force survey 2021 confirms the impact of Government measures. Figure 9 shows the growth of the private sector compared to the public sector. As shown, in the years 2012-2014, no significant change is observed in the public and private sectors, and that small difference was in the direction of increasing the public sector and decreasing the private sector. In 2015, this increase was more obvious, where public sector increased by one point compared to the previous year. The trend of the public and private sector has been reversed after 2015. In 2021, each of these two sectors shows opposite direction by about 14 points.

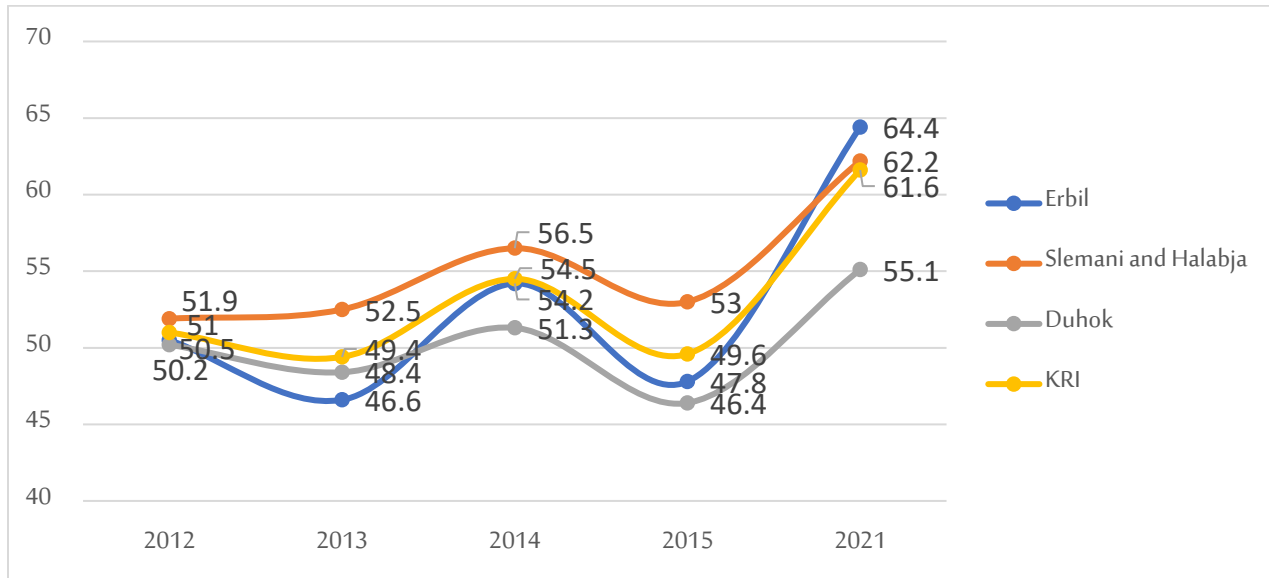
Figure 9: Percentage distribution of Job sector for the main jobs in KRI for 2012-2021



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If we look at the results of the labor force survey 2021, the impact of the KRG's policies and its measures can be clearly seen at the governorates level. Changes in both Sulaymaniyah (jointly with Halabja) and Duhok is in the same direction, but the changes are different and higher in Erbil. Figure 10 shows the employment changes in private sector in Kurdistan region for available data in the years 2012-2021.

Figure 10: employment percentage rate in private sector in 2012-2021



Broad Branch Economic activities

The results of the survey also showed that agriculture although in a small scale, but had progressed in term of labore force, and industry has returned back to the situation it had before the financial crisis and the fight against ISIS terrorists. Figures 11 and 12 show the status of economic activities for the main job of workers in the governorates of Kurdistan Region and the changes they had in recent years according to the results of the labor force surveys.

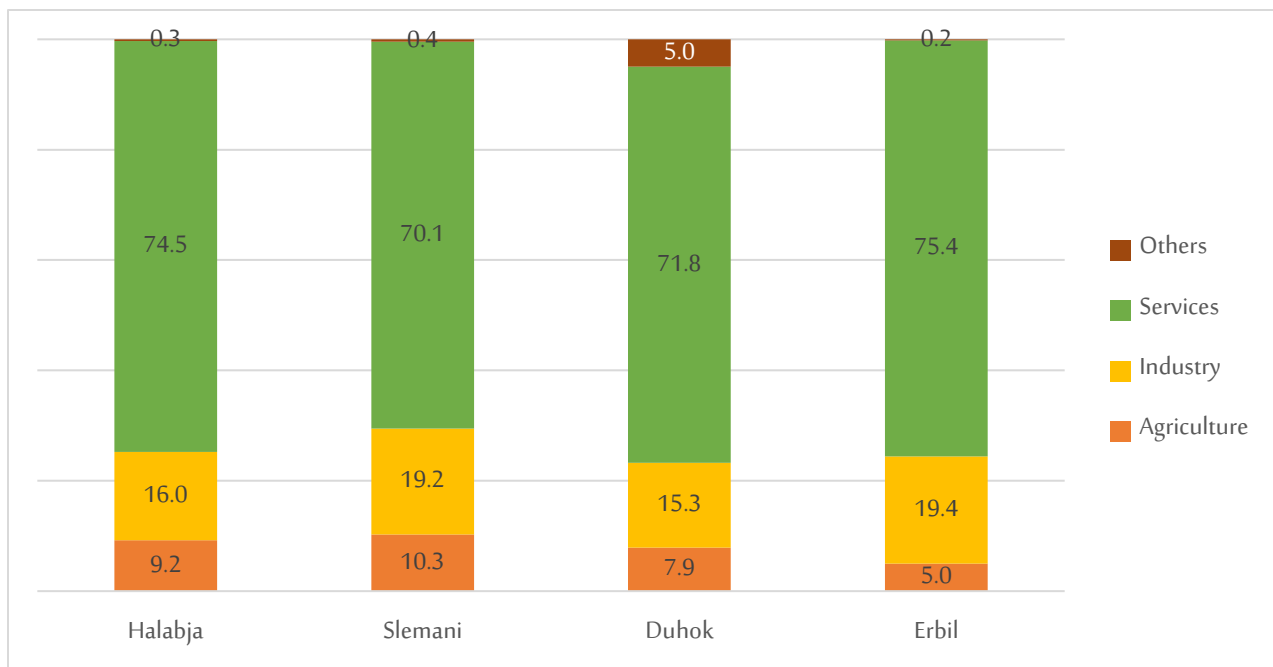
To better understand the Broad Branch Economic activities, a brief explanation is given as follows:

- **Agriculture:** includes cultivation, forestry, fishing and animal husbandry,
- **Industry:** includes mining and quarrying, manufacturing, water supply, sewerage and waste treatment and construction,
- **Services:** includes wholesale and retail trade, car and motorcycle repair, transportation and storage, accommodation and restaurant, information and communications, financial and insurance activities, real estate, technical Professional activities, scientific and technical activities, administrative and support services activities, public

administration and defence; obligatory social security, education, human health and social work activities, arts, entertainment and recreation, other service activities.

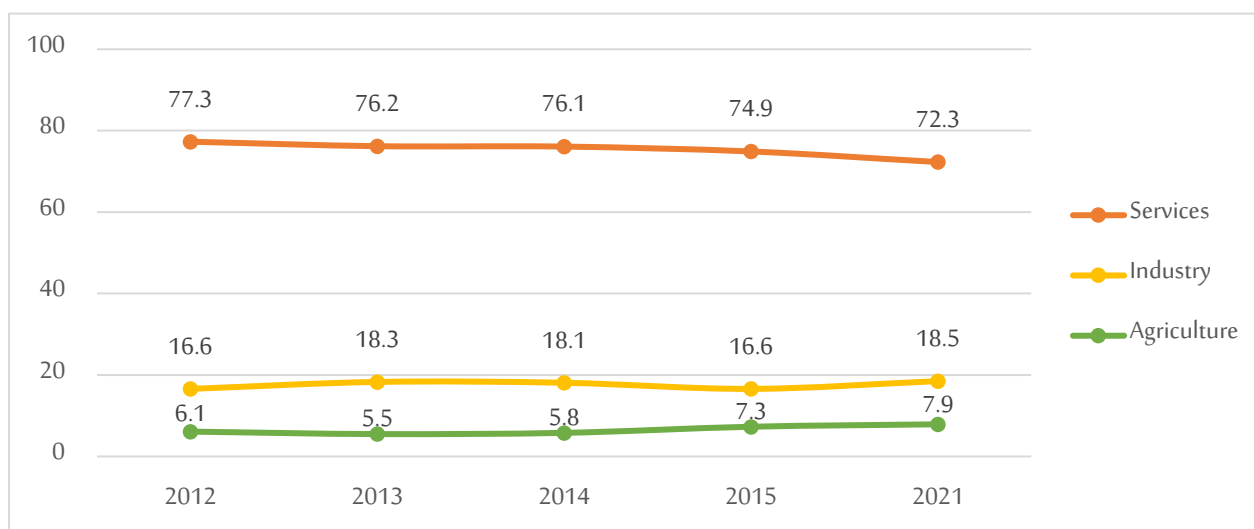
In terms of industry, Erbil and Sulaymaniyah governorates are almost at the same level, then Halabja and Duhok stand at the third and fourth rank respectively. However, in the field of agriculture, Erbil is in the last rank (5.0%), Sulaymaniyah is in the first rank (10.3%), followed by Halabja (9.2%) and Duhok (7.9%) governorates. In terms of service activities, Erbil governorate is first (75.4%), followed by Halabja (74.5%), Duhok (71.8%) and Sulaymaniyah (70.1%).

Figure 11: main job distribution by broad branch economic activities at the level of governorates, labor force survey 2021



One of the efforts of Kurdistan region government in the recent years is to encourage the development of agriculture and industry sector. For this purpose, it has developed its efforts, plans and policies alien with these goals and took steps to implement the goals. looking at Figure 12, it can be seen that both agriculture and industry have been changed and show progress with a slight increase compared to the previous years with more concentration in industry about 2 points increase.

Figure 12: Changes percentage rate in branches of the main jobs in 2012-2021



Multi job

Another subject that needs to be more focused is multi job or owning more than one job that reflects the availability of decent jobs. About 1.43 million people are working in Kurdistan region, of whom about 98,000 engaging in more than one job and of course big share goes for men (above 93,000 people). So that, the rate of population with more than one job in Kurdistan region is 6.8% of the working population. The rate is about three times higher than that of Iraq as a whole (following Table). The high number of people with more than one job has a significant impact on the unemployment rate. Eliminating or decreasing multiple jobs means replacing people with more than one job with unemployed people and subsequently declining unemployment rate. The number of unemployed people and people with more than one job as shown in the Labor Force Survey 2021, reveals this fact that the unemployment rate goes down to 6 percent lower should multi job is prevented or eliminated.

Table 11: Multi job owners by gender in KRI and Iraq as a whole, labor force survey 2021

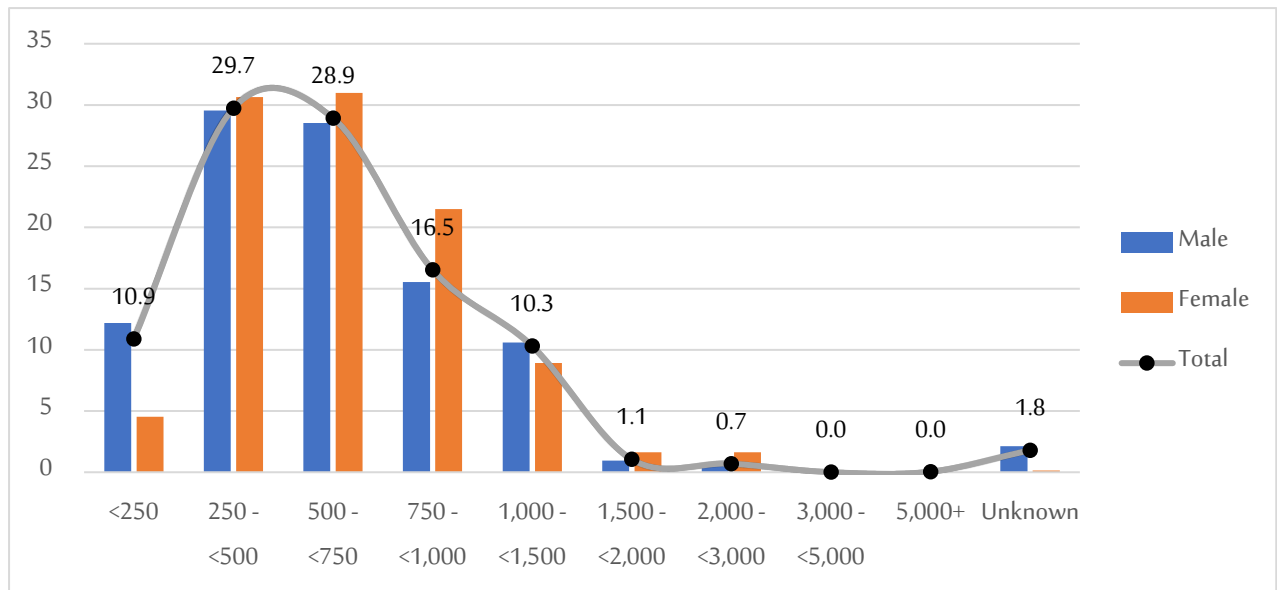
	Total	Male	Female
Multi job owners (KRI)	97,800	93,100	4,700
Total workers (KRI)	1,427,800	1,207,100	220,700
The rate of multi job owners (KRI)	6.8%	7.7%	2.1%
The rate of multi job owners (Iraq as a whole)	2.2%	2.4%	0.7%

Income

The last part of this topic is dedicated to income and the changes of the main jobs' monthly income. In the labor force survey conducted in 2014 and 2015, income was included. Due to the sensitivity of the question, many respondents may be reluctant to disclose their monthly income and may refuse to answer questions in this regard or may like to answer this question in other ways. Therefore, in order to keep the respondents away from any uncertainty and receive a more accurate answer close to the real answer, in the labor force surveys it has been attempted to divide the incomes into groups based on which the respondents are questioned about their incomes. The income groups that have been shown in the following Figure, have been used in all surveys in Kurdistan region since 2014 and become the standard income groups in statistical work in Kurdistan region.

According to the results of the Labor Force Survey in Kurdistan region, in 2021, the monthly income of workers for the majority of the income groups, women recorded a higher rate than men, especially for the income group of 750,000-1,000,000 dinars. The results also showed that the majority of workers (75%) have an income between 250,000-1,000,000 dinars. The following Figure represents more details on the monthly income of workers by sex for all income groups.

Figure 13: Monthly income (000) by sex, labor force 2021

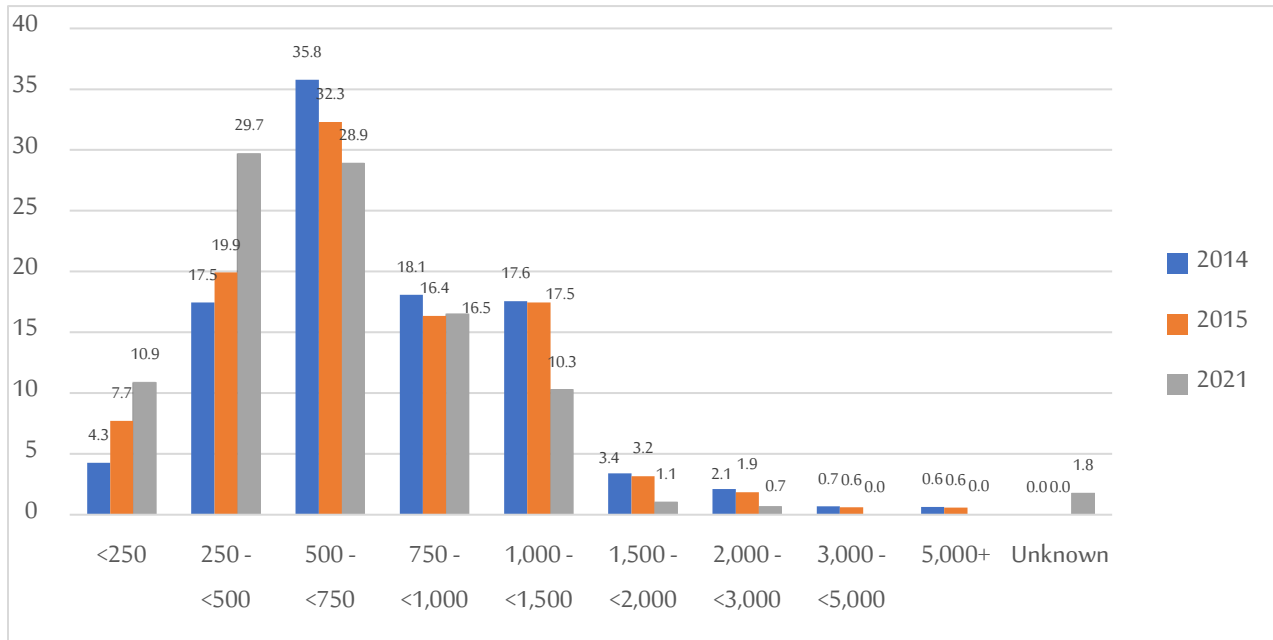


Comparing the income of workers in 2014, 2015 and 2021, we can see that the income of workers has declined after 2014. The percentage rate of people with income between 250,000-1,000,000 dinars in 2014 and 2015 is 71.4% and 68.6% respectively, while it was 75%

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in 2021. The most obvious changes are observed in 250,000-500,000 income group with increase of about 10 points. The highest decrease can be observed in 1,000,000-1,500,000 income group, which is more than 7 points. Following Figure Shows changes for all income groups.

Figure 14: Compariason between income groups in KRI (000) in 2014, 2015 and 2021 surveys



Sources

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Education, Health and Social Statistics

Education

Education is of great importance for all countries as the main factor of progress and development in all social, economic and industrial fields. A strong and ideal education system paves the way to achieve several goals, including raising a capable generation in order to use their abilities for innovate, improving ability and culture of youth in general and women in particular, creating more job opportunities and raising the level of knowledge and awareness on family planning and how to protect the environment. In the past, like other countries, Kurdistan region government has made efforts to eradicate illiteracy and provide equal education to males and females to attend and continue their education in all stages of education. Although, the education process faced big challenges especially in the last two years due to the spread of the corona virus which interrupted education process, government attempted to develop an E-learning system so that students could learn directly through digital platforms and media channels. According to data, majority of people were not satisfied with the E-learning system. In general, Indicators of education process are satisfactory in providing equal education as a basic right for children and youth at all stages of education for both sexes (Table 1).

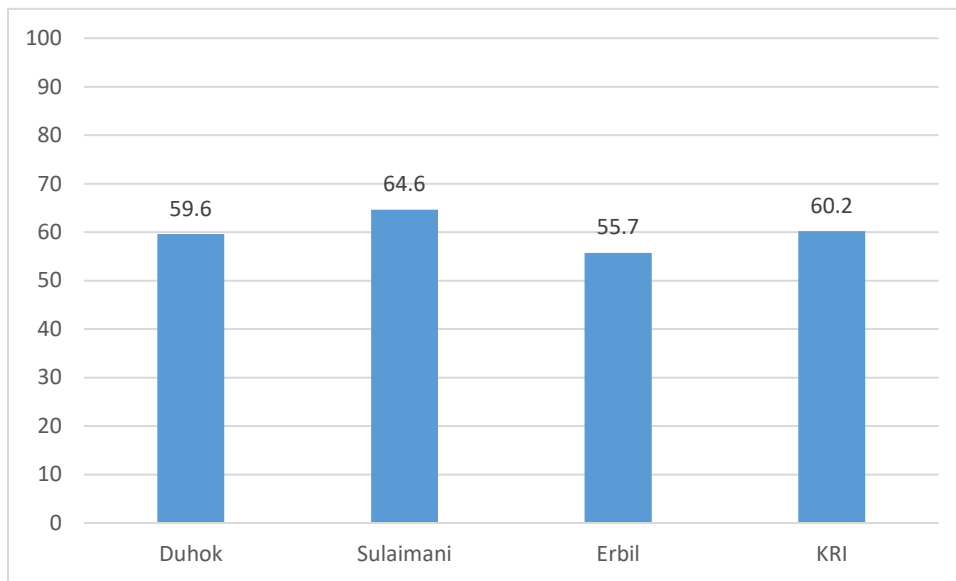
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Table 1: education indicators at the KRI and governorate level (%)

Source	KRI	Erbil	Sulaymaniyah	Duhok	Indicator
Youth and juveniles national survey 2019	60.2	55.7	64.6	59.6	Percentage of juveniles and youth aged (10 - 30) years who were continuing their education in 2019
Youth and juveniles national survey 2019	37.5	41.9	34.4	36	Percentage of juveniles and youth aged (10 - 30) years who attended school in the last year
Youth and juveniles national survey 2019	2.3	2.3	0.9	4.4	Percentage of juveniles aged 10-30 who have never attended school
Youth and juveniles national survey 2019	94	90.3	94.8	97.4	Percentage of juveniles aged 10-30 who are currently studing in public sector
Youth and juveniles national survey 2019	6	9.7	5.2	2.6	Percentage of juveniles aged 10-30 who are currently studing in private sector
women's health and social status Survey (WISH-II 2021)	34.7	34.3	34.2	36.3	Percentage of household members aged 4 years and older who Continued their education in 2021
women's health and social status Survey (WISH-II 2021)	47.4	49.9	48.6	41.5	Percentage of household members aged 4 years and older who attended school in the past
women's health and social status Survey (WISH-II 2021)	17.9	15.8	17.2	22.2	Percentage of household members aged 4 years and older who have never attended school
women's health and social status Survey (WISH-II 2021)	16.0	13.6	16.5	18.7	Illiteracy rate among family members aged 10 years and older
women's health and social status Survey (WISH-II 2021)	9.3	8.1	9.7	10.4	Illiteracy rate among males aged 10 years and older
women's health and social status Survey (WISH-II 2021)	22.5	19	23.2	26.6	Illiteracy rate among females aged 10 years and older
women's health and social status Survey (WISH-II 2021)	94.3	93.5	94.1	95.7	Percentage of household members aged 4 years and older who are studing in public sector
women's health and social status Survey (WISH-II 2021)	5.1	6.2	5.2	3.4	Percentage of household members aged 4 years and older who are studing in private sector
women's health and social status Survey (WISH-II 2021)	0.6	0.2	0.8	0.9	Percentage of household members aged 4 years and older who are studing in other sectors
women's health and social status Survey (WISH-II 2021)	66	65.7	68.4	62.4	Percentage of household members aged 4 years and older who are not satisfied with E-laerning system/ educational TV channels in Kurdistan region
women's health and social status Survey (WISH-II 2021)	34	34.3	31.6	37.6	Percentage of household members above 4 years old who are dissatisfied with E- learning/ educational TV channels in Kurdistan region

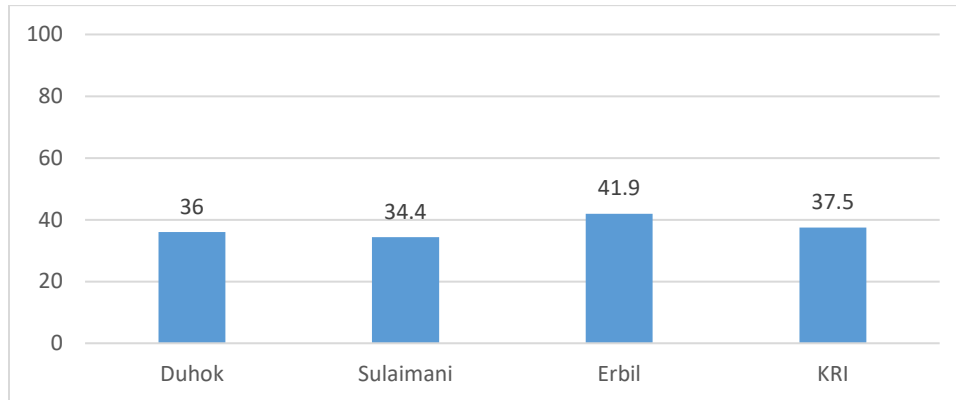
Juveniles and youths aged (10 - 30) years who continued education in 2019: it refers to the number of juveniles and youths aged (10 - 30) years who were studding at any stage and level of education to the total number of juveniles and youths at the same age group in 2019. At the level of Kurdistan region, the percentage of this age group who continued their education in 2019 is 60.2% and at the level of governorate, Sulaymaniyah governorate recorded the highest rate at 64.6%, followed by Duhok and Erbil governorate with 59.6% and 55.7% respectively.

Figure 1: Percentage of juveniles and youths aged 10-30 years who continued education in 2019 at the KRI and governorates level



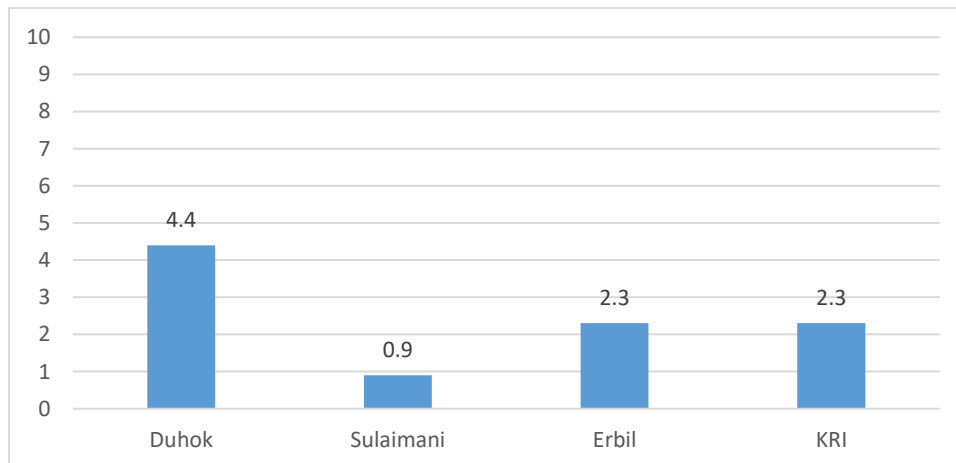
Proportion of juveniles and youths aged (10 - 30) years who attended school in the past: It refers to the number of juveniles and youths aged (10 - 30) years who studied at any stage and level of education in the past to the total number of juveniles and youths at the same age group. According to the youths and juveniles national survey 2019, at the level of Kurdistan region, 37.5% of juveniles and youths aged (10 - 30) years attended school in the past. At the level of governorates, Erbil governorate recorded the highest rate at 41.9%, followed by Duhok and Sulaymaniyah governorates with 36% and 34.4% respectively (Figure 2).

Figure 2: Percentage of juveniles and youths aged 10-30 years who attended education in the past at the regional and governorates level, youth and juveniles national survey 2019



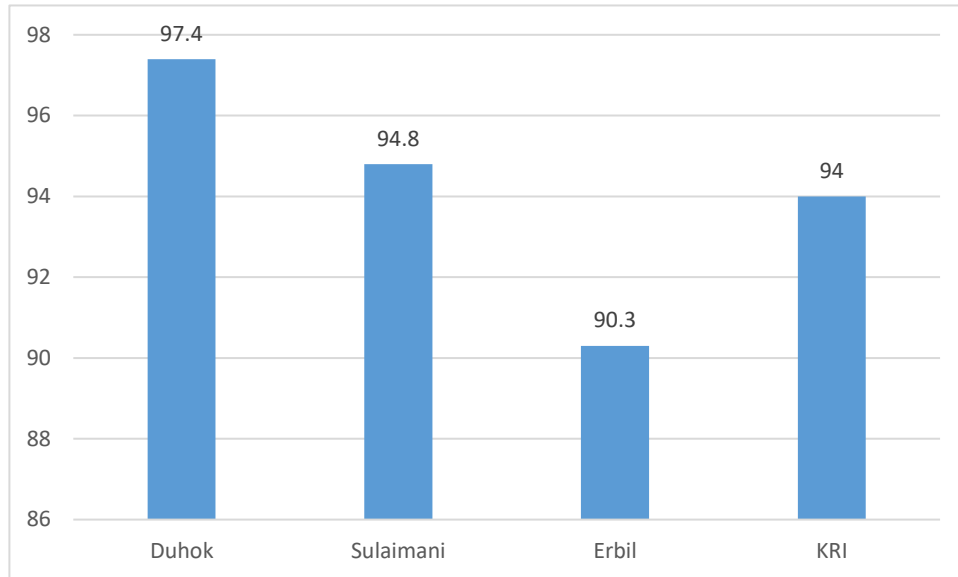
Juveniles and youths aged (10 - 30) years who have never attended school: It refers to the number of juveniles and youths aged (10 - 30) years who have never attended school to the total number of juveniles and youths at the same age group in a given year. At the level of Kurdistan region, it is 2.3% and at the level of governorates, the difference is notable, where Duhok governorate has the highest rate accounting for 4.4%, followed by Erbil with 2.3% and Sulaymaniyah governorates with 0.9% (Figure 3).

Figure 3: Percentage of juveniles and youths aged (10 - 30) years who have never attended school at the regional and governorates level, youth and juveniles national survey 2019



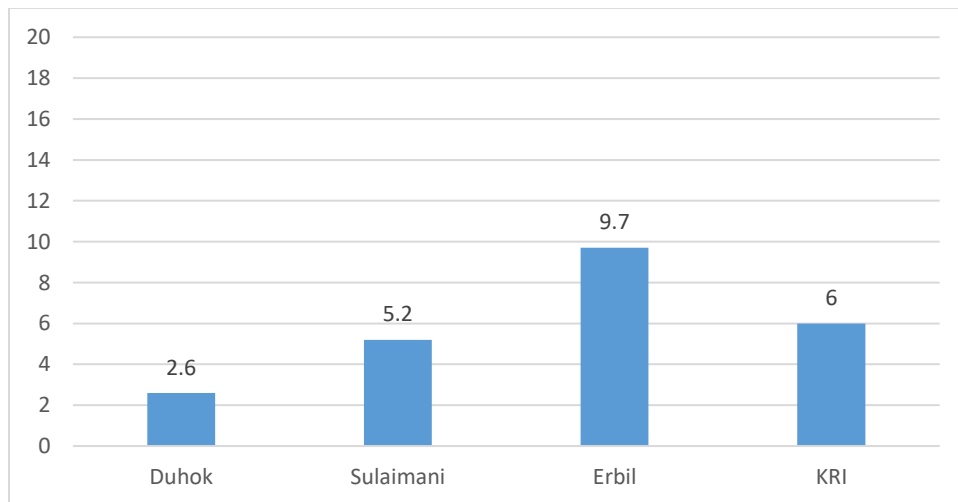
Juveniles and youths aged (10-30) years old who study in the public sector: this is the number of juveniles and youths aged (10-30) who study at any level of education in the public sector to the total number of juveniles and youths aged (10-30) years old at the same age in a given year. According to the Youth and juveniles national survey 2019, at the level of Kurdistan region, 94% of this age group were studying in the public sector and at the governorates level, Duhok governorate recorded the highest rate of 97.4%, followed by Sulaymaniyah and Erbil governorates with 94.8% and 90.3% respectively.

Figure 4: Percentage distribution of respondents aged 10-30 who were studying in public sector in 2019 at the regional and governorates level, youth and juveniles national survey 2019



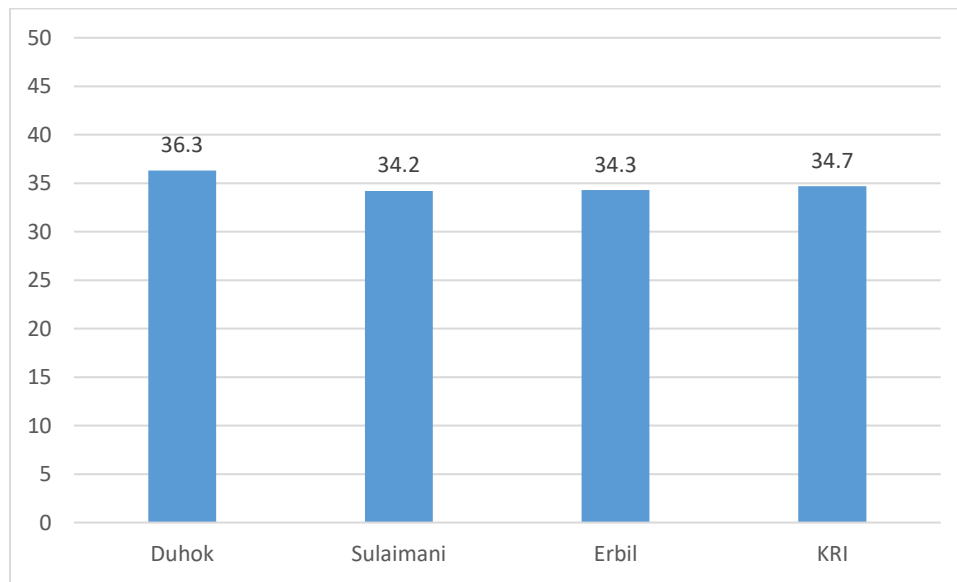
Juveniles and youths aged (10-30) years old who study in the Private sector: It refers to the number of juveniles and youths aged (10-30) who are study at any level of education in the private sector to the total number of juveniles and youths aged (10-30) years old at the same age in a given year. At the level of Kurdistan region, 6% of this age group were studying in private sector in 2019 and at the governorates level, Erbil governorate with the highest rate recorded 9.7%, followed by Sulaymaniyah and Duhok governorates with 5.2% and 2.6% respectively (Figure 5).

Figure 5: Percentage of juveniles and youths aged (10-30) years old who were studying in the Private sector in 2019 at the regional and governorates level



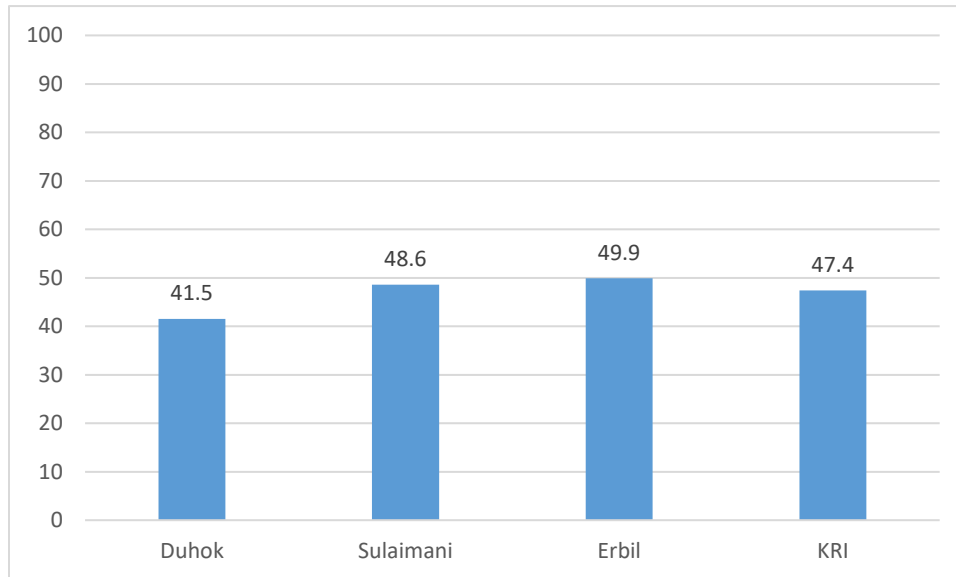
Proportion of household members aged 4 years and older who are continuing their education: It refers to the number of household members aged 4 years and older who are studying at any stage and level of education to the total number of household members at the same age. According to the women's health and social status Survey (WISH-II 2021), 34.7% of this group were continuing their education at the level of Kurdistan region in 2021. At the level of governorates, Duhok governorate has the highest level at 36.3%, followed by Erbil and Sulaymaniyah governorates very close to each other at 34.3% and 34.2% respectively.

Figure 6: Percentage of household members aged 4 years and older who are continuing their education, IWISH-II 2021, women's health and social status Survey (WISH-II 2021)



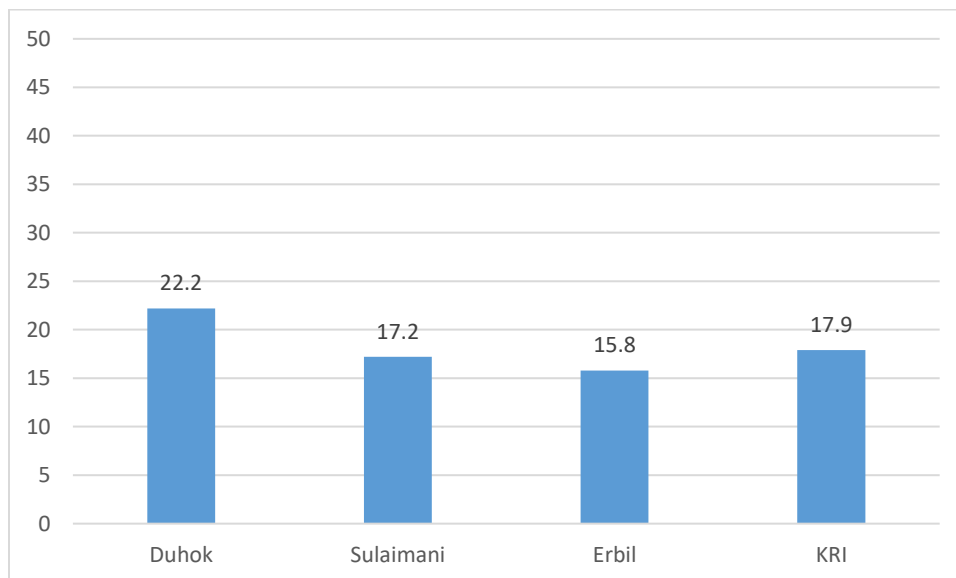
Proportion of household members aged 4 years and above who attended school in the past: It is the number of household members aged 4 years and above who attended school at any stage or level of education in the past to the total number of the household members at the same age in a given year. In Kurdistan region, the rate is 47.4% and at the level of governorates, Erbil and Sulaymaniyah stand close to each other at 49.9% and 48.6%, and Duhok with a significant difference recorded the lowest rate with 41.5%.

Figure 7: percentage of household members aged 4 years and above who attended school in the past at the regional and governorates level, IWISH-II 2021



Proportion of household members aged 4 and above who have never attended school: it refers to the number of household members aged 4 and above who have never attended school to the total number of household members surveyed at the same age in a given year. Relying on the IWISH-II 2021, those who have never attended school recorded a high rate of 17.9% in Kurdistan region, and at the level of governorates, Dohuk governorate with 22.2% registered the highest rate compared to Suleimani with 17.2% and Erbil with 15.8%.

Figure 8: Percentage of household members aged 4 and above who have never attended school at the KRI and governorates level, IWISH-II 2021

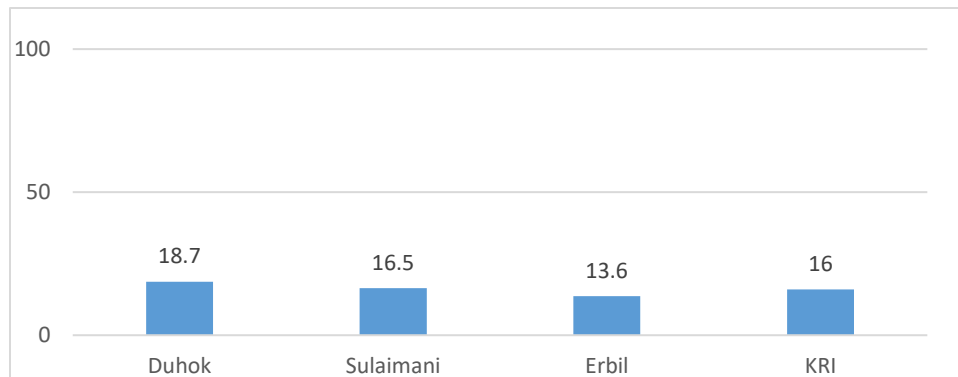


Illiteracy

In underdeveloped or poor countries, illiteracy rate is significantly higher than in developed countries, which has directly affected many aspects of life in these countries. According to the financial capacity and the level of illiteracy, countries make efforts to eliminate or reduce illiteracy rate. In Kurdistan region, like other countries, there are efforts to eliminate or reduce illiteracy rate through illiteracy eradication centers and accelerated education, which play a major role in benefiting individuals in society and reducing the illiteracy rate.

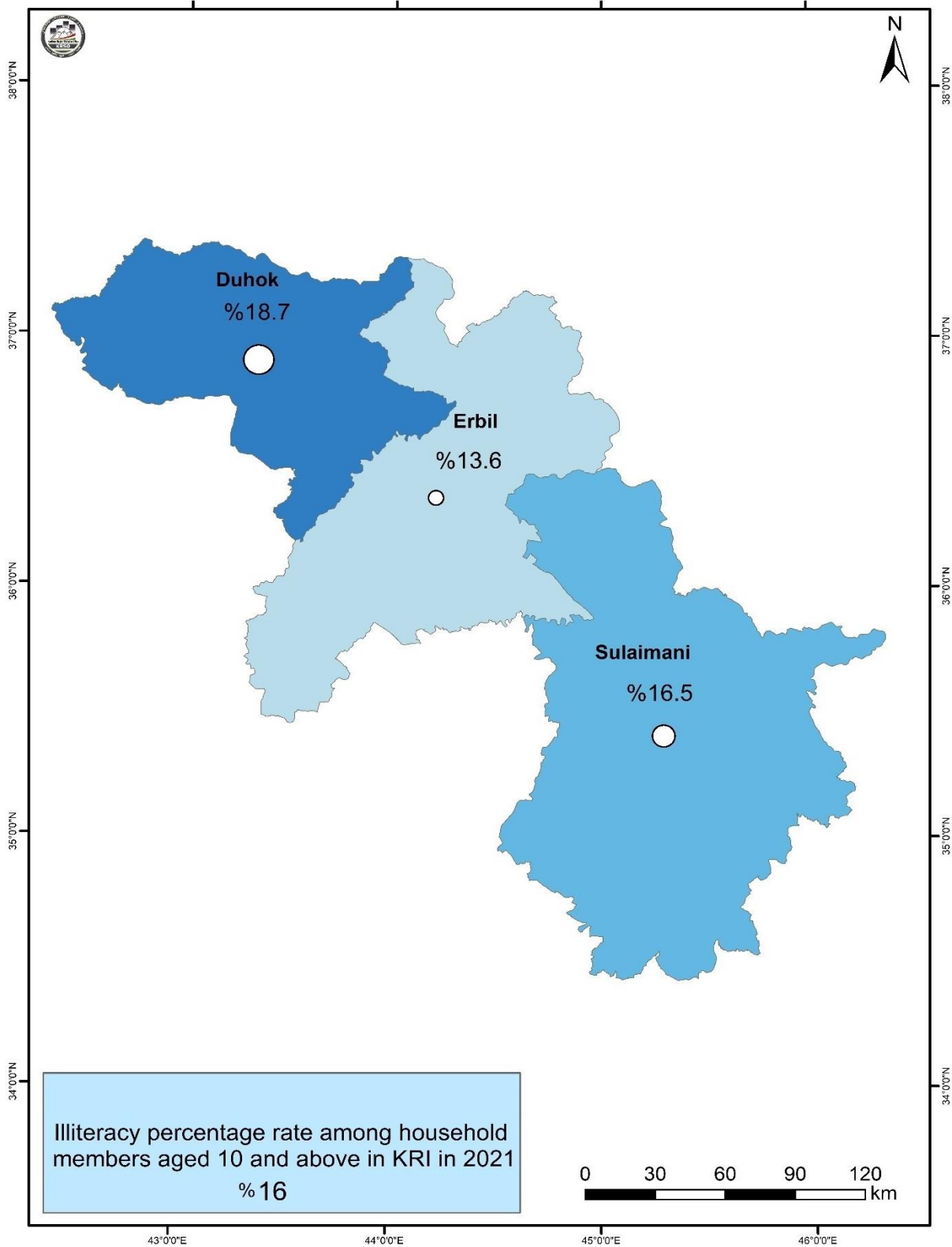
According to IWISH-II 2021, In Kurdistan region, illiteracy rate among household members aged 10 and above stands at 16.0%, and at the governorates level, Duhok governorate with 18.7% has the highest rate, followed by Sulaimani and Erbil governorates with 16.5% and 13.6% respectively (Figure 9).

Figure 9: Illiteracy percentage rate among household members aged 10 and above at the regional and governorates level, IWISH-II 2021



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Map 3: illiteracy percentage rate among household member aged 10 and above at the regional and governorate level, IWISH II 2021



Illiteracy rate among males aged 10 years and above

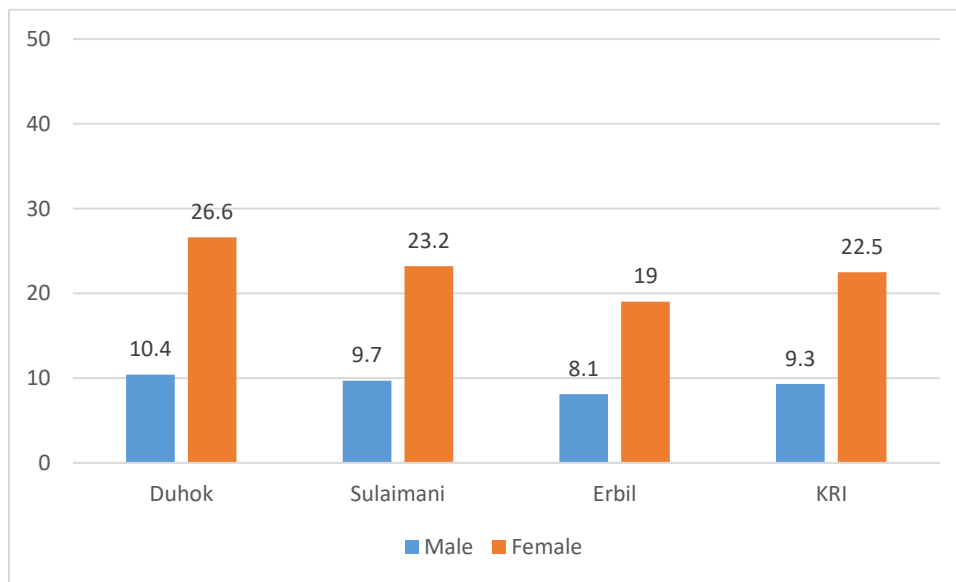
In general, the illiteracy rate among males aged 10 years old and above is relatively low in Kurdistan region accounting for 9.3%. At the level of governorates, the illiteracy highest rate is in Duhok governorate at 10.4%, followed by Suleimani and Erbil governorates with 9.7% and 8.1% respectively.

Illiteracy among females aged 10 years old and above

Illiteracy rate among females of this age group recorded a high rate at 22.5% in Kurdistan with the highest rate in Duhok governorate with 26.6%, then Suleimani with 23.3% and Duhok with 19%.

Comparing the illiteracy rate between male and female, we will find a significant difference both at the regional and governorates levels, where the illiteracy rate for females is much higher compared to males due to the discrimination between the two sexes in the last century, where more attention has been paid to the education and sending males to school than female. Also, economic and social factors have had a direct impact on raising illiteracy rate among women (following Figure).

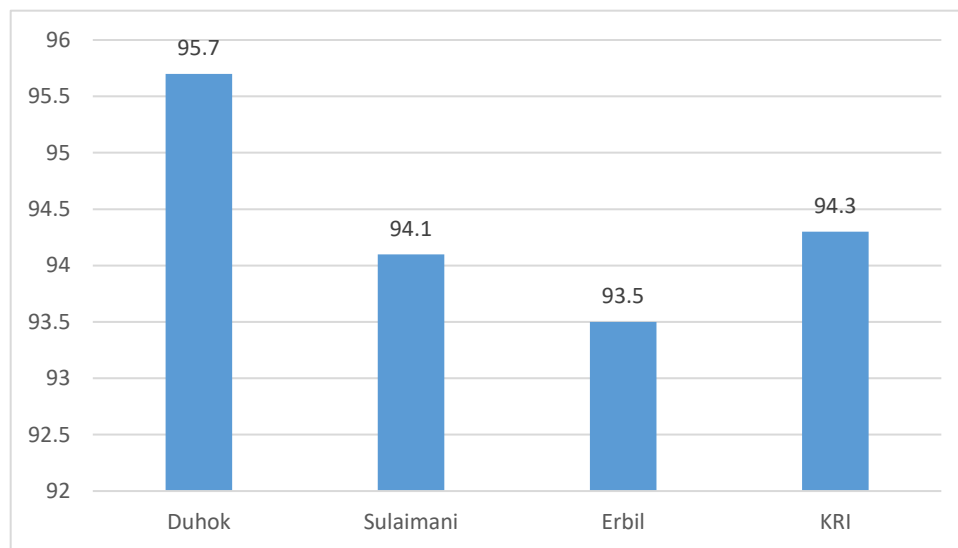
Figure 10: Illiteracy rate among male and female 10 years old and above at the level of KRI and governorates, IWISH-II 2021



Household members aged 4 years and above studying in the public sector

Percentage of household members aged 4 years and above studying in the public sector: It refers to the number of household members aged 4 years and older studying in the public sector to the total number of household members at the same age group in a given year. In general, participation rate of this group who studying in public sector is high (94.3%) in Kurdistan region as it is in governorates with the highest rate in Duhok governorate (95.7%) followed by Sulaimani and Duhok governorates with 94.1% and 93.5% respectively.

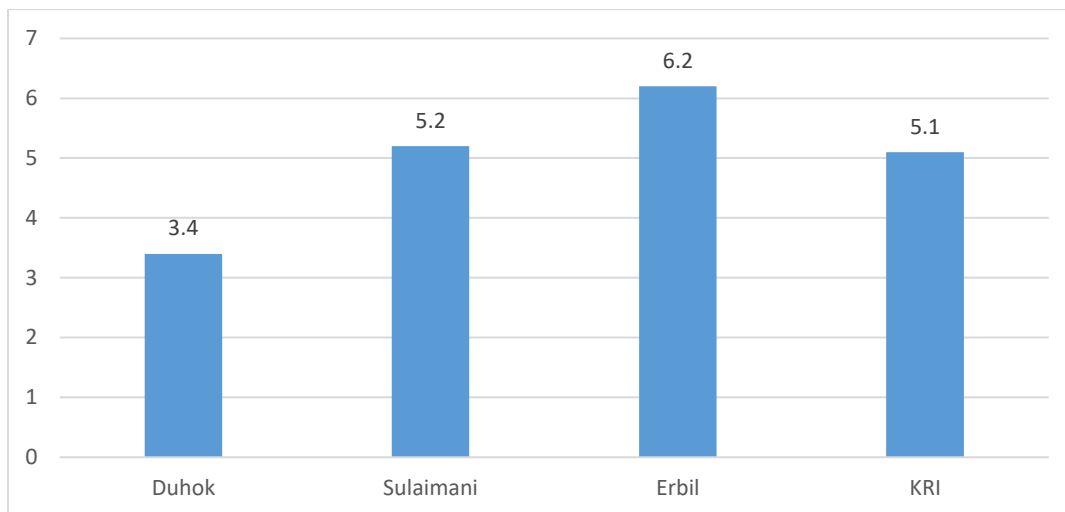
Figure 11: Percentage Distribution of household members aged 4 years and older studying in the public sector at the regional and governorates level



Household members aged 4 years and above studying in the private sector

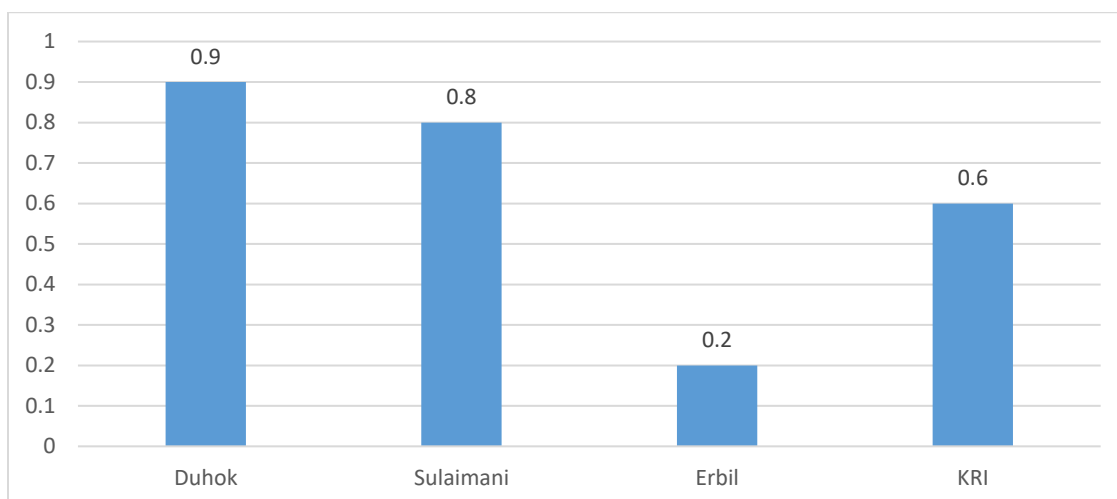
Percentage of household members aged 4 years and older studying in the private sector: It refers to the number of household members aged 4 years and older studying in the private sector to the total number of household members at the same age group in a given year. At the level of Kurdistan region, 5.1% of this age group were studying in the private sector in 2021, and at the level of governorates, the highest rate goes for Erbil with 6.2%, Sulaimani with 5.2% and Duhok with the lowest rate at 3.4% comes next (Figure 12).

Figure 12: percentage of household members aged 4 years and above studying in the private sector at the level of KRI and governorates



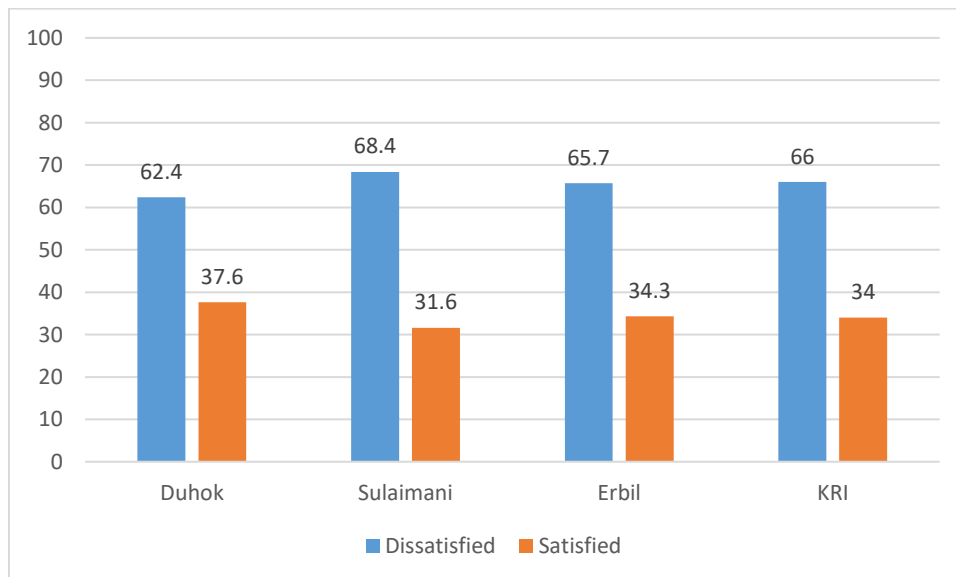
Percentage of household members aged 4 years and above studying in other sectors (mixed): It is the number of household members aged 4 years and above studying in other sectors to the total number of household members at the same age group in a given year. At the level of Kurdistan region, this group recorded 0.6% in 2021, and in governorates, the highest rate is with Duhok governorate at 0.9%, followed by Suleimani and Erbil with 0.8% and 0.2% respectively (Figure 13).

Figure 13: Percentage of household members aged 4 years and above studying in other sectors at the level of KRI and governorates, IWISH-II 2021



Satisfaction and dissatisfaction Percentage rate of household members aged 4 years and above with e-learning / educational television channels in Kurdistan region: in order to continue the studding process following outbreak of COVID-19 and during the curfew in the world in general and Kurdistan region in particular, the Ministry of Education of Kurdistan region government (KRG) continued the education process through an electronic platform in the public, private and other sectors. To find out the opinions of students on e-learning / educational television channels in the Kurdistan Region, a part of the questionnaire of the women social and health survey 2021 (IWISH) was dedicated to this topic. The results show that the level of satisfaction with this process is low. At the level of Kurdistan region, satisfaction rate is 34% against dissatisfaction with 66% which is almost double. At the level of governorates, Erbil recorded 34.3% for satisfaction and 65.7% for dissatisfaction, Suleimani has 31.6% satisfaction and 68.4% dissatisfaction, and Duhok governorate recorded the highest rate for satisfaction with 37.6% and the lowest rate for dissatisfaction with 62.4% comparing to other governorates. In general, dissatisfaction level both at the regional and governorate levels recorded a high rate, so that two out of three students are dissatisfied with this method of learning as shown below.

Figure 14: Percentage of household members aged 4 years and above based on their satisfaction and dissatisfaction with e-learning / educational TV channels at the regional and governorates level, IWISH-II 2021



Health

The health section includes several key indicators resulted from both the National Survey of youths and juveniles 2019 and the Survey of Social Status and Health of Women in the Kurdistan Region (IWISHII 2021). Indicators include the health status of juveniles and Youth, awareness and hearing about HIV and protective ways against this deadly disease, women's fertility in a specific age group, the number of live births, type of delivery, family planning methods, assessment of health status, female circumcision and other important indicators as shown in the following table.

Table 2: Health important indicators at the regional and governorates level

Sources	KRI	Erbil	Sulaymaniyah	Duhok	Indicator
National youths and juveniles survey 2019	98.4	99	97.9	98.3	percentage of Juvenile and youth aged (10-30) years who assess their health status well
National youths and juveniles survey 2019	1.6	1	2.1	1.7	percentage of Juvenile and youth aged (10-30) years who assess their health status unwell
National youths and juveniles survey 2019	92.9	94.2	95.9	86.8	percentage of Juvenile and youth aged (10-30) years who have never heard about HIV
National youths and juveniles survey 2019	7.1	5.8	4.1	13.2	Percentage of juveniles and youthe aged 18-30 years who have never about HIV
National youths and juveniles survey 2019	20.1	20.2	19.6	20.7	Percentage of juveniles and youthe aged 15-30 who smok
National youths and juveniles survey 2019	30.9	27.5	27.5	42.2	Percentage of juveniles and youthe aged 15-30 years who started smoking befor the age of 15
women's health and social status Survey (WISH-II 2021)	34.5	47.4	23.3	38.1	percentage of married or previously married women aged 15-49 who visited the hospital within the first week after the end of their pregnancy (stillbirth, miscarriage and abortion) in the last 5 years
women's health and social status Survey (WISH-II 2021)	98.9	98.7	99.8	97.6	Percentage of women aged 15–49 years who are currently married or previously married and received prenatal health care for their last live birth in the past 5 years.
women's health and social status Survey (WISH-II 2021)	3.2	3.3	3	3.4	Fertilization among women aged 15-49 years

Continued 2

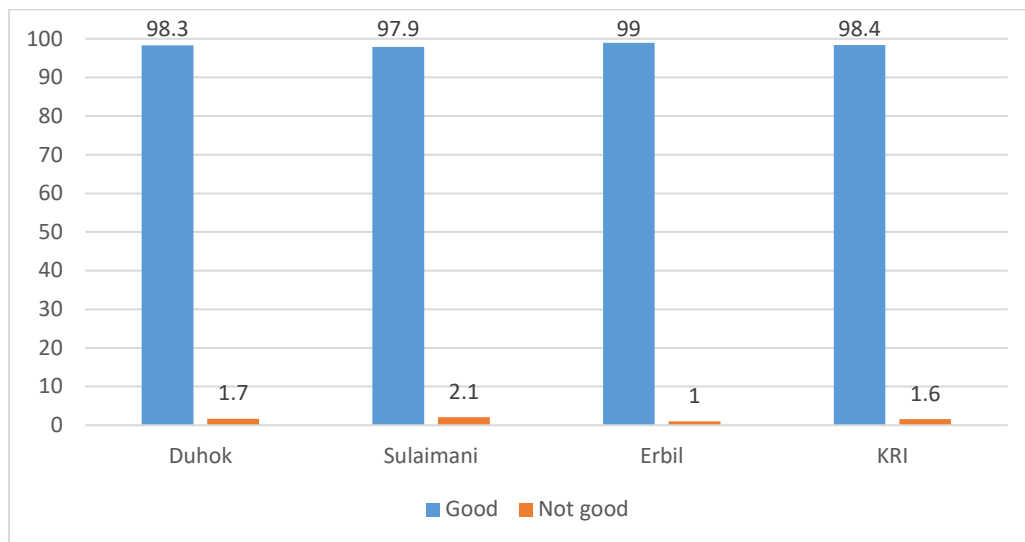
Sources	KRI	Erbil	Sulaymaniyah	Duhok	Indicator
women's health and social status Survey (WISH-II 2021)	96.4	92.6	98.3	99	Percentage of currently married or previously married women aged 15 - 49 years who have given birth to child in medical centers in the last 5 years.
women's health and social status Survey (WISH-II 2021)	3.6	7.4	1.7	1	Percentage of currently married or previously married women aged 15-49 who gave birth to a child outside medical center in the last 5 years.
women's health and social status Survey (WISH-II 2021)	49.2	42.6	45.8	65.1	percentage of currently or previously married women aged 15-49 who had a natural live birth within the five years prior to the survey
women's health and social status Survey (WISH-II 2021)	50.8	57.4	54.2	34.9	percentage of currently or previously married women aged 15-49 years who had live births with cesarean section within the five years prior to the survey
women's health and social status Survey (WISH-II 2021)	89.5	84.5	97.1	87.8	Percentage of currently married or previously married women aged 15-49 who gave birth and breastfed their children immediately after delivery in the 5 years prior to the survey.
women's health and social status Survey (WISH-II 2021)	75.6	79.3	78.3	63.9	Percentage of currently married or previously married women aged 15-49, they or their spouses used family planning methods in the past
women's health and social status Survey (WISH-II 2021)	82.3	87.4	78.4	81.9	percentage of currently married or previously married women aged 15-49, they or their spouses currently using family planning methods
women's health and social status Survey (WISH-II 2021)	30.5	29.1	30.2	34.3	percentage of currently married or previously married women aged 15-49, they or their spouses currently use any traditional family planning methods

Continued 2

Sources	KRI	Erbil	Sulaymaniyah	Duhok	Indicator
women's health and social status Survey (WISH-II 2021)	69.5	70.9	69.8	65.7	percentage of currently married or previously married women aged 15-49, they or their spouses currently use any modern family planning methods
women's health and social status Survey (WISH-II 2021)	91.6	91.9	90	94.4	percentage of women aged 15 years and older who assess their health status "well"
women's health and social status Survey (WISH-II 2021)	8.4	8.1	10	5.6	percentage of women aged 15 years and older who assess their health status "unwell"
women's health and social status Survey (WISH-II 2021)	5.7	8.1	3.9	5.4	Percentage of women aged 15 years and older who smoke cigarette or the likes
women's health and social status Survey (WISH-II 2021)	48	53.3	52.2	3.4	Proportion of women aged 15 years and older who have been circumcised
women's health and social status Survey (WISH-II 2021)	94.4	91	96.2	96.3	Percentage of household members aged 10 years and older who received treatment at home during infection with coronaviruses
women's health and social status Survey (WISH-II 2021)	3.9	6.6	2.3	2.2	percentage of household members aged 10 years and older who received treatment in public hospitals during their infection with coronaviruses
women's health and social status Survey (WISH-II 2021)	1.8	2.4	1.4	1.4	percentage of household members aged 10 years and older who received treatment in private hospitals during their infection with coronaviruses

Juveniles and youths aged 10-30 years old based on assessment for their health status: health status is not merely physical status or absence of diseases, but is a state of complete physical, mental, and social well-being that are required for performing daily activities in a proper manner. In Kurdistan region, 98.4% of Juveniles and youths aged 10-30 have a good assessment for their health. The rate is also high at the level of governorates, Erbil with 99%, Duhok with 98.3% and Sulaymaniyah with 97.9%. For those who do not have a good assessment of their health, Sulaymaniyah comes first with 2.1%, Duhok with 1.7% stands next followed by Erbil with 1% according to the National youths and juveniles survey 2019 (following Figure).

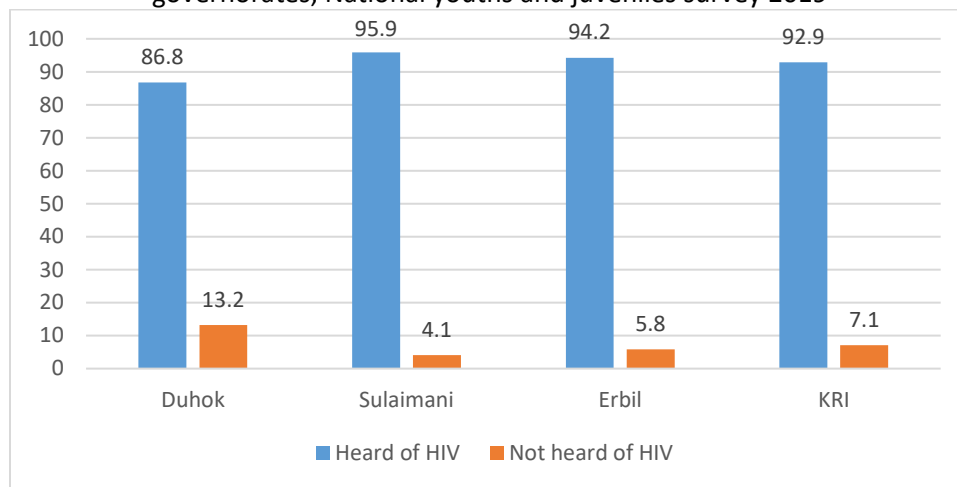
Figure 15: percentage of Juveniles and youths aged 10-30 years old based on assessment for their health status at the level of KRI and governorate, National youths and juveniles survey 2019



Hearing of AIDS for youths aged 18-30

Percentage of youths aged 18-30 based on hearing of AIDS: AIDS is a deadly disease that causes death by attacking the body's immune system. This disease transmits through blood infusion, sexual intercourse, and the use of dirty medical tools, especially through injection. The purpose behind this indicator is to show the level of awareness of youths of the disease and causes and preventive ways. In general, juveniles and young people (18 - 30) who have heard of this disease in Kurdistan region is pleasant with a high rate of 92.9%. The same is true at the level of governorates, Suleimani at 95.9% and Erbil at 94.2% relatively close to each other and Dohuk is behind with 86.8%. For those who have not heard of this disease, the rate is 7.1% at the level of Kurdistan region and at the level of governorates, the highest rate goes for Duhok with 13.2% far standing from Erbil and Suleimani governorates with 5.8% and 4.1% respectively.

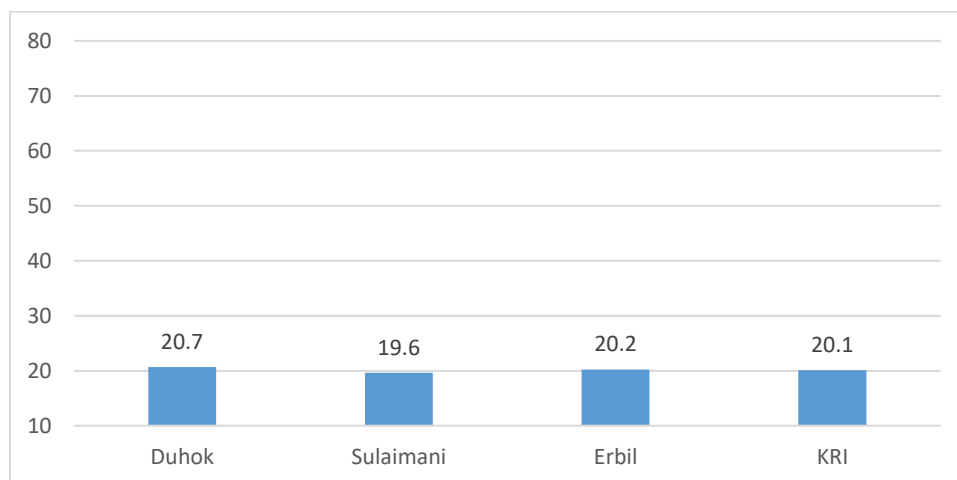
Figure 16: Percentage of youths aged 18-30 based on hearing of AIDS at the level of KRI and governorates, National youths and juveniles survey 2019



Smoking among juveniles and youths aged 15 - 30

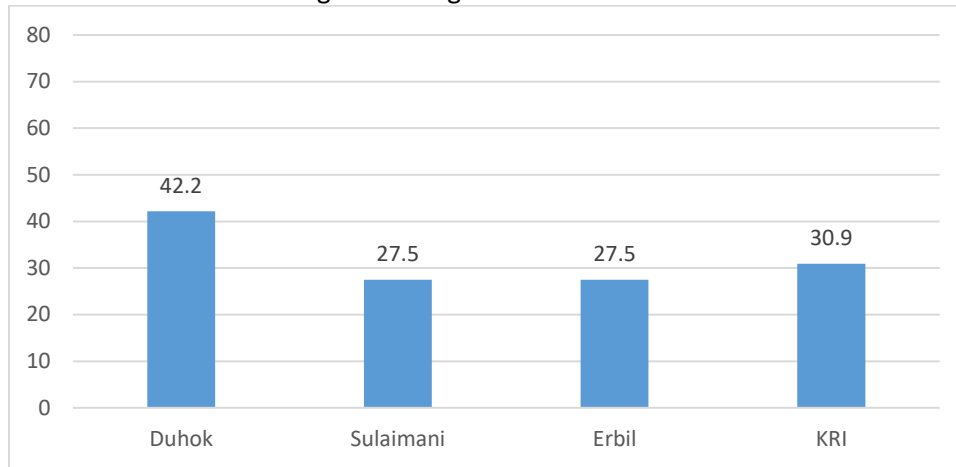
Percentage of juveniles and youths aged 15 - 30 who smoke: smoking is not only a great risk to human health, but it can also cause mental and economic damage. Smoking is a common and dangerous phenomenon among young people. In Kurdistan region, smoking rate reached 20.1% among juveniles and youth which is relatively high according to the national juveniles and youth survey 2019. The Governorates' records are close to that of the region, with Dohuk having the highest rate at 20.7%, Erbil and Suleimani at 20.2% and 19.6% come next respectively (Figure 17).

Figure 17: Percentage of juveniles and youths aged 15 - 30 who smoke at regional and governorates level, National youths and juveniles survey 2019



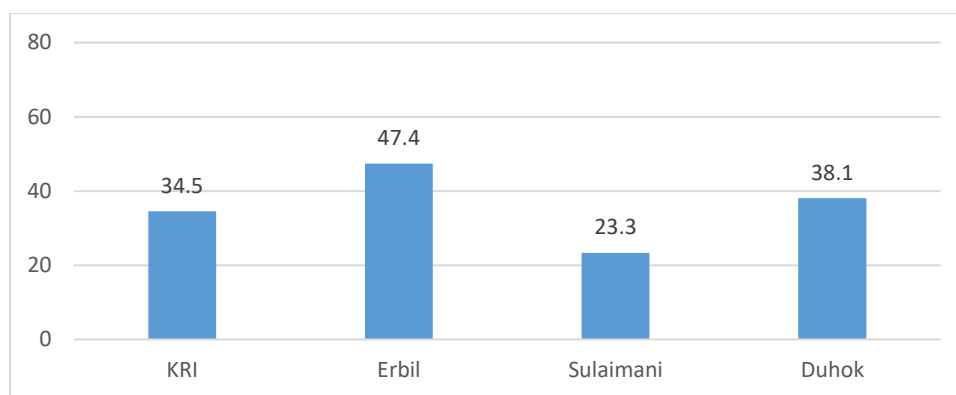
Percentage of juveniles and youths aged 15-30 who started smoking before the age of 15: smoking among young people under 15 years of age is an alarm for society because of its negative effects on this group, especially in terms of health and economy. The rate is high in Kurdistan region accounting for 30.9% and at the governorates level, Dohuk governorate has the highest rate at 42.2%, followed by Erbil and Suleimani governorates with an equal rate of 27.5% according to National youths and juveniles survey 2019.

Figure 18: Percentage of juveniles and youths aged 15-30 who started smoking before the age of 15 at the regional and governorates level in 2019



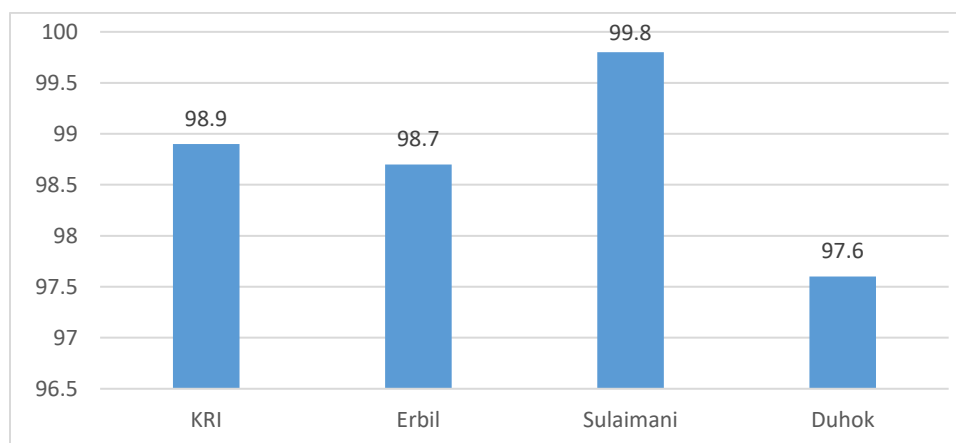
Percentage of married or previously married women aged 15-49 years who visited hospital within the first week after the end of their pregnancy (stillbirth, miscarriage and abortion) 5 years before interviewing: visiting hospital to receive medical care and council immediately after the end of pregnancy (stillbirth, miscarried and abortion) or after a few days not more than a week, is essential to avoid unwanted situations that risks life or health. Government can play an important role in avoiding risks through opening hospitals, medical centers special for women and maternity, health centers, attracting health workers and giving information through the media or directly to women. Percentage of this group of women who visited hospital within the first week after the end of their pregnancy 5 years before interviewing reached 34.5% in Kurdistan region which is relatively a low rate. At the governorates level, Erbil governorate has the highest rate (47.4%) compared to Duhok (38.1%) and Suleimani (23.3%) as shown in the following Figure.

Figure 19: Percentage of married or previously married women aged 15-49 years who visited hospital within the first week after the end of their pregnancy (stillbirth, miscarriage and abortion) 5 years before interviewing at the regional and governorates level, IWISH-II) 2021



Women aged 15–49 years who are currently married or previously married and received prenatal health care for their last live birth during the 5 years before interviewing: Women's awareness of pregnancy and receiving prenatal medical care play an important role for the health of mother and her baby. Fortunately, figures are pleasing in Kurdistan region accounting for 98.9%, at the level of governorates, Suleimani recorded the highest rate with 99.8%, and Erbil and Duhok with 98.7% and 97.6% come next respectively.

Figure 20: Women aged 15–49 years who are currently married or previously married and received prenatal health care for their last live birth during the 5 years before interviewing at the regional and governorates level, IWISH-II 2021



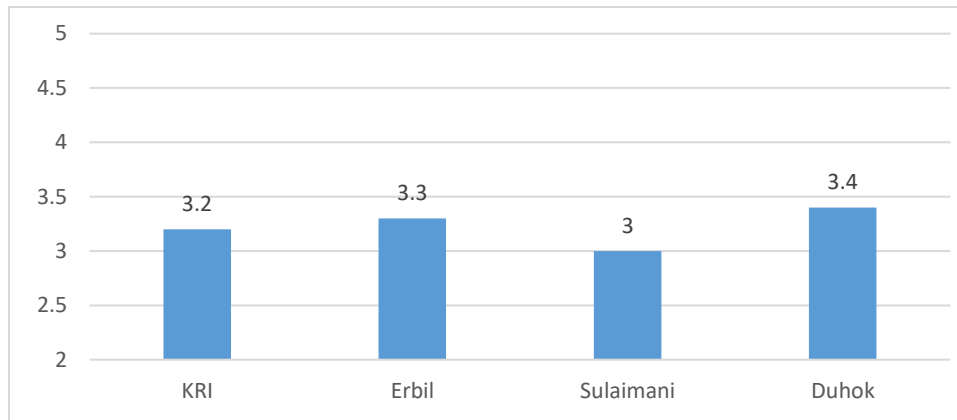
Fertility among women aged 15-49

Fertility among women aged 15-49: is the average number of children that would be born to a married woman during her reproductive time (age 15-49). In Kurdistan region, the average number of children per woman has been 3.2, and at the governorate level, Dohuk governorate with 3.4 children per

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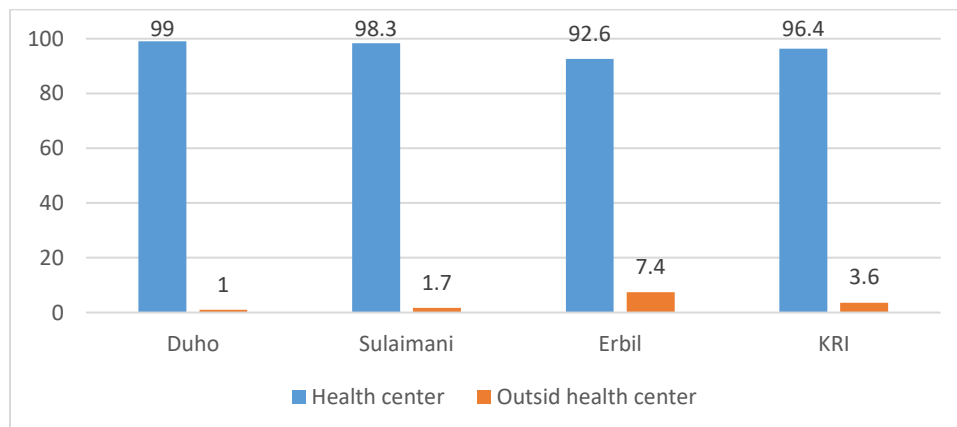
woman recorded the highest number compared to Erbil with 3.3 and Suleimani with 3 children per woman according to IWISH-II 2021 (Figure 21).

Figure 21: Fertility among women aged 15-49 at the regional and governorates level, IWISH-II 2021



Percentage of married or previously married women aged 15-49 who gave birth to a child in and outside health centers in the past 5 years before survey (interviewing). Giving birth in a health center under the supervision of experts and competent people in this field is a factor to avoid risks and reducing mortality for both mothers and children. In Kurdistan region, the rate of childbearing in the health centers is high at 96.4%, with the highest rate in Duhok governorate with 99% followed by Suleimani with 98.3% and Erbil with 92.6%. Similarly, giving birth outside a health center away from medical cares is a serious risk to the life of the mother and her baby. For these cases (childbearing outside health centers), Kurdistan region recorded 3.6%, and at the governorate level, the highest rate is in Erbil governorate with 7.4%, then Suleimani and Duhok governorates with a significant difference compared to Erbil recorded 1.7% and 1% respectively as shown below.

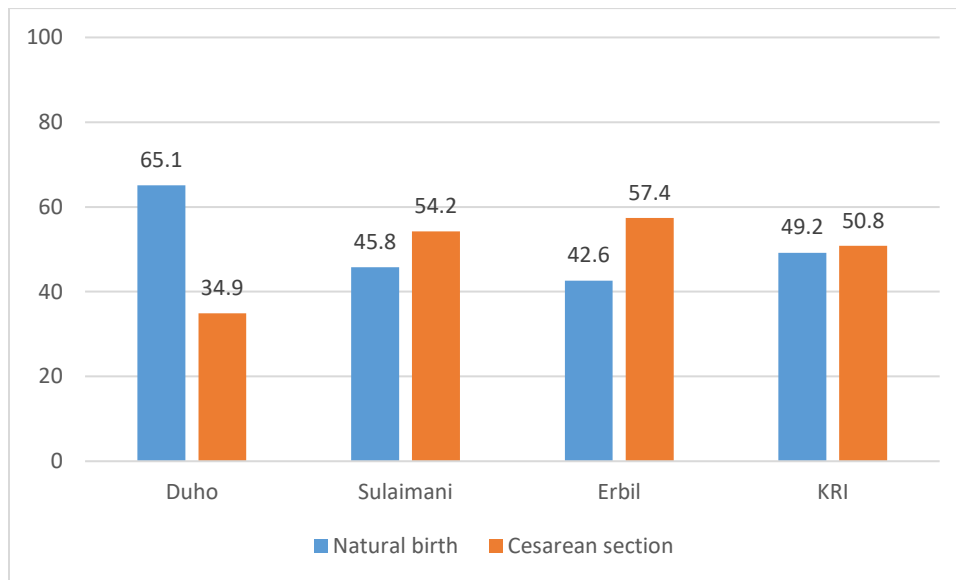
Figure 22: Percentage of married or previously married women aged 15-49 who gave birth to a child in and outside health centers in the past 5 years before interviewing



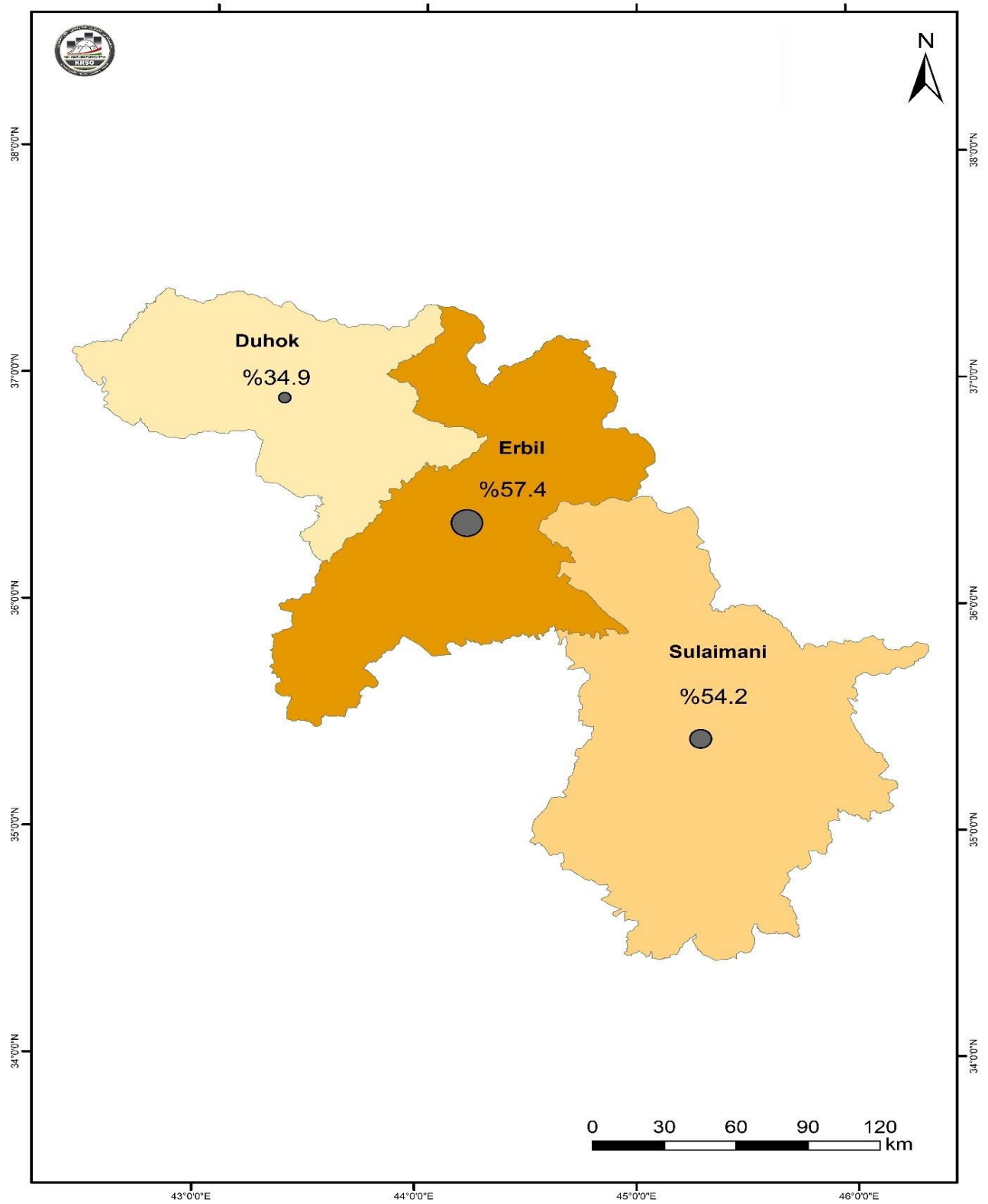
Types of birth (natural birth and cesarean section)

Percentage of currently married or previously married women aged 15-49 who had living children in the 5 years prior to the survey by types of birth: In general, there are two types of birth- natural birth and cesarean section. Although the natural birth is the most common type in the world, the cesarean section has increased significantly in the recent years In Kurdistan region. According to IWISH-II 2021, **natural birth** recorded 49.2% in Kurdistan region and at the level of governorates, Duhok with 65.1% has the highest rate for natural birth, then each of Suleimani and Erbil governorates come with 45.8% and 42.6% respectively. Cesarean section is high in Kurdistan region reached 50.8%. At the level of governorates, the highest rate is reported in Erbil governorate at 57.4%, then Suleimani with 54.2% and Duhok with 34.9% come next. we find that cesarean section is high in the region and governorates especially in Erbil with 57.4% and Suleimani with 54.2% which could have negative impacts on women's health that needs to be taken into consideration by relevant parties to have plans and strategies to reduce the cases.

Figure 23: Percentage of currently married or previously married women aged 15-49 who had live birth in the 5 years prior to the survey by types of birth (natural birth and cesarean section) at the level of KRI and governorates

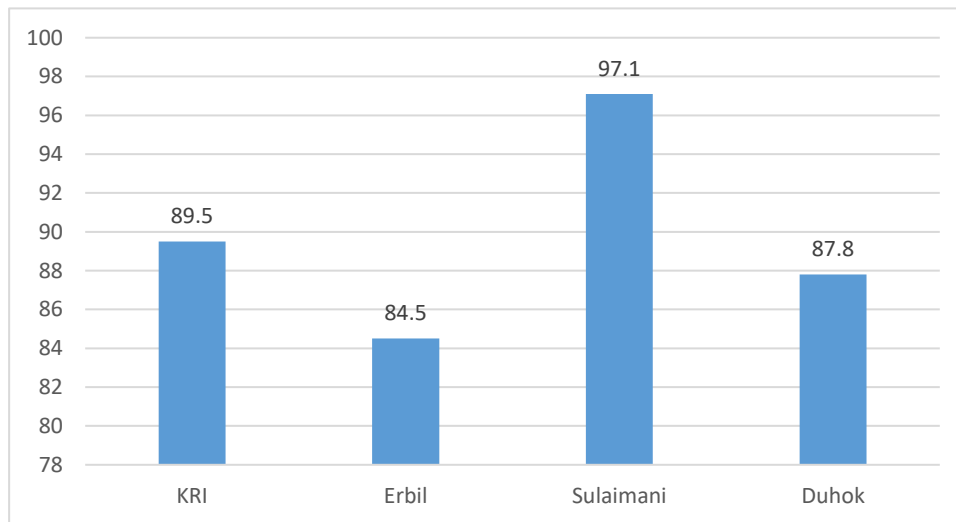


Map 4: percentage of currently married or previously married women aged 15-49 who had natural live birth in the 5 years prior to the survey at the level of governorates



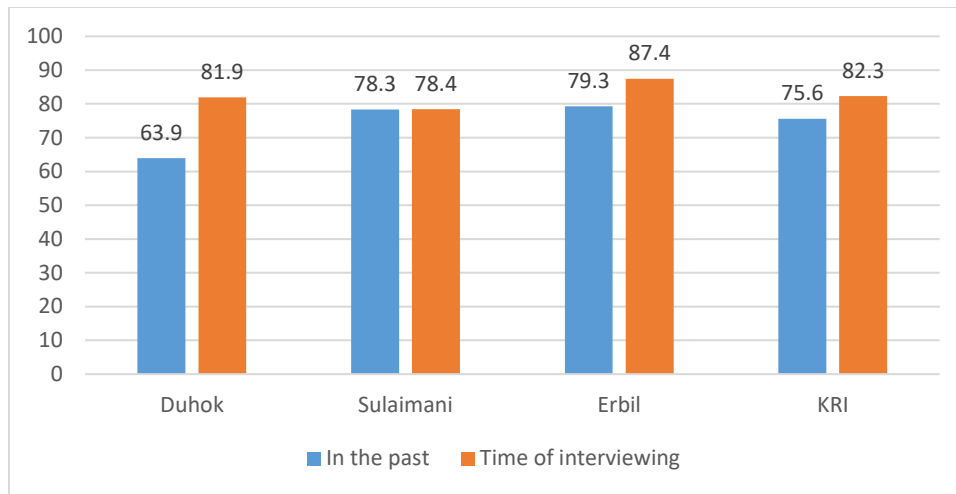
Percentage of married or previously married women aged 15 -49 who had a live birth in the 5 years prior to the survey and started breastfeeding immediately after delivery: Natural breastfeeding is very beneficial for both baby and mother. United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) recommend natural breastfeeding from the first hour after birth to the first six months. Breast milk is enough to meet the child need for food, which is very effective on the child's growth without any additional foods. In Kurdistan region, breastfeeding rate is 89.5% and at the governorates level, Suleimani governorate has the highest rate of 97.1%, followed by Duhok and Erbil governorates with 87.8% and 84.5% respectively (Figure 24).

Figure 24: percentage of married or previously married women aged 15 - 49 who had a live birth in the 5 years prior to the survey and started breastfeeding immediately after giving birth at the region and governorates level



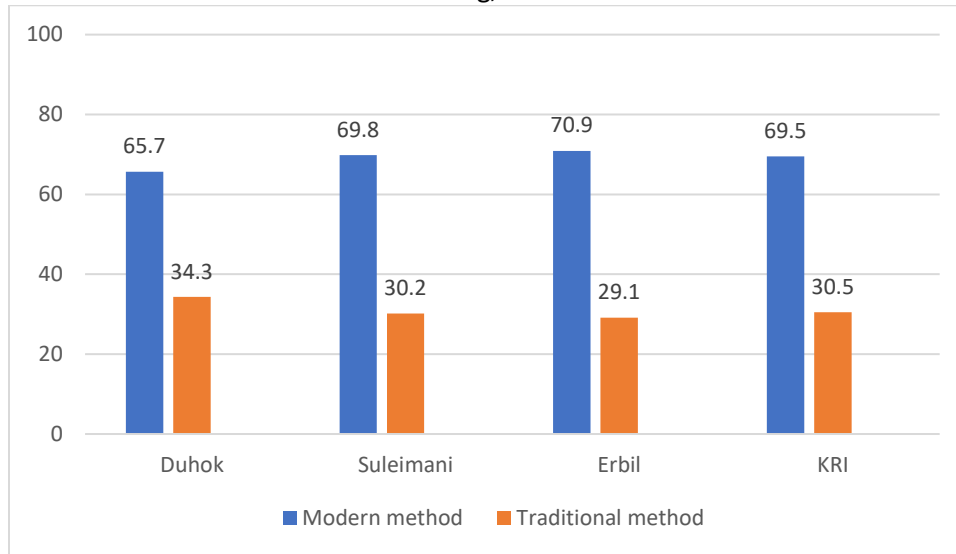
Percentage of married or previously married women aged 15-49, who or whose husband had used household planning methods in the past or at the time of interviewing: household planning methods is used to prolong the interval between two pregnancies or preventing pregnancy whether by spouses or one of them to prevent or delay pregnancy for any reason (economic, social, health) that has a direct effect on reproduction and population growth. According to IWISH-II 2021, In Kurdistan region, women who had used any kind of household planning methods in the past (before survey) is 75.6%. At the level of governorate, the highest rate is reported in Erbil with 79.3%, followed by Suleimani and Duhok governorates with 78.3% and 63.9% respectively. As for women who currently use any household planning methods, the rate is noticeable (82.3%) in Kurdistan region with the highest rate in Erbil governorate (87.4%) followed by Duhok and Suleimani at 81.9% and 78.4% respectively. If we compare the use of household planning methods in Kurdistan region in the past and present, we can see an increase in the using of the household planning methods. At the level of governorates, using the methods increased in Erbil and Dohuk governorates, unlike Suleimani that shows decrease (Figure 25).

Figure 25: Percentage of married or previously married women aged 15-49, who or whose husband had used household planning methods in the past or at the time of interviewing at the region and governorates level



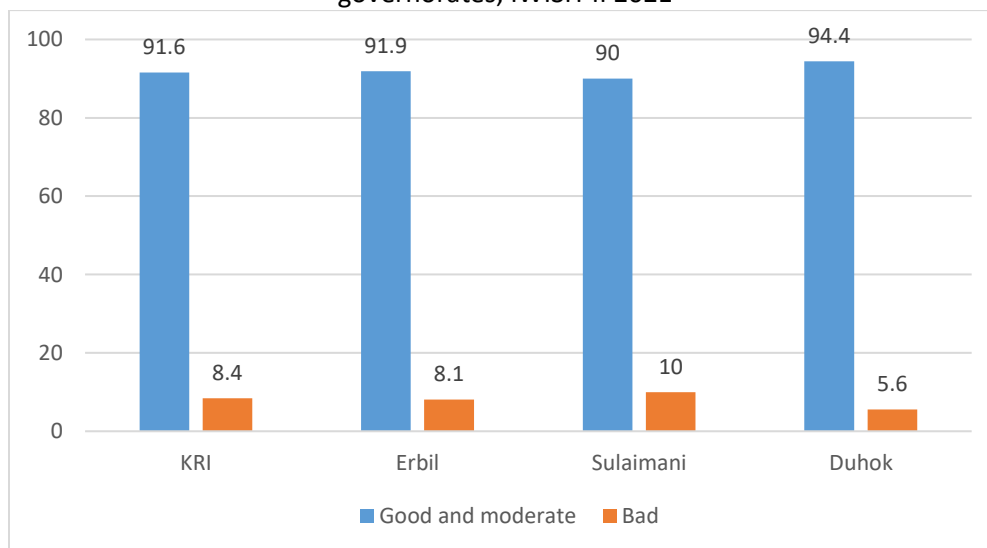
Percentage of married or previously married women aged 15-49 years old, who or whose husband had used any modern or traditional household planning methods in the past or at the time of interviewing: there are two types of household planning method, the new and traditional, each with its own effects and consequences. In Kurdistan region, **using traditional method** (exclusive/prolonged breastfeeding, abstinence...) is 30.5% with the highest rate in Duhok governorate (34.3%) compared to Suleimani (30.2%) and Erbil (29.1%). **As for using modern method** (oral contraceptive pills, implants, injectables, contraceptive patch and vaginal ring...) is 69.5% at the level of Kurdistan region and at the level of governorates, the highest rate is in Erbil governorate at 70.9%, followed by Suleimani and Duhok governorates with 69.8% and 65.7% respectively. If we compare the two methods in Kurdistan region, we see that the use of modern method is almost twice as much as traditional method, and the same is true at the governorate level as shown below.

Figure 26: Percentage of married or previously married women aged 15-49 years old, who or whose husband had used any modern or traditional household planning methods in the past or at the time of interviewing, IWISH-II 2021



Assessing of women aged 15 and over about their health status: it refers to the respondents' opinion on their physical, social and mental health, not just the absence of disease or disability that required for conducting daily activities in an appropriate manner. In Kurdistan region, the percentage of women who assessing their health status well have a high percentage of 91.6% with the highest percentage of 94.4% in Duhok governorate followed by Erbil and Sulaymaniyah governorates with 91.9% and 90.9% respectively according to IWISH-II 2021. Regarding **women who do not have a good assessment for their health status** in Kurdistan region, it recorded a rate of 8.4% with the highest rate in Sulaymaniyah with 10.0%, followed by Erbil and Duhok governorates with 8.1% and 5.6% respectively (Figure 27).

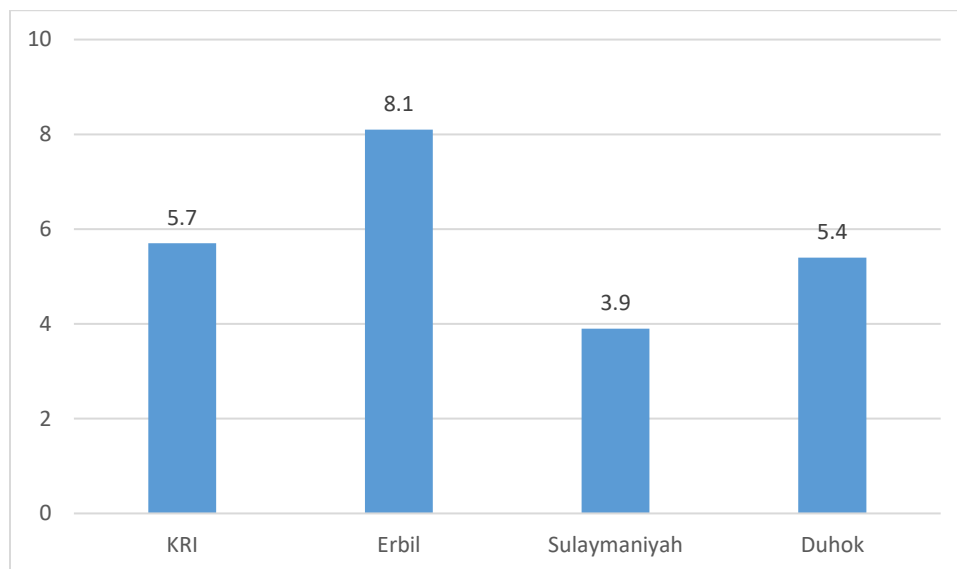
Figure 27: Assessing of women aged 15 and over for their health status at the level of KRI and governorates, IWISH-II 2021



Smoking among women aged 15 years and above

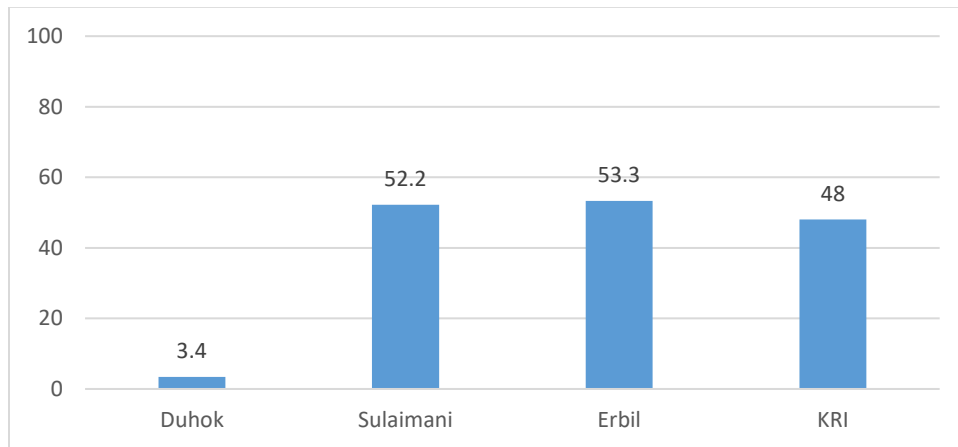
Percentage of women aged 15 years and older who use tobacco (cigarette and the likes): Smoking of any kind is harmful to health which causes diseases such as lung, mouth and throat cancer. Using cigarette, hookah and the likes is relatively widespread among women. At the level of Kurdistan region, 5.7% of women aged 15 and over smoke with the highest rate in Erbil governorate at 8.1%, followed by Duhok and Sulaymaniyah governorates with 5.4% and 3.9% respectively, IWISH-II 2021 (Fi 28).

Figure 28: Percentage of women aged 15 years and older who smoke at the level of KRI and governorates, IWISH-II 2021



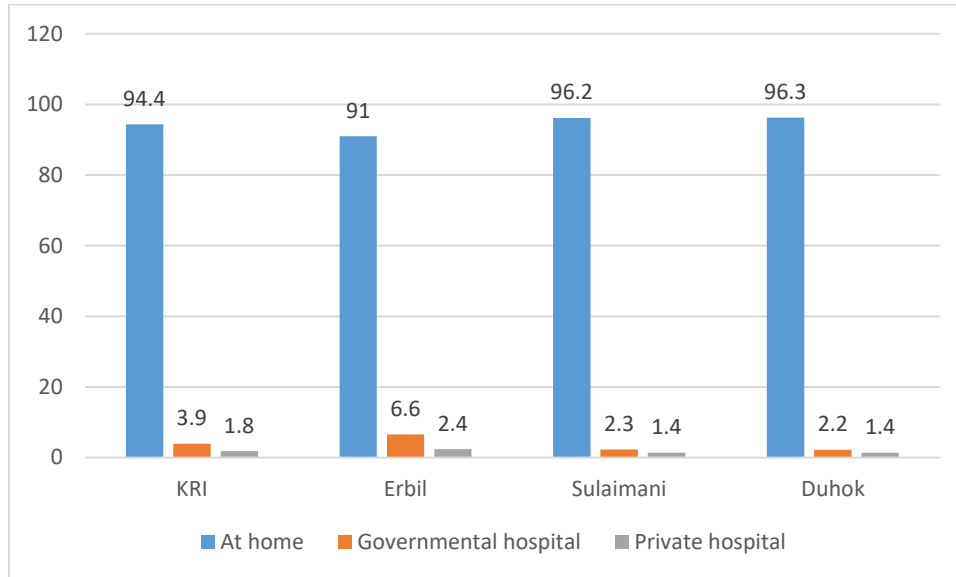
Percentage of women aged 15 and older who have been circumcised: female genital mutilation (FGM) is a common phenomenon in Eastern society. According the law made in Kurdistan parliament, circumcision is forbidden and cost imprisonment or fine penalty however, it is practiced hiddenly in some areas which risks women’s physical and mental health status. Circumcision rate is high in Kurdistan region (48%) and by governorates, Erbil (53.35) and Sulaymaniyah (52.2%) registered significant high rates compared to Duhok (3.4%) according to IWISH-II 2021 (Figure 29).

Figure 29: Percentage of women aged 15 and older who have been circumcised at the level of KRI and governorates, IWISH-II 2021



Percentage of households’ members ages 10 and older based on the place they were treated during infection with coronavirus: The COVID-19 is a global pandemic that has killed millions of people around the world. Therefore, with the spread of the virus all over the world in 2020, governments and organizations around the world announced strict rules and measures against further spread of the virus. Many patients have been treated at home or in hospitals (public and private) according to their health status and severity of the disease. In Kurdistan region, majority of those who have been infected with the corona disease, had received treatment at home is 94.4% according to IWISH-II 2021. At the level of governorates, there is no significant difference between Duhok and Sulaymaniyah governorates with 96.3% and 96.2% respectively and Erbil recorded the lowest rate at 91% for those who received treatment at home. As for those who received treatment in government hospitals is 3.9% at the level of Kurdistan region and at the level of governorates, the highest rate is in Erbil with 6.6%, followed by Sulaymaniyah and Duhok with 2.3% and 2.2% respectively. **Those who received medical threarment in the private hospitals** in Kurdistan region is 1.8%, with Erbil having the highest rate of 2.4% and Duhok and Sulaymaniyah governorats with the same rate of 1.4% follow.

Figure 30: Percentage of households' members ages 10 and older based on the place they were treated during infection with coronavirus at the level of KRI and governorates, IWISH-II 2021



Polling the measures taken by Kurdistan region government against Covid-19

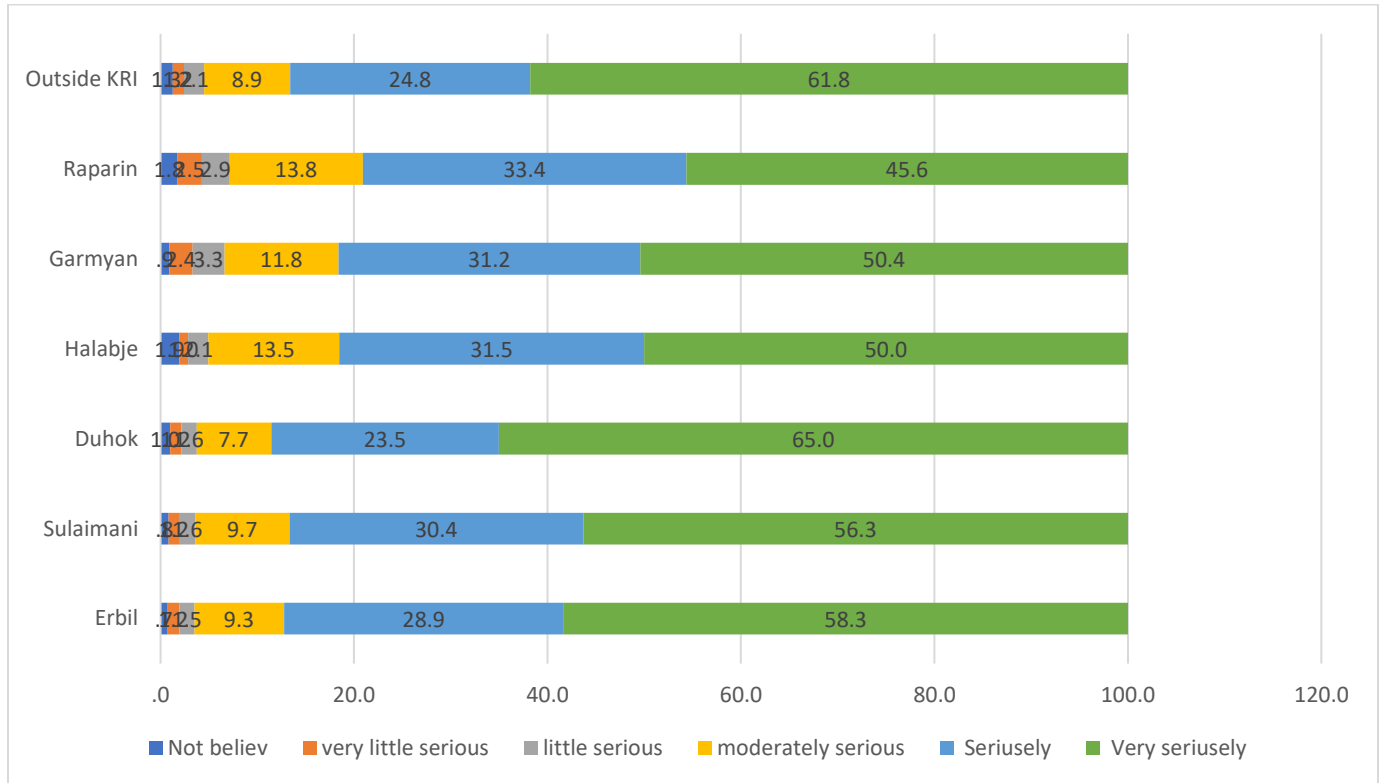
Following the spread of the Covid-19 and recording several cases in Kurdistan region, the region took measures against the spread of the coronavirus. Under the supervision of the Ministry of Planning, KRSO conducted a 48-hour online poll on 24/3/2020 to get public opinion about the situation and how it is handled by the government, so the government can use the results to plan to take further steps to control coronavirus. 49,037 people participated, 48,082 in Kurdistan region and 995 outside the region.

Seriousness about Coronavirus

One of the indicators of the polling was the public opinion about the seriousness of Coronavirus if it is taken or not seriously. According to the results, taking the disease very seriously is relatively high, as it is 65% in Duhok governorate, 58.3% in Erbil, 65.3% in Sulaymaniyah, 50% in Halabja and both administrations of Garman and Raparin reported 50.4% and 45.65 respectively (Figure 31).

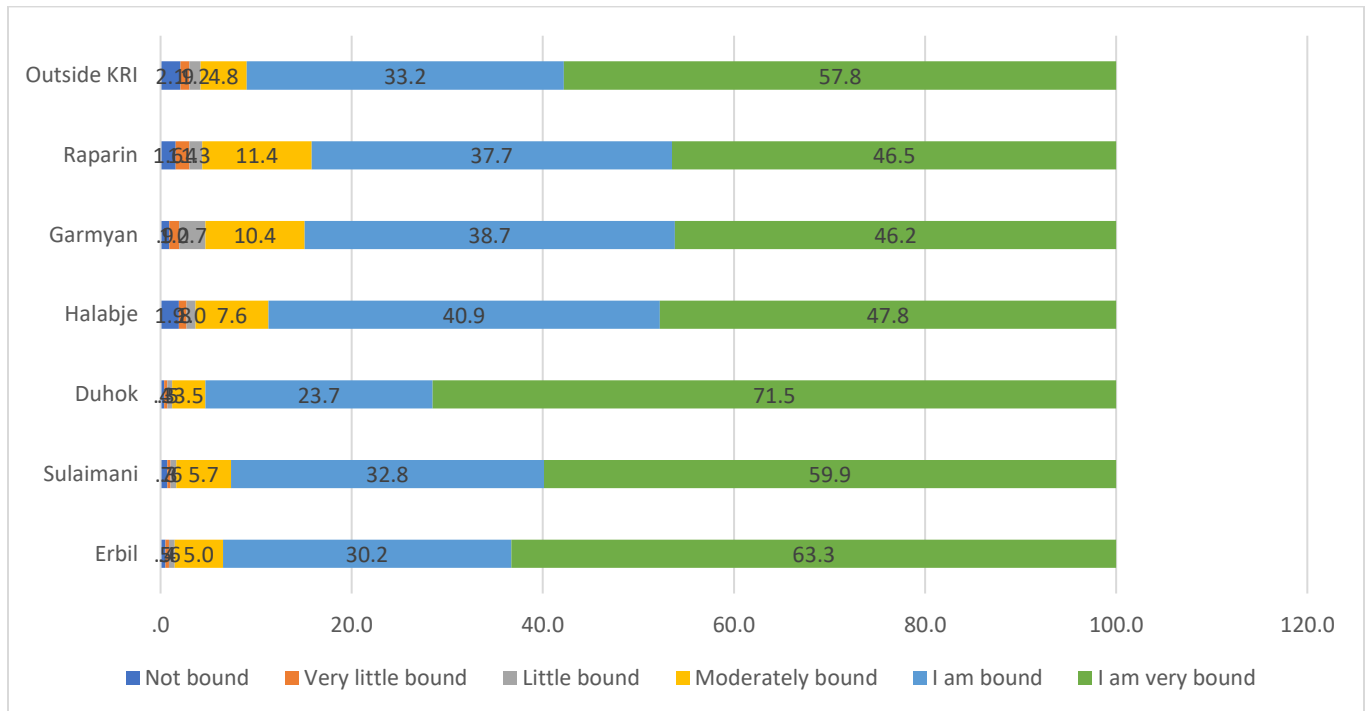
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Figure 31: percentage of taking the disease (corona virus) seriously by public at the level of governorates and independent administrations in Kurdistan region - Online poll 2020



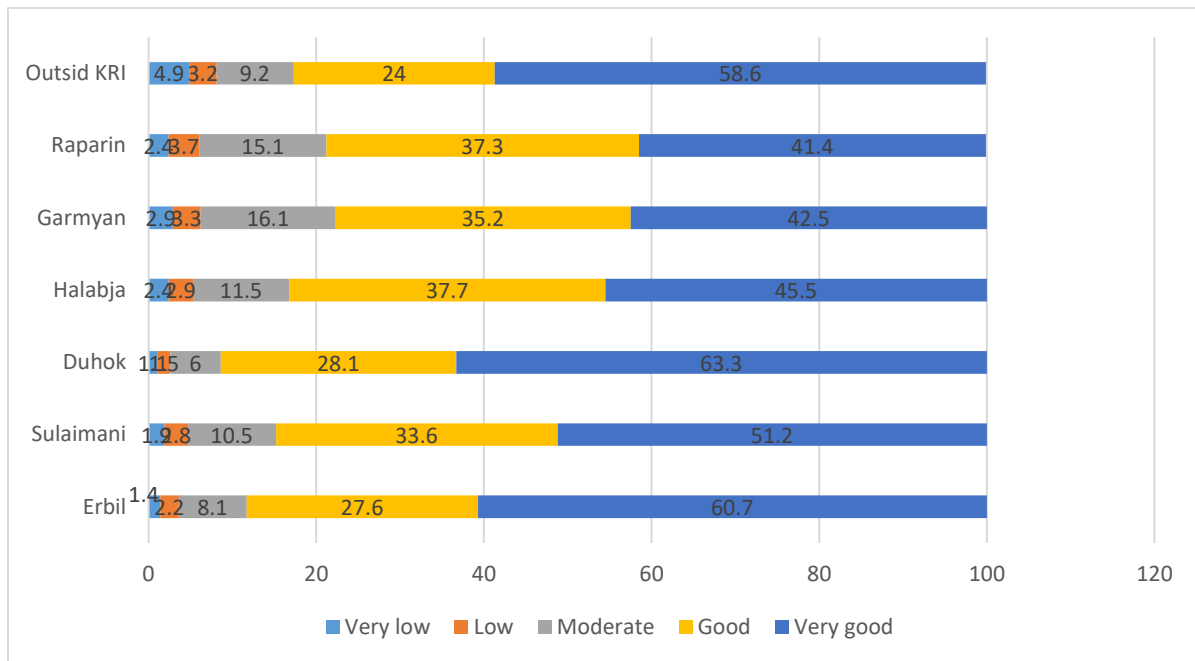
Commitment of citizens to the rules of government to combat COVID-19: Kurdistan region government issued guideline and regulations through ministry of health to prevent more spread of Coronavirus and save people’s life. In KRI, People’s commitment to the rules was relatively high, where at the level governorates, the highest rate has been reported in Duhok governorate accounting for 71.5% followed by Erbil and Sulaymaniyah at 63.3% and 51.9% respectively. For the independent administrations (Garmyan and Raparin) there is not a notable difference as can be seen in Figure 32.

Figure 32: the rate of commitment of citizens to the rules issued by government against Coronavirus at the level of governorates and independent administrations in KRI, online poll 2020



The effectiveness of KRG regulations against Coronavirus: the guidelines or regulations of KRG had significant role in preventing further spread of the disease. According to the results, at the level of governorates, Duhok reported 63.3% for very good impacts and 28.1% for good impact, in Erbil governorate very good is 60.7 % and good is 27.6%, in Sulaymaniyah very good is 51.2% and good is 33.6%. As for independent administrations, Garmyan reported 42.5% for very good and 33.6% for good and Raparin recorded 41.4% and 37.3% for very good and good respectively (Figure 33).

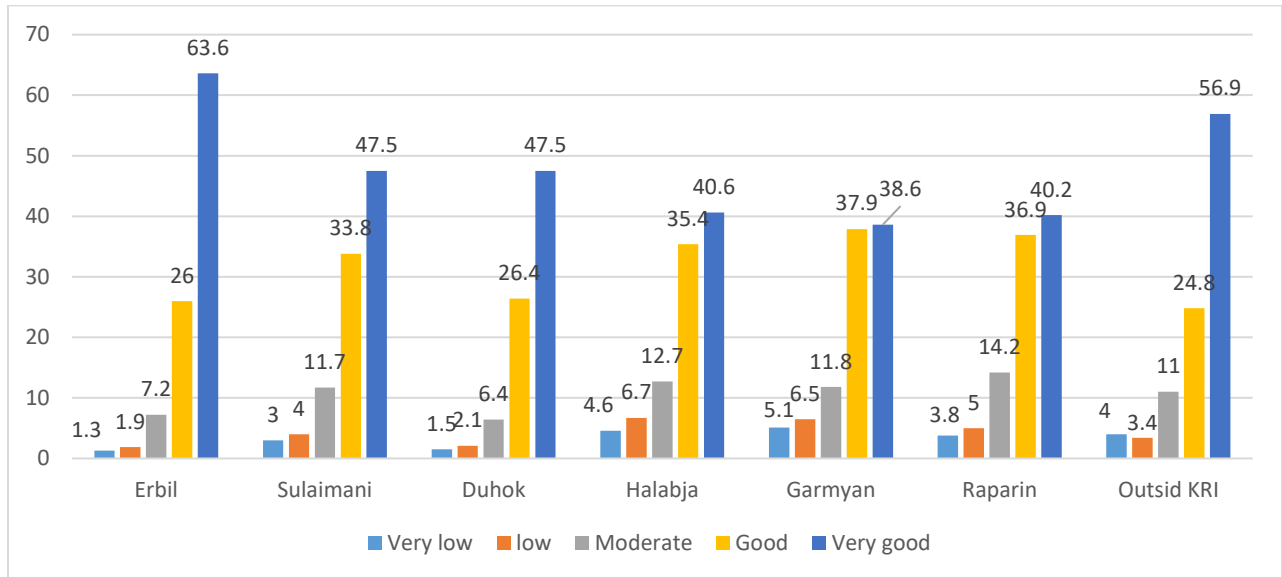
Figure 33: percentage rate of effectiveness of KRG regulations against Coronavirus against Coronavirus at the level of governorates and independent administrations in KRI, online poll 2020



Responsibility of KRG in combating outbreak of Coronavirus: the online poll 2020 revealed the citizens' evaluation for KRG's responsibly to combat Coronavirus. According to the results, at the level of governorates, Duhok and Erbil governorates equally reported 63.6% for very good and 26.4% and 26% for good in Duhok and Erbil respectively, Sulaymaniyah governorate reported 47.5% for very good and 33.8% for good. The evaluation of independent administrations was as follows: 38.6% and 40.2% for very good in Garmyan and Raparin respectively and 37.9% and 36.9% for good in Garmyan and Raparin respectively. Regarding those who evaluate the government's responsibly in low level, Duhok recorded 1.5% followed by Erbil at 1.9%, Sulaymaniyah at 3%, Halabja at 4.6% Garmyan and Raparin administrations recorded 5.1% and 3.8% respectively, Figure 34.

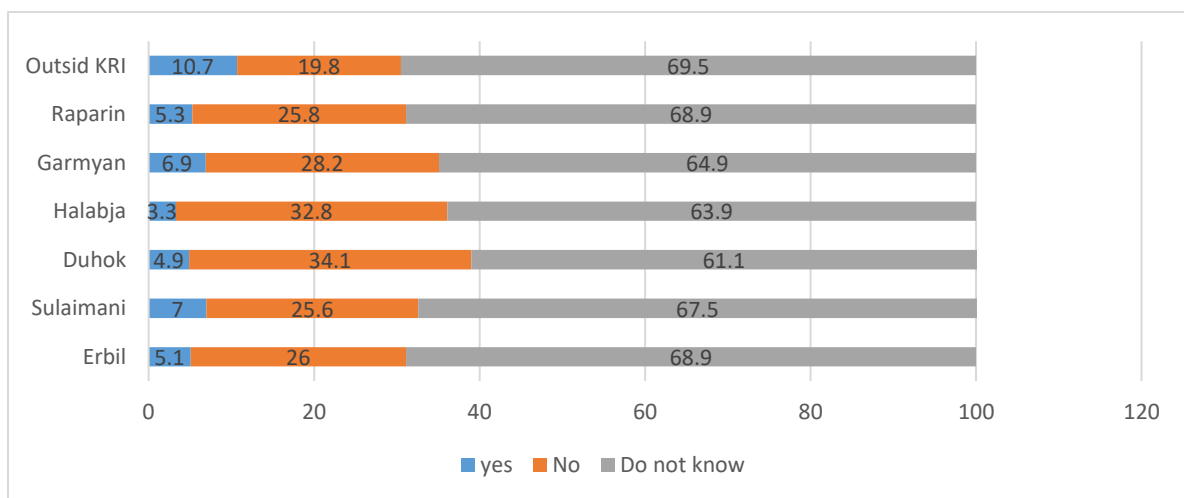
Kurdistan Region 2018-2022 Indicators

Figure 34: responsibility of KRG in combating outbreak of Coronavirus at the level of governorates and administrations in KRI, online poll 2020



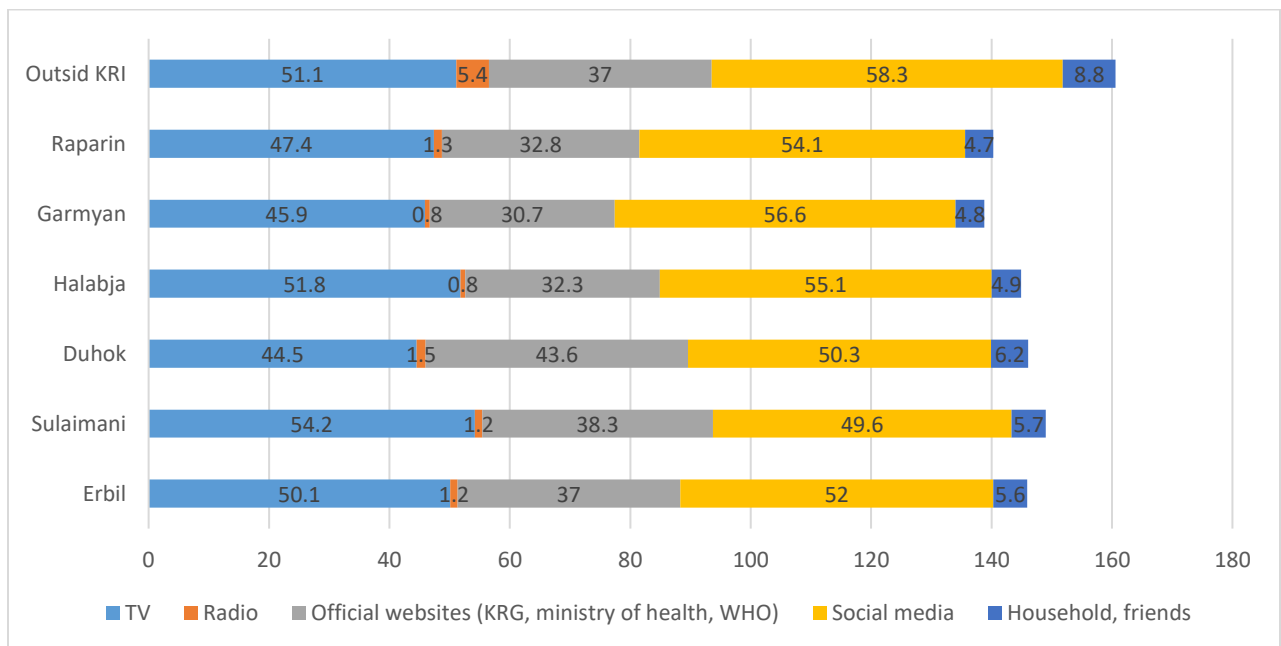
Respondents' prediction of being affected by the disease in the future: people have not a clear idea about being affected by Coronavirus in the future as this is a new disease and people have no previous experience with that, therefore, the percentage of those who responded with “I don’t know” have recorded a high rate at 68.9% in Erbil, 67.5% in Sulaymaniyah, 61.1% in Duhok, 63.9% in Halabja, 64.9% in Garmyan administration and 68.9% in Raparin administration. For those who believed they will not be affected by the disease and responded with “NO”, Duhok governorate reported 34.1%, Sulaymaniyah 25.6%, Erbil 25%, Halabja 32.8%, and both Garmyan and Raparin administrations recorded 28.2% and 25.8% respectively (Figure 35).

Figure 35: respondents' prediction of being affected by the disease in the future at the level of governorates and administration in KRI, online poll 2020



The main sources of getting information about the coronavirus: having the necessary information on how to prevent from infection plays an important role in protecting people from diseases by taking the necessary measures at the time of feeling any symptoms. In this regard, social media and television channels have been pioneer in providing information and giving awareness to people about the virus, as well as the role of official websites of Kurdistan region government, ministry of health and the World Health Organization (WHO) cannot be underestimated. In Erbil governorate, 52% of information sourced from social media, 50.1% from TV channels. For Sulaymaniyah governorate, 49.6% and 54.2% of information originated from social media and TV channels respectively. In Duhok governorate, 50.3% of information comes from social media and 44.5% from TV channels. In Halabja, social media provided 55.1% of information about Coronavirus and 51.8% provided through TV channels. In both Raparin and Garmyan administration, 56.6% and 54.1% of people received the information from social media and 45.9% and 47.4% from TV channels respectively (Figure 36).

Figure 36: the main source of obtaining information about Coronavirus at the level of governorates and administration in KRI, online poll 2020



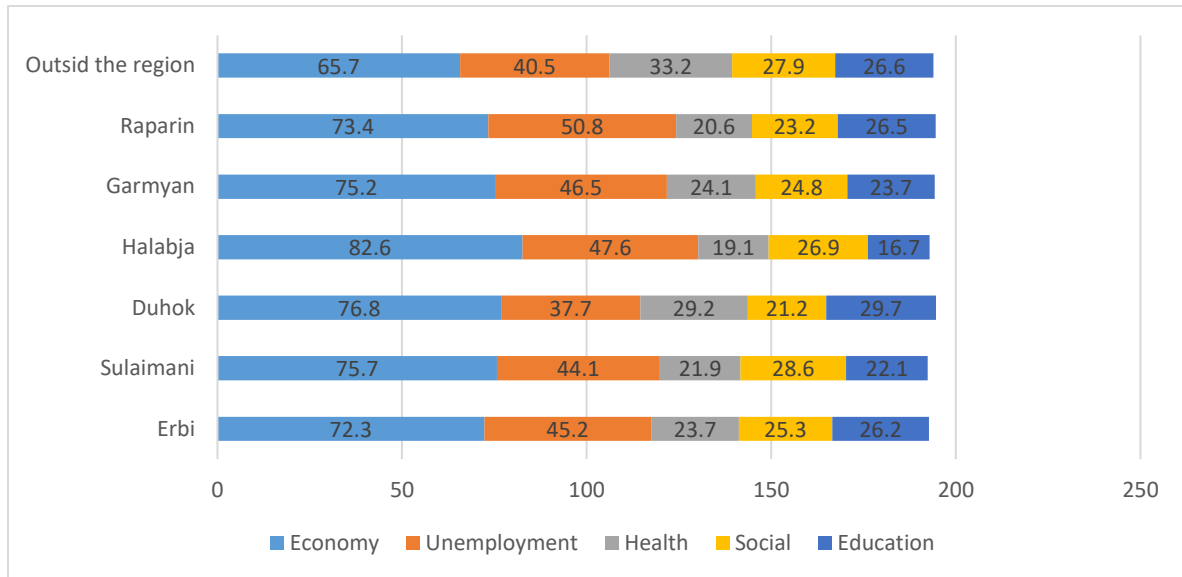
*The rates are more than 100% as more than one answer was allowed

The biggest problems that respondents faced during the outbreak of the coronavirus: Following the spread of the corona virus and taking preventive measures to prevent the disease, people faced many problems in terms of education, social and health, the most problematic ones were economic and unemployment. Economic problem recorded the highest rate in Halabja governorate accounting for 82.6% followed by Duhok at 76.8%,

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Sulaymaniyah, and both Garman and Raparin administrations close to each other at 75.7%, 75.2% and 73.4% respectively and Erbil at 72.3% (Figure 37%).

Figure 37: the biggest problems that respondents faced during the outbreak of the coronavirus at the level of governorates and independent administration in KRI, online poll 2020



*The rates are more than 100% as more than one aswer was allowed

Social

Social section is a major and multi topic section that contains many important indicators. The indicators of this section originated from juveniles and youth survey and the women's social and health condition survey conducted in 2021 (IWISH-II). These indicators include the marital status of juveniles and youth, their opinions about several issues and phenomena in the society, their opinions about some issues related to violence against women, the marriage status of women aged 15 and over, marriage of women before the age of 15, reason behind getting marriage and reason behind divorce, the rate and the age of women at the time of divorce, and several other issues as explained in the following table.

Table 3 : Social important indicators at the level of governorates and KRI (%)

Indicator	Duhok	Sulaymaniyah	Erbil	KRI	Sources
Percentage of unmarried juveniles and youths aged (10 - 30) years old	84.5	85.2	78.4	82.6	National youths and juveniles survey 2019
Percentage of married juveniles and youths aged (10 - 30) years old	15.3	14	20.6	16.7	National youths and juveniles survey 2019
Percentage of juveniles and youth aged (10 - 30) years who are divorced	0.1	0.3	0.9	0.4	National youths and juveniles survey 2019
Proportion of juveniles and youths (male, female) aged (10 - 30) years who are widowed	0.1	0	0	0	National youths and juveniles survey 2019
Percentage of juveniles and youth aged (10 - 30) years who have seperated	0	0.4	0.1	0.2	National youths and juveniles survey 2019
Percentage of youngs aged 15-30 who agree that the education of boys is more important than the education of girls	16.9	13.3	15.7	15.1	National youths and juveniles survey 2019
Percentage of youngs aged 15-30 who disagree that the education of boys is more important than the education of girls	80.2	83.4	80.5	81.5	National youths and juveniles survey 2019
percentage of youngs aged 15 - 30 who are neutral or do not know if the education of boys is more important or the education of girls	3	3.3	3.8	3.4	National youths and juveniles survey 2019
percentage of young aged 15 - 30 who agree that a man has the right to beat his wife if she does not listen to him	19.6	9.3	13	13.3	National youths and juveniles survey 2019

Continued 3

Indicator	Duhok	Sulaymaniyah	Erbil	KRI	Sources
percentage of youths aged 15 - 30 who disagree that a man has the right to beat his wife if she does not listen to him	75.8	88	83.4	83.2	National youths and juveniles survey 2019
percentage of youths aged 15-30 who are neutral or do not know if a man has the right to beat his wife if she does not listen to him	4.6	2.7	3.6	3.5	National youths and juveniles survey 2019
percentage of youths aged 15-30 years who agree with murder under the name of honor protection	31.2	6.4	10.1	14.1	National youths and juveniles survey 2019
percentage of youths aged 15-30 years who disagree with murder under the name of honor protection	60.1	89.7	84.8	80.3	National youths and juveniles survey 2019
percentage of youths aged 15-30 years who are neutral or do not know about acceptance of committing murder crimes under the name of honor protection	8.7	3.8	5.2	5.6	National youths and juveniles survey 2019
percentage of youths aged 15-30 years who agree that women are the main partners of men in making all decisions in the household	91.2	86.4	92.1	89.7	National youths and juveniles survey 2019
percentage of youths aged 15-30 years who disagree that women are the main partners of men in making all decisions in the household	6.3	11.7	6.6	8.4	National youths and juveniles survey 2019
percentage of youths aged 15-30 years who are neutral or do not know that women are the main partners of men in making all decisions in the household	2.5	2	1.3	1.9	National youths and juveniles survey 2019
percentage of youths aged 15-30 who disagree that girls should marry their relatives if their guardian wants	75.6	88.4	89.6	85.6	National youths and juveniles survey 2019
Percentage of youths aged 15-30 who are neutral or do not know that girls should marry their relatives if their guardian wants	4.6	1.1	2.1	2.4	National youths and juveniles survey 2019
Percentage of youths aged 15-30 who agree that political activities should be restrictive to men	22.7	18.4	20.5	20.3	National youths and juveniles survey 2019
Percentage of youths aged 15-30 who disagree that political activities should be restrictive to men	70.8	76.3	74.5	74.2	National youths and juveniles survey 2019

Continued 3

Indicator	Duhok	Sulaymaniyah	Erbil	KRI	sources
Percentage of youths aged 15-30 who are neutral or do not know that political activities should be restricted to men	6.5	5.2	5	5.5	National youths and juveniles survey 2019
Percentage of youths aged 15 - 30 who agree that a woman has the right to divorce or separate if she does not compromise with her husband.	68.3	91.9	95.7	87.3	National youths and juveniles survey 2019
Percentage of youths aged 15 - 30 who disagree that a woman has the right to divorce or separate if she does not compromise with her husband.	25.3	4.9	3.6	9.6	National youths and juveniles survey 2019
Percentage of youths aged 15-30 who are neutral or do not know about that women have the right to divorce or separate if she does not compromise with her husband	6.3	3.2	0.8	3.1	National youths and juveniles survey 2019
Percentage of youths aged 15-30 years who agree that women who are not covered are exposed to sexual harassment and offensive	47.4	56.3	48.8	51.3	National youths and juveniles survey 2019
Percentage of youths aged 15-30 years who disagree that women who are not covered are exposed to sexual harassment and offensive	45.5	37.8	45.6	42.7	National youths and juveniles survey 2019
Percentage of youths aged 15-30 years who disagree that women who are not covered are exposed to sexual harassment and offensive	7.1	5.9	5.6	6.1	National youths and juveniles survey 2019
Percentage of youths aged 18-30 who wish to migrate abroad	29.8	34.9	26.4	30.4	National youths and juveniles survey 2019
Percentage of women aged 15 years and older who are single (unmarried)	31.4	23.9	30.6	27.9	National youths and juveniles survey 2019
Percentage of women aged 15 years and older who are married	60.3	63.8	61.2	62.1	National youths and juveniles survey 2019
Percentage of women aged 15 years and older who are divorced	0.8	2.9	0.7	1.7	National youths and juveniles survey 2019
Percentage of women aged 15 years and older who are widows	7.1	9.4	6.2	7.7	National youths and juveniles survey 2019
Percentage of women aged 15 years and older who are separated	0.5	0	1.4	0.6	National youths and juveniles survey 2019

Continued 3

Indicator	Duhok	Sulaymaniyah	Erbil	KRI	Sources
percentage of women who married before the age of 18	22.1	23.0	22.2	22.6	women's health and social status Survey (WISH-II 2021)
percentage of married or previously married women who married before the age of 18 because of their economic status	3.0	2.5	0.0	1.7	women's health and social status Survey (WISH-II 2021)
percentage of married or previously married women who married before the age of 18 "because of traditional custom"	55.1	44.4	25.3	40.0	women's health and social status Survey (WISH-II 2021)
percentage of married or previously married women who married before the age 18 "because of their family insistence on marriage"	16.3	34.1	47.2	35.0	women's health and social status Survey (WISH-II 2021)
percentage of married or previously married women who married before the age 18 "on their own will"	31.2	34.1	35.7	34.1	women's health and social status Survey (WISH-II 2021)
percentage of married or previously married women who married before the age 18 and "security situation" was the reason for marriage	0.9	0.0	0.0	0.2	women's health and social status Survey (WISH-II 2021)
percentage of married or previously married women who married before the age 18 and for "other reason"	3.0	2.0	0.0	1.5	women's health and social status Survey (WISH-II 2021)

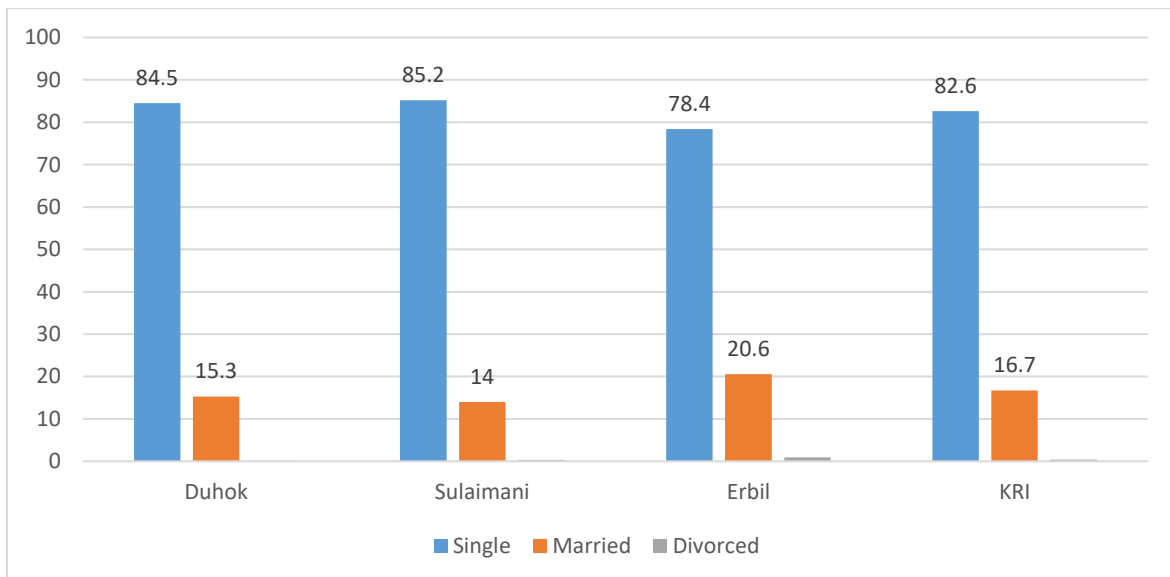
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Indicator	Duhok	Sulaymaniyah	Erbil	KRI	Sources
percentage of divorced women aged 15 years and older who divorced because of economic situation	-	-	-	8.0	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 years and older whose reason for divorce was polygamy	-	-	-	12.9	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 years and older whose reason for divorce was lack of trust	-	-	-	21.1	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 years and older whose reason for divorce was "not having children"	-	-	-	0.0	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 and older whose reason for divorce was social conflicts	-	-	-	33.8	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 and older whose reason for divorce was alcohol addiction	-	-	-	18.6	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 years and older whose reason for divorce was beating by their husbands	-	-	-	16.0	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 years and older whose reason for divorce was social networks	-	-	-	0.0	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 years and older whose reason for divorce was family interference	-	-	-	36.0	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 years and older whose reason for divorce was ISIS terrorists	-	-	-	0.0	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 years and older whose husband's persistence was the reason for divorce	-	-	-	1.1	women's health and social status Survey (WISH-II 2021)
percentage of divorced women aged 15 and older who divorced for other reasons.	-	-	-	8.0	women's health and social status Survey (WISH-II 2021)

Youths aged 10-30 by their marital status

Percentage of juveniles and youths aged 10-30 by their marital status: relying on the juveniles and youth survey, marriage among juveniles and youths aged 10-30 years old in KRI is low as it is at the level of governorates. In Kurdistan region, 82.6% of this group are reported unmarried against 16.7% married and 0.4% divorced. In Sulaymaniyah, 85.2% are unmarried, 14% are married and 0.3% are reported divorced. Then, Duhok governorate with 84.5% unmarried, 15.3% married and 0.1% divorced stand in the second rank followed by Erbil with 78.4% unmarried, 20.6% married and 0.9% divorced.

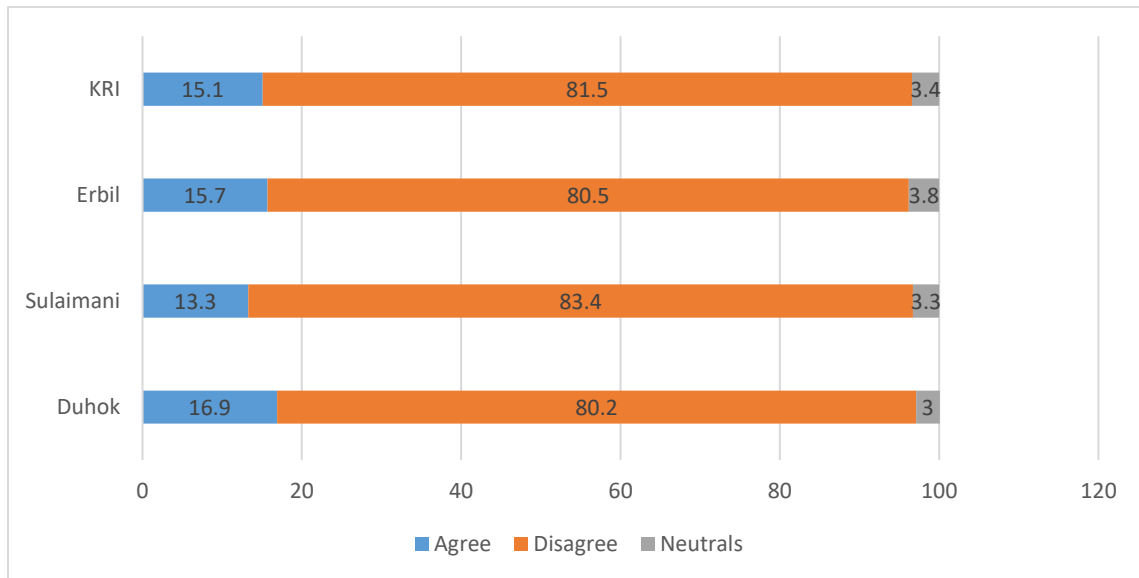
Figure 38: Percentage of Juveniles and youths aged 10-30 years old by marital status at the Level of KRI and governorates, national youths and juveniles survey 2019



Percentage of youth aged 15-30 years by their opinions on “whether boys' education is more important than girls' education”: at the level of Kurdistan region, the results show that 15.1% agreed that boys' education is more important than girls' education, 81.5% disagreed and 3.4% were neutrals. At the level of governorates, Duhok governorat had the highest rate for those who agree with this statement accounting for 16.9%, disagreement is 80.2% and neutrals is 3%. In Erbil governorate, 15.7% agree, 80.5% disagree and 3.8% neutral. And Sulaymaniyah governorate reported 13.3% agree, 83.4% disagree and 3.3% neutrals according to national youths and juveniles survey 2019 (following figure).

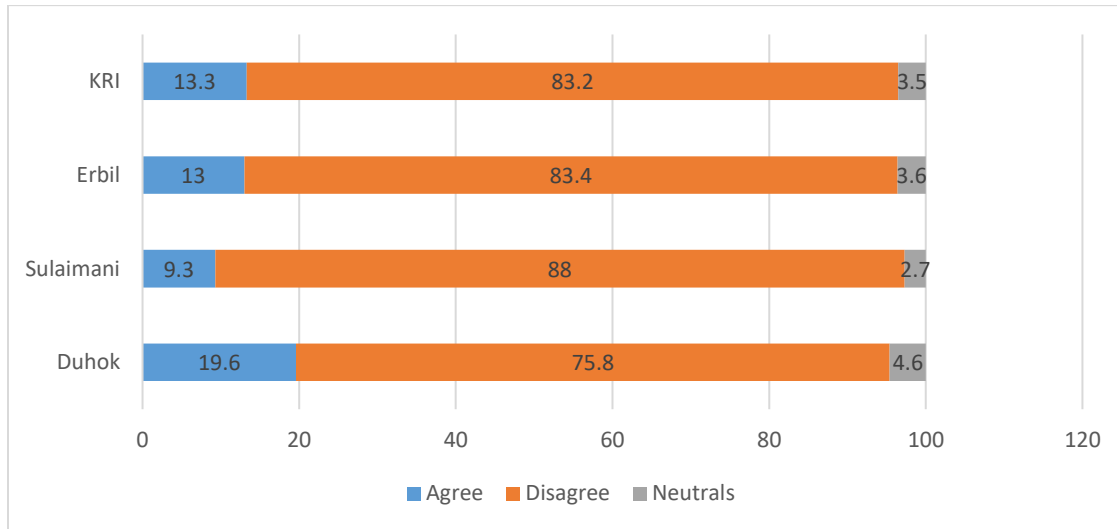
Kurdistan Region 2018-2022 Indicators

Figure 39: Percentage of youth aged 15-30 years by their opinions on “whether boys' education is more important than girls' at the level of KRI and governorates, national youths and juveniles survey 2019



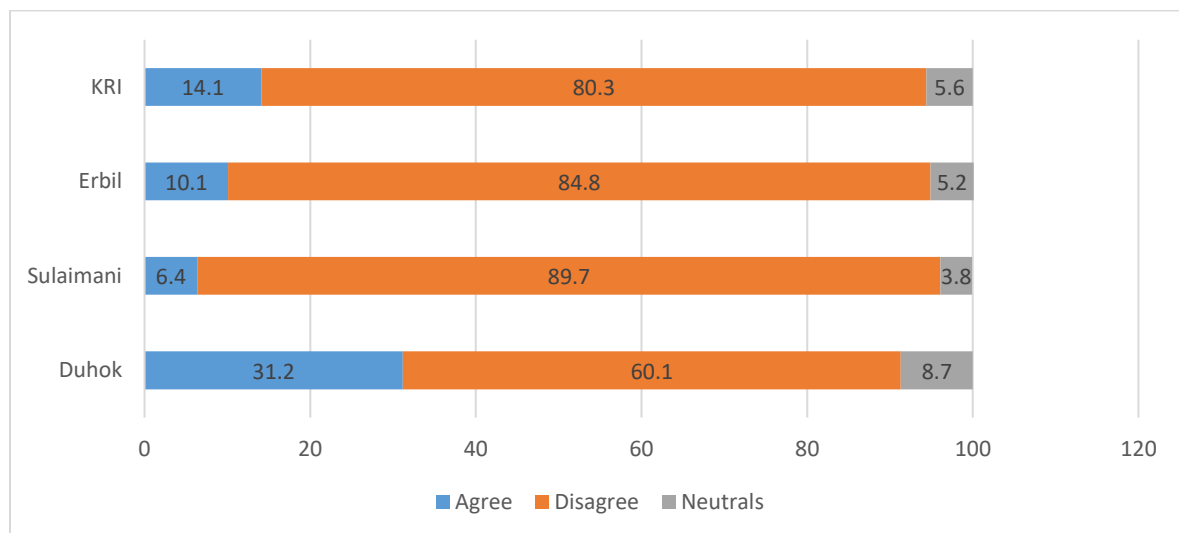
Percentage of youths aged 15-30 years by their opinion on “whether men have the right to beat their wives if they do not compromise with or listening to them”: According to the UN definition, violence against women defined as "any act of gender-based violence that results in physical, sexual, or mental harm or suffering to women, and threats of such acts that deprive them of liberty, whether occurring in public or in private life". Beating women by husbands for whatever reason is certainly a form of violence against women. One of the reasons that make men beat their wives is disagreement or not listening to them. In Kurdistan region, 13.3% of youths agree with the statement that men have the right to beat their wives if they do not compromise with or listen to them, 83.2% disagree and 3.5% neutrals. At the level of governorates, Duhok governorate has the highest rate for those who agree with this statement accounting for 19.6%, disagree is 75.8% and neutrals is 3%. in Erbil governorate, the percentage of those who agree with this statement is 13%, disagree is 83.4% and neutrals is 3.6% followed by Sulaymaniyah with 9.3% for agrees which is the lowest compared to other governorates, 88% for disagree which is the highest to other governorates and 2.7% for neutrals according to national youths and juveniles survey 2019.

Figure 40: Percentage of youths aged 15-30 years by their opinion on “whether men have the right to beat their wives if they do not compromise with or listening to them” at the level of KRI and governorates, national youths and juveniles survey 2019



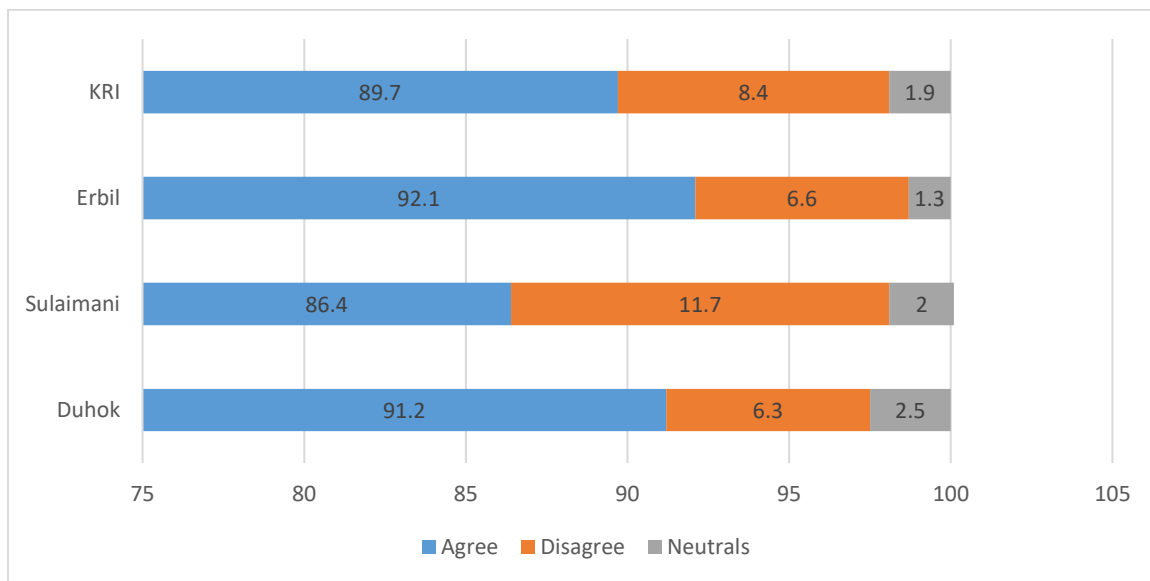
Percentage of youth aged (15-30) years by their opinion about the acceptance of murder crimes under the name of honor crimes: Honor crimes are a type of violence against women that is generated from traditions, society, and culture. in Kurdistan region, agreement on this statement (acceptance of murder crimes under the name of honor crimes) among youth aged (15-30) is 14.1% against 80.3% for those who disagree and those who are neutrals recorded 5.6%. At the level of governorates, Duhok governorate has the highest rate of agreement at 31.2% against the lowest rate in Sulaymaniyah at 6.4% and those who disagree, Duhok recorded the lowest rate at 60.1% and Sulaymaniyah had the highest rate at 89.7% (Figure 41).

Figure 41: Percentage of youth aged (15-30) years by their opinion about the acceptance of murder crimes under the name of honor crimes, national youths and juveniles survey 2019



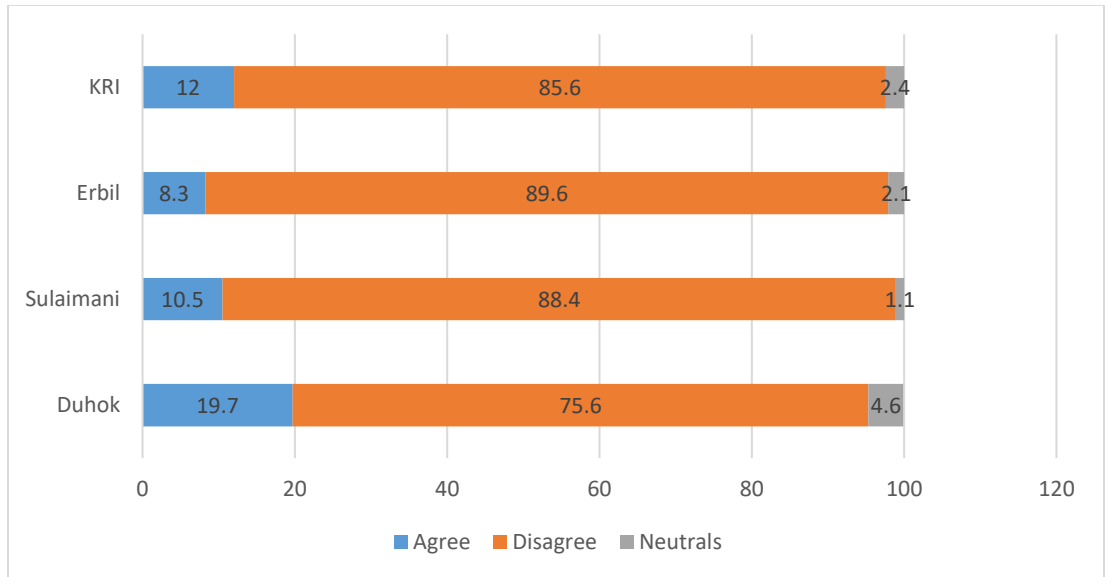
Percentage of youth aged 15-30 years by their opinion that women should be the main partners of men in making all decisions in the household: women's involvement in household decision-making is a primary right of women and depriving them of this right by men is considered violence against them. At the level of Kurdistan region, the percentage of youth who agree with this statement that **“women are the main partners of men in making all decisions in the household”** is 89.7%, disagreed is 8.4% and neutral is 1.9%. At the governorates level, the highest rate of youth who agree with the statement is in Erbil with 92.1%, and the lowest rate is recorded in Sulaymaniyah at 86.4% according to national youths and juveniles survey 2019 (Figure 42).

Figure 42: Percentage of youthe aged 15-30 years by their opinion that women should be the main partners of men in making all decisions in the household, national youths and juveniles survey 2019



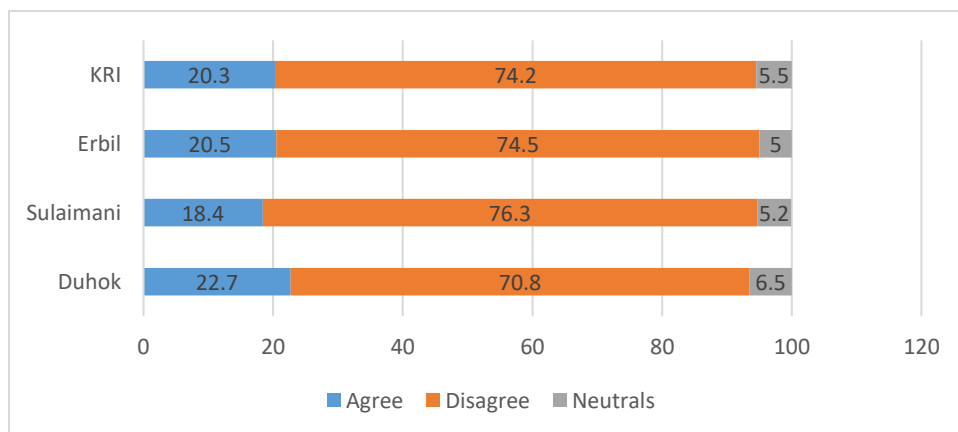
Percentage of youths aged 15-30 years by their opinion that girls should marry their relatives if their guardians wishe: choosing the future spouse is one of the legal and fundamental rights of every boy and girl, and family should respect their decision. Consanguineous marriage without girls' consent or against their will, in addition to causing genetically inherited diseases, is violence against their rights. This custom still exists in a part of society. According to the results of the national youths and juveniles survey 2019, at the level of Kurdistan region, a relatively high percentage (12%) of youths aged 15-30 years agree with this statemen that **“girls should marry their relatives if their guardians wishe”**, 85.6% disagree, and 2.4% is neutral. At the level of governorates, Duhok governorate has the highest rate for those who agree with the statement accounting for 19.7%, disagree is 75.6%. in Sulaymaniyah, the agreement rate is 10.5%, disagreement is 88.4% and the lowest rate of agreement is recorded in Erbil governorate at 8.3%, and disagreement at 89.6% according to national youths and juveniles survey 2019 (Figure 43).

Figure 43: Percentage of youths aged 15-30 years by their opinion that girls should marry their relatives if their Guardians wish at the level of KRI and governorates, national youths and juveniles survey 2019



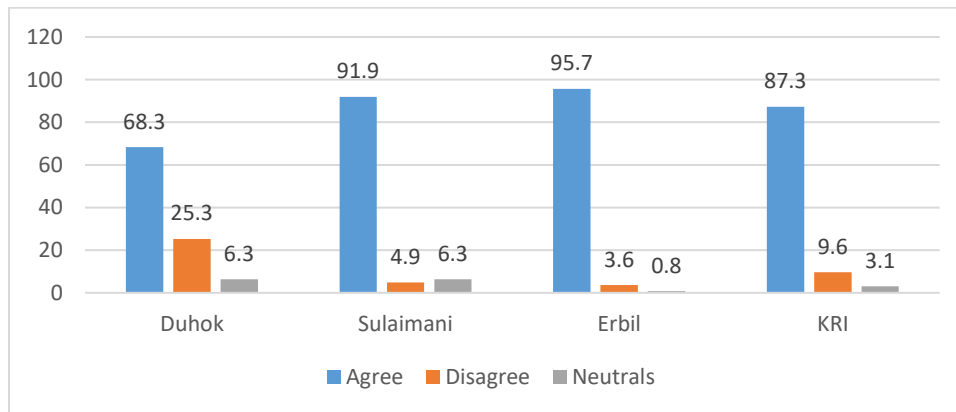
Percentage of youths aged 15-30 who believe that political activities should be restricted to men: Women political participation in the national and international decision-making plays an important role in the development and modernization of any country. At the level of Kurdistan region, agreement of youths with this statement that ‘**political activities should be restricted to men**’ is 20.3%, disagreement is 74.2% and neutral is 5.5%. At the level of governorates, Duhok governorates has the highest rate for those who agree with this statement (22.7%), and disagreement is 70.8%. In Sulaymaniyah governorate, those who agree recorded 18.4% that is the lowest rate comparing to other governorates and disagreement is 76.3%. In Erbil governorate, agreement rate is 20.5% and the disagreement is 74.5% as shown in Figure 44 according to national youths and juveniles survey 2019 (Figure 44).

Figure 44: Percentage of youths aged 15-30 who believe that political activities should be restricted to men at the level of KRI and governorates, national youths and juveniles survey 2019



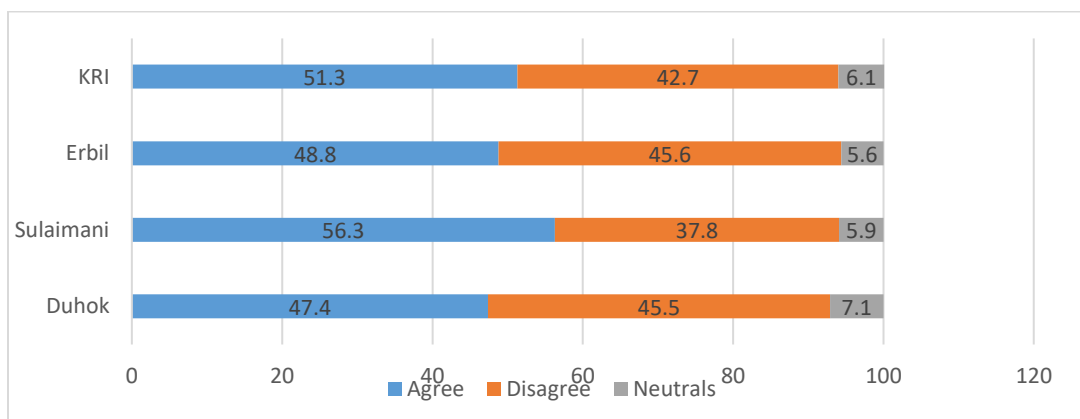
Percentage of youths aged 15-30 years by their opinion that women have the right to demand divorce if they do not compromise with their husbands: Another right of women is the right to demand divorce. Asking youths about their opinion about the statement that **women have right to ask for divorce**, 87.3% of youths in Kurdistan region were agree, 9.6% disagree. At the level of governorates, agreement with this statement is the highest in Erbil with 95.7% and Suleimani is at 91.9%. Duhok governorate, agrees recorded the lowest rate at 68.3% (Figure 45).

Figure 45: Percentage of youths aged 15-30 years by their opinion that women have the right to demand divorce if they do not compromise with their husbands at the level of KRI and governorates, national youths and juveniles survey 2019



Percentage of youths aged (15-30) years who believe that women who are not covered are exposed to sexual harassment and offensive: According to the results of national youths and juveniles survey 2019, majority of youths in Kurdistan region attribute women’s sexual harassment and offensive to lack of Hijab. Percentage of youths who agree with this statement in the Kurdistan Region is 51.3%. At the level of governorates, the highest rate for agreement is in Sulaymaniyah with 56.3%, Erbil is 48.8% and Duhok recorded 47.4% (Figure 46).

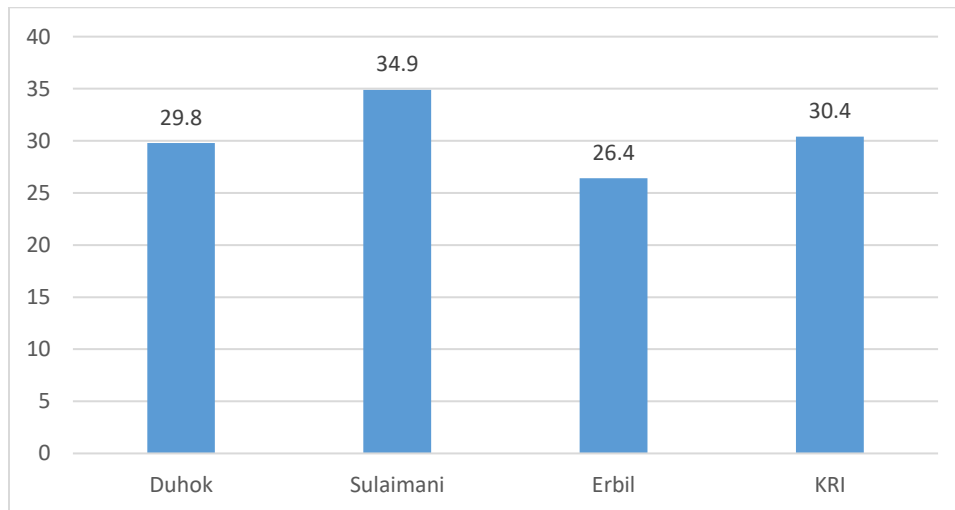
Figure 46: Percentage of youths aged (15-30) years who believe that women who are not covered are exposed to sexual harassment and offensive by opposite sex at the level of KRI and governorates, national youths and juveniles survey 2019



Migration among youths aged 18-30 years

Proportion of youths aged 18-30 years who wish to migrate abroad: youths are an important part of society. The energy, ability and their talent should be taken into consideration and used in country's development. Youths' migration causes a big gap in the society and collapses the foundation of the country. Emigration means leaving homeland for another country in order to achieve a better life and future due to several economic, social and political reasons, including unemployment and domestic crisis. So that young people decide to leave their country. On the other hand, lack of security and peace, constant anxiety, political and security situations, unemployment among youths with educational degrees is another reason behind migration, in addition to encouraging youths according to by some countries for any reason and agenda is another reason behind youths' migration. In Kurdistan region, 30.4% of youths wish to migrate abroad with the highest rate in Sulaymaniyah at 34.9%, Duhok at 29.8% and Erbil with the lowest rate at 26.4 according to national youths and juveniles survey 2019 (following Figure).

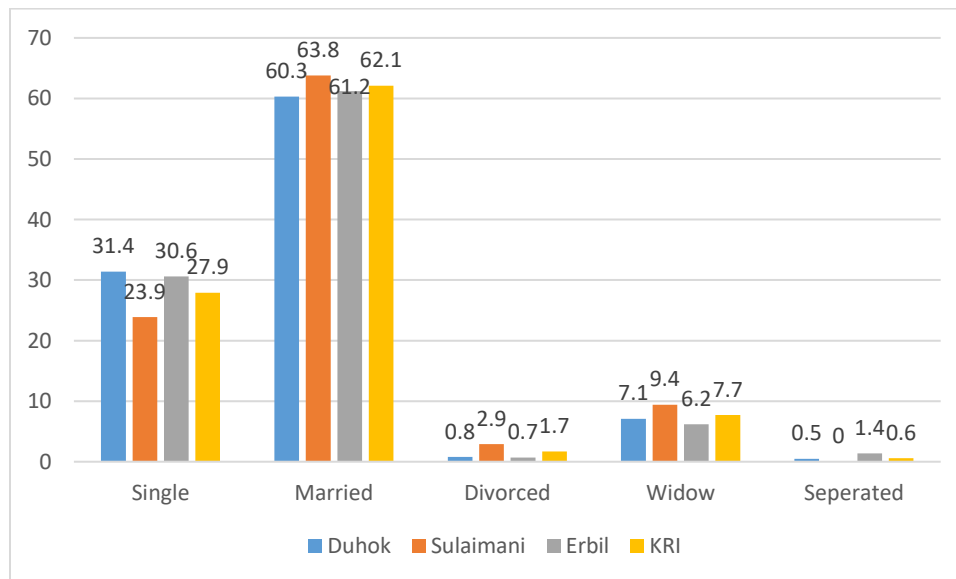
Figure 47: percentage of youths aged 18-30 years who wish to migrate abroad at the level of KRI and governorates, national youths and juveniles survey 2019



Marital status of Women aged 15 and above

Marital status of Women aged 15 and above: In general, marriage among women of this age recorded a high rate according to the Women's Health and Social Status Survey (IWISH-II). 27.9% of women at this age group are reported unmarried in Kurdistan region and at the level of governorates, the lowest rate has been reported in Sulaymaniyah at 23.9% for those who are unmarried, then Erbil with 30.6% and the highest rate for unmarried women is reported in Duhok at 31.45. As for women who are married at the same age group, it is 62.1% at the level of Kurdistan region, and at the level of governorates, the highest rate goes for Sulaymaniyah at 63.8% followed by Erbil and Duhok at 61.2% and 60.3% respectively. At the level of Kurdistan region, **the divorce rate is low at 1.7%**, with the highest rate in Sulaymaniyah governorate at 2.9% followed by Duhok and Erbil governorates at 0.8% and 0.7% respectively. **widow rate** is 7.7% in Kurdistan region with the highest rate in Sulaymaniyah governorate with 9.4%, followed by Duhok and Erbil governorates with 7.1% and 6.2% respectively. For separate women, the rate is very low at 0.6% in Kurdistan region and at the governorates level, Erbil governorate recorded 1.4%, followed by Duhok governorate with 0.5%, and no case has been reported in Sulaymaniyah as shown below.

Figure 48: percentage of women aged 15 years and above by marital status at the level of KRI and governorates, IWISH-II 2021

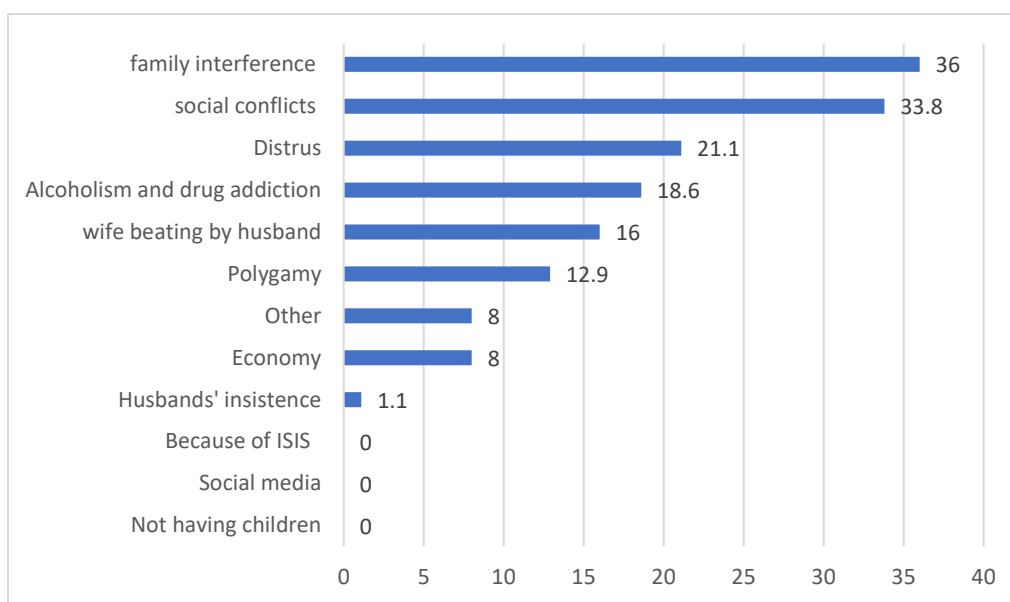


Women who married before the age of 18

Divorce and the reason behind divorce for women aged 15 years and above

Percentage of divorced women aged 15 years and above and the reasons behind the divorce: according to the women's health and social condition survey (IWISH-II 2021), there are various reasons behind divorce. The two most important reasons are family interference and social conflicts at 36.0% and 33.8% respectively. Distrust, alcoholism, drug addiction are other reasons that can be referred as shown below.

Figure 51: Percentage of divorced women aged 15 years and above and the reasons behind divorce in KRI, IWISH-II 2021



Sources

- Education, Health and social statistics department 2020, CSO, KRSO and UNFPA, National youth and juveniles survey 2019, Kurdistan region: KRSO,
- Education, Health and social statistics department 2021, CSO, KRSO and UNFPA, women social and health condition 2021 (IWISH-II), Kurdistan region: KRSO,
- Education, Health and social statistics department 2020, CSO, KRSO and UNFPA, online poll on government preventive measures against Coronavirus 2020, Kurdistan region: KRSO.

Agriculture and Environment Statistics

Agriculture and Environment

Agriculture is looked as an important source of food and the basis of a strong economy around the world, so information in this area is of great importance.

Agricultural statistics provides all information related to winter and summer crops that have the largest planted area and are considered the first most important indicators such as planted area, yield, size of production, type of agricultural pests and the cost of production etc. Statistics of livestock and its products, are also of great importance and are considered the second most important agricultural statistical data, which is economically important alongside crops. The number of farmers, water resources, weather and arable land make up another part of this statistic.

In general, the main objective of this section is to reflect the real situation of agriculture sector in the light of an accurate and reliable data that can be relied on for an appropriate agricultural plan.

Agricultural land

Agricultural land refers to all land that can be used for agricultural purposes, which is divided into two types of rainfed and irrigated land.

Table 1: agricultural land at the level of governorate in Kurdistan Region 2021

	Indicators	Erbil	Duhok	Suleimani	KRI
Arable land 2021	Million dunums	2.5	1.1	3.1	6.7
	%	37	17	46	100
Rainfed arable land 2021	Million dunums	2.3	1.02	2.1	5.4
	%	42	19	39	100
Irrigated arable land 2021	Million dunums	0.21	0.12	0.98	1.31
	%	16	9	75	100
Winter crops planted area 2020-2021	Million dunums	1.89	1	2.1	5.09
	%	38	20	42	100
Summer crops planted area 2021	Million dunums	0.08	0.08	0.15	0.31
	%	26	26	48	100

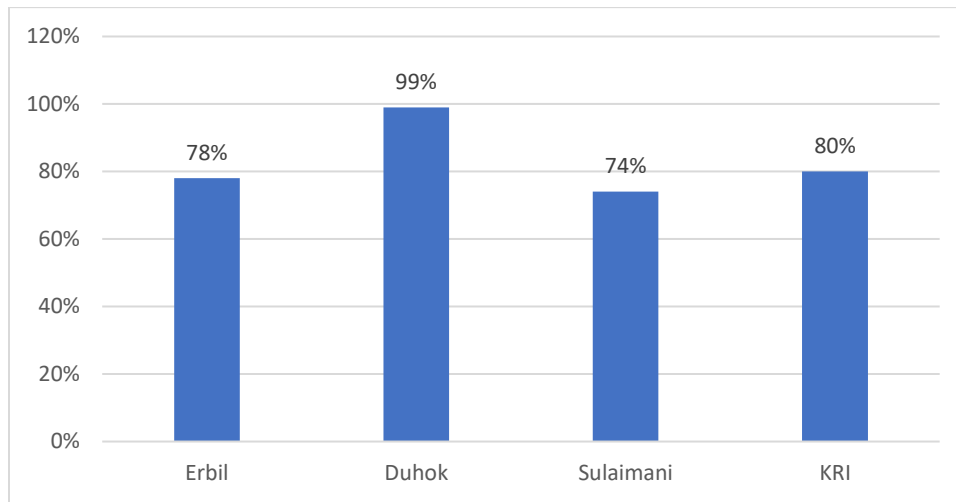
Thanks to God, Kurdistan region has good conditions for work and development in the agricultural sector due to having suitable agricultural lands and water sources of rivers and springs. Agriculture sector is one of the most important sectors to provide food security.

According to the data of the Ministry of agriculture and water resources, there are 6.7 million dunums of suitable arable land for agriculture in Kurdistan region accounting for 35.7% of the total area of the region.

At the level of governorate, 2.5 million dunums of arable land are located in Erbil governorate, 1.1 million dunums in Duhok governorate, and 3.1 million dunums of agricultural land divided over Suleimani, Halabja and Garman.

The largest rainfed agricultural land is registered in Erbil governorate covers 2.3 million dunums that comprises 43% of the total rainfed area in Kurdistan region. 2.1 dunum of rainfed land area located in Sulaymaniyah governorate and 1.02 in Duhok governorate, each make 39% and 19% of the Kurdistan region's land area respectively. Referring to irrigated land, the most area is located in Sulaymaniyah governorate with an area of 0.89 million dunum (75%), followed by Erbil governorate with 0.21 million dunum (16%), and Duhok governorate with 0.12 (9%).

Figure 1: percentage of agriculture land cultivated with winter and summer crops at the level of governments and KRI 2021

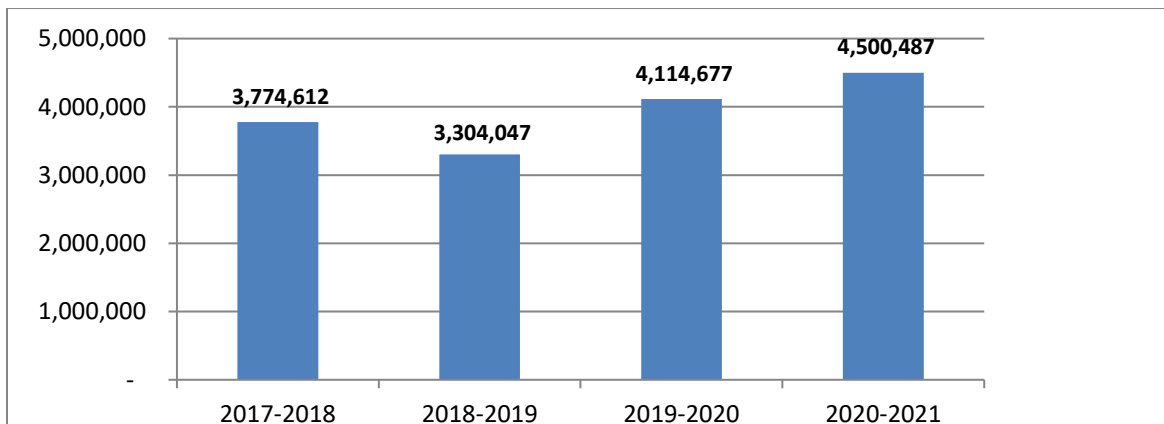


Comparing the total agricultural land area and cultivated area, Duhok governorate planted 99% of its agricultural land which is the highest rate compared to other governorates, Erbil with 78% planted agricultural land comes next followed by Sulaymaniyah, Halabja and Garmyan together with 74% of planted area out of the total agricultural land.

Land area and production

In the absence of real field recorded data, the relevant sides rely on estimation of the land area and production, which is not be possible without relative data on the cultivated area, types of crop, number of farmers and characteristics of area in term of planting conditions and weather effects.

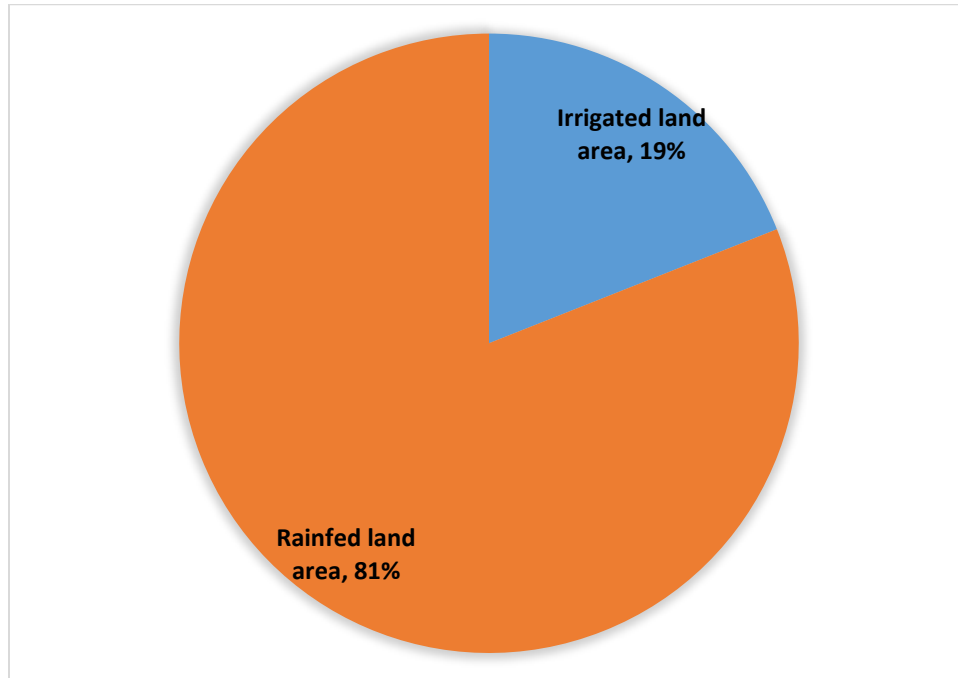
Figure 2: Projected area for wheat production in KRI in 2018-2021 (dunum)



Due to the lack of a reliable data for wheat production, production data is not available in this report.

As shown (Figure 2), between 2020-2021, there is the highest level of wheat planted area compared to other years and the lowest level is recorded in 2018-2019.

Figure 3: percentage rate of rainfed and irrigated agricultural area in KRI 2021



According to the ministry of agriculture and water resources, there is a large difference between the rainfed land area (81%) and irrigated land area (19%) due to the lack of irrigation projects and the lack of advanced irrigation systems for agricultural land in Kurdistan region.

According to the winter crop 2016-2017 report published by KRSO, the yield obtained from one dunam irrigated land in Kurdistan region for wheat is 733 kg against 344 kg obtained from one dunam rainfed land, which is a big difference for a staple crop such as wheat, so to reduce this difference we need a special plan from the institutions related to the agricultural sector.

Crops

Rice planted area and production

Table 2: rice planted area and production at the level of governorates and KRI 2018-2021

Year	Erbil		Duhok		Sulaymaniyah		Halabja		Garmyan administration		KRI	
	Area/dunum	Production/ton	Area/dunum	Production/ton	Area/dunum	Production/ton	Area/dunum	Production/ton	Area/dunum	Production/ton	Area/dunum	Production/ton
2018	305	763	11,728	9,382	1,912	1,530	254	381	1,974	1,430	16,173	13,486
2019	193	289	19,764	15,811	2,115	1,692	104	208	2,420	1,658	24,596	19,658
2020	630	945	24,206	19,365	1,540	1,232	315	630	75	90	26,766	22,262
2021	613	920	11,223	8,978	358	286	320	640	1,575	1,355	14,089	12,179

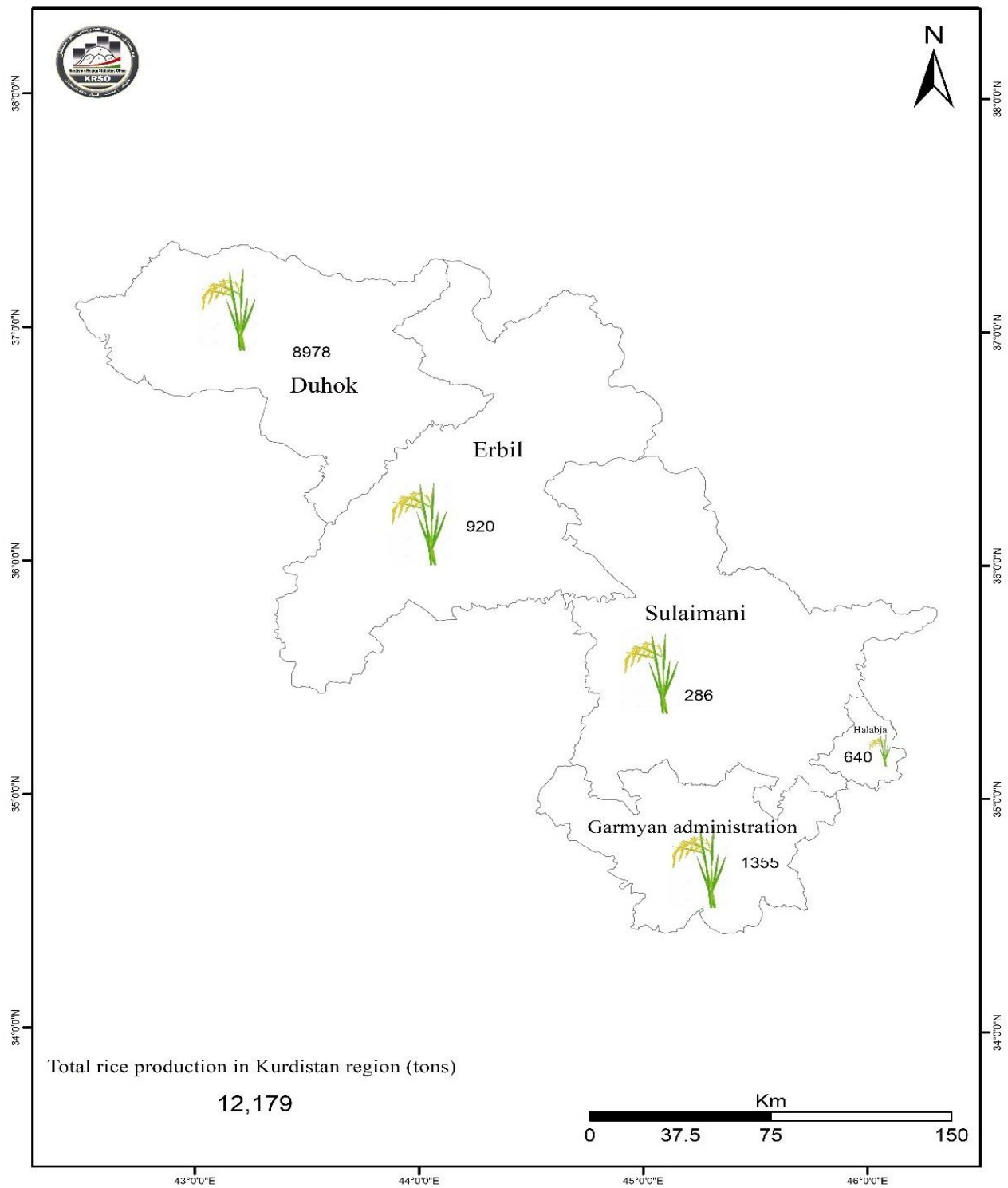
Rice has its own nutritional value, that's why it is considered one of the most important agricultural products. According to the data from ministry of commerce and Industry of Kurdistan region, the local demand for rice in the Kurdistan Region is 38.5 kg per capita.

in 2020, Kurdistan region needed 237,583 tons rice to meet its need, while the domestic production was 22,262 tons in this year, meaning that Kurdistan region's domestic production could only fill 9% of its need for rice.

According to ministry of agriculture and water resources, rice production shows increase between 2018-2020. Rice production recorded 13,486 tons in 2018 and reached 19,658 tons in 2019 with an increase of 45%, mainly due to the amount of rainfall in this year. In 2020, it reached 22,262 tons with an increase of 14%. Unlike these years, in 2021, rice production significantly decreased to 12,179 tons because of low rainfall in this year (236 mm) which is a sufficient for rice that needs a lot of water.

In Kurdistan region, 80% of the cultivated area with rice is located in Duhok governorate. to rise the rice production, there is need for an appropriate plan to increase the level of this product in other governorates.

Map 5 : rice production at the level of governorates and Garmyan administration in KRI, 2021



Summer crops, land area and production

Table 3: Production and land area for tomato, cucumber, eggplant, potato, onion, okra in Kurdistan region 2018-2021

Year	Tomatoe		Cucumber		Eggplant		Potatoe		Onion		Okra	
	Area/Dunum	Production/ton	Area/Dunum	Production/ton	Area/Dunum	Production/ton	Area/Dunum	Production/ton	Area/Dunum	Production/ton	Area/Dunum	Production/ton
2018	46,366	234,180	26,638	108,715	15,172	60,890	39,482	187,712	41,631	107,485	10,055	16,703
2019	51,304	244,002	25,851	108,865	9,147	36,504	26,086	112,164	25,008	69,044	9,662	19,185
2020	56,976	277,307	29,523	116,631	8,580	38,609	35,324	198,219	27,192	53,774	10,024	19,527
2021	57,307	255,669	27,040	116,062	7,066	30,022	34,952	215,354	27,304	47,976	8,181	19,321

According to the Ministry of agriculture and water resources (Table above), at the level of Kurdistan region, the crops production is fluctuating during 2018-2021. In 2018, tomato production was about 234,180 tons, the amount increased to 255,669 tons in 2021, an increase of 9%. As for cucumber, the production was about 108,715 tons in 2018 with an increase of about 7% it reached 116,062 tons in 2021. Regarding the eggplant, it recorded an amount of about 60,890 tons in 2018, and in 2021 by a decrease of 50% it reached 30,022 tons. Unlike other crops, potato production significantly increased during these four years, from 187,712 tons in 2018 to 215,354 tons in 2021, an increase of about 15%. Regarding the onion in 2018, the amount of production was 107,485 tons, but in 2021, it significantly dropped to 47,976 tons, a decrease of 55%. In 2018, okra production was 16,703 tons, while in 2021 it increased to 19,321 tons, showing an increase of 16%.

As shown above, during 2018 - 2021, unlike potato, tomato, cucumber and okra production, the production of eggplant and onion shows a decrease.

Table 4: tomato, cucumber, eggplant, potato, onion, and okra production at the level of KRI and governorates 2021

	Governorate	Okra	Eggplant	Tomatoe	Potatoe	Onion	Cucumber
Erbil	Ton	6,936	14,718	105,372	23,266	21,109	48,042
	%	36	49	41	11	43	41
Duhok	Ton	3,905	5,377	46,628	165,771	19,496	19,309
	%	20	18	18	77	40	17
Sulaymaniyah	Ton	3,542	6,303	94,332	19,030	4,726	45,560
	%	18	21	37	9	10	39
Halabja	Ton	3,025	615	3,325	3,500	2,060	896
	%	16	2	2	2	4	1
Garmyan administration	Ton	1,913	3,009	6,013	3,787	1,585	2,273
	%	10	10	1	2	3	2
KRI		100	100	100	100	100	100
		19,321	29,678	255,669	215,354	48,976	116,062

At the level of governorates (above table), the highest amount of **potato** production is in Duhok governorate with 77%, followed by Erbil governorate with 11%, Sulaymaniyah governorate with 9%, Halabja governorate and Garmyan administration with 2% for each. The highest amount of **tomato** has been produced in Erbil governorate with 41%, Sulaymaniyah governorate with 37%, Duhok with 18%, Garmyan administration with 2% and the lowest amount of tomato production is in Halabja governorate accounting for 1%.

In 2021, **okra** production recorded the highest rate in Erbil governorate with 36%, followed by Duhok governorate by 20%, Sulaymaniyah governorate by 18%, Halabja governorate by 16% and Garmyan administration accounted for 10%.

Near half production of **eggplant** goes for Erbil governorate with 49% followed by Sulaymaniyah governorate with 21%, Duhok governorate with 18%, Garmyan administration with 10% and Halabja governorate recorded the lowest by 2%.

Onion, the highest production is in Erbil governorate with 43%, Duhok governorate accounts for 40%, Sulaymaniyah governorate accounts for 10% and Halabja governorate with 4% and the lowest production level goes for Garmyan administration with 3%.

Regarding **cucumber**, the highest level of cucumber production comes from Erbil governorate with 41%, followed by Sulaymaniyah governorate with 39%, Duhok governorate with 17%, Garmyan administration with 2% and the lowest level of cucumber production is from Halabja governorate that makes 1% of the Kurdistan Region's production.

Livestock

Poultry farm

Poultry farm refers to all farms, where chickens or other fowls are raised for their products. It is an important part of livestock and economically is very important.

Table 5: Poultry farm projects in Kurdistan region 2018-2021

Year	Broiler poultry		Egg-laying chickens		Hatchery		Poultry slaughterhouse	
	No. of projects	Capacity/chick for each batch	No. of projects	Capacity/Eggs per year	No. of projects	Capacity/Eggs per year	No. of projects	Capacity/Chicken per hour
2018	1,467	20,803,055	11	1,638,150,000	44	271,282,080	8	-
2019	1,544	23,055,245	12	1,349,900,000	46	307,158,080	9	37,500
2020	1,626	24,665,095	12	1,368,368,000	45	296,890,280	10	38,900
2021	1,741	27,482,920	20	2,557,297,900	52	355,907,080	10	38,900

Poultry breeding as a major source of food supply is of great importance in Kurdistan region. Poultry farming is of the interest to farmers due to its characteristics, such as fast growth, earning income in less than three months, raising larger numbers in smaller area compared to other animals, less economic loss in the possibility of illness and losing. Economically, these characteristics have increased the importance of poultry farming in the region and in the world.

Poultry slaughterhouses are very important in terms of marketing broiler chickens, because when the chickens grow up and ready for sailing, the owner face problem to sale live chickens in markets, so they need to keep them in poultry farm that causes more cost. For these reasons, slaughterhouses and freezing have an important role in keeping the products until they find ways to the markets.

The number of poultry farms in 2018 was about 1,467. With an increase of about 18%, it reached 1,741 farms in 2021. The data are calculated according to the official license of the Ministry of Agriculture and Water Resources; it means that all operating farms are not included except those that have been licensed.

Similarly, layer hen farms increased by 81% from 2018 to 2021. It indicates that layer hen farms are of interest to farmers which have an important role in the economic recovery if relevant parties provide facilities in terms of marketing and breeding cost such as medicine, fuel, feed... etc.

Table 6: poultry farm project at the level of governorates in KRI, 2021

Poultry slaughterhouse		Egg-laying chickens		Broiler poultry		governorate
Capacity/Chicken per hour	No. of projects	Capacity/egg per year	No. of projects	Capacity/chick for each batch	No. of projects	
18,000	4	1,534,985,900	11	8,626,120	540	Erbil
7,000	2	337,770,000	4	11,361,705	690	Sulaymaniyah
12,500	3	681,392,000	4	5,375,275	328	Duhok
-	-	-	-	436,820	34	Halabja
1,400	1	3,150,000	1	1,683,000	149	Garmyan
38,900	10	2,557,297,900	20	27,482,920	1,741	KRI

According to the general directorate of livestock and veterinary in 2021, the largest number of poultry farms were in Sulaymaniyah governor with 690 farms and capacity to raise 11,361,705 chickens in each batch, Erbil governorate stands next with 540 poultry farms and capacity to raise 8,626,120 chickens, Duhok governorate has 328 farms with a capacity of raising 5,375,275 chickens, Garmyan has 149 poultry farms with a capacity of 1,683,000 chickens, and Halabja governorate has the lowest number of poultry farms with 34 farms and capacity of 436,820 chickens per year. Regarding the egg-laying chicken farm, the largest number are located in Erbil governorate with 11 farms, Sulaymaniyah and Duhok governorates have 4 farms each, Garmyan administration has only one farm and Halabja governorate has no egg-laying chicken farms.

At the level of governorates, Erbil governorate has 4 slaughterhouses, Duhok 3, Sulaymaniyah 2 and Garmyan has 1 slaughterhouse, but Halabja province has no poultry slaughterhouses.

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Livestock projects

It includes all officially licensed projects, including breeding, fattening, dairy cow and buffalo projects within a designated area. Livestock projects do not include animals raised in an open area (pastures) in groups or individually and are counted separately.

Table 7: livestock projects in KRI, 2018-2021

Year	Sheep and goat breeding		Dairy cow breeding		Buffalo breeding		Calf fattening		Goat fattening	
	No. of projects	Capacity/ number	No. of projects	Capacity/ number	No. of projects	Capacity/ number	No. of projects	Capacity/ number	No. of projects	Capacity/ number
2018	70	18,807	72	7,759	1	75	50	9,040	7	2,210
2019	72	18,335	73	8,719	1	75	59	19,909	6	2,110
2020	75	22,760	81	10,732	1	75	74	31,341	6	2,066
2021	74	22,160	81	11,110	1	75	86	65,373	7	2,166

Animal husbandry as an important part of the agricultural sector is very important in supplying meat, milk and its products. Vast pastures area in Kurdistan region provides the possibility of developing livestock and its products.

Of livestock projects, we can refer to breeding sheep, goats, dairy cows, fattening goats and calf. Growth can be seen in livestock projects from 2018-2021 especial the project of calf fattening that increased by 72% in 2021 compared to 2018 (Table 7).

Table 8: livestock projects at the level of governorates in KRI 2021

Governorate	Sheep and goat breeding		Dairy cows breeding		Buffalo breeding		Calf fattening		Goat fattening	
	No. of projects	Capacity	No. of projects	Capacity	No. of projects	Capacity	No. of projects	Capacity	No. of projects	Capacity
Erbil	23	5,799	44	6,595	-	-	42	14,880	1	550
Sulaymaniyah	6	1,545	19	1,530	-	-	18	4,283	-	-
Duhok	44	14,516	15	2,415	1	75	24	45,710	4	1,360
Halabja	-	-	2	470	-	-	1	100	1	156
Garmyan	1	300	1	100	-	-	1	400	1	100
KRI	74	22,160	81	11,110	1	75	86	65,373	7	2,166

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Above table shows the livestock projects at the governorates level in Kurdistan region. These projects are the projects that have been officially registered in general directorate of livestock and Veterinary in Kurdistan region.

Those animals raised in groups or individually by citizens are counted separately from that animal of the projects, so this data is excluded from this context.

In 2021, the largest number of sheep and goat breeding projects were in Duhok governorate with 44 projects, 23 projects in Erbil, 6 projects in Sulaymaniyah, Garmyan had 1 project and Halabja had projects of sheep and goat breeding.

breeding dairy cow is another livestock projects with most projects located in Erbil governorate with 44 projects, followed by Sulaymaniyah governorate with 19 projects, Duhok governorate with 15 projects, Halabja governorate with 2 projects and Garmyan with 1 project stands last.

Regarding the buffalo breeding project, in Kurdistan region there is only one project that is in Duhok governorate with a capacity of 75 buffalos.

The largest number of livestock projects in Kurdistan region is located in Erbil governorate with total number of 110 projects followed by Duhok governorate with 88 projects, Sulaymaniyah with 43 projects, Halabja and Garmyan each with 4 projects have the least number.

Table 9: the number of sheep, goats, cows, and buffalos at the level of governorate in KRI, 2021

Governorate / Animal	Sheep	Goat	Cow	Buffalo
Erbil	631,381	386,934	93,029	-
Sulaymaniyah	1,145,610	410,992	161,971	768
Duhok	953,000	345,000	44,300	-
Halabja	97,750	10,303	20,823	-
Garmyan	526,958	71,854	9,617	855
KRI	3,354,699	1,225,083	329,740	1,623

According to the directorate of livestock and veterinary in Kurdistan region, the total number of livestock animals of all kinds (sheep, goat, cow, and buffalo) are about 4,911,000. Sheep has the highest number (3,354,699) accounts for 68.31%, followed by goats (1,225,000) at a rate of 29.94%, cows (329,740) accounts for 6.71% and buffaloes with least number (1,623) accounting for 0.03%. It is worth mentioning that the number of buffalos significantly decreased (48%) in 2021 compared to 2017 which is a large rate in 5 years and efforts should be made to protect this animal by providing breeding needs such as water and forage.

At the governorate level, Sulaymaniyah governorate ranks first for all types of animals at a rate of 35%, followed by Duhok governorate (27%), Erbil governorate (23%) and Garmyan (12%) and Halabja (3%).

As shown in the above table, the number of sheep (3,354,699) and goats (1,225,083) is larger in Kurdistan region in 2021 comparing the number of buffalo that recorded the lowest number (1,623).

Fishery projects

It covers fish breeding ponds and the amount of fish meat produced of all kinds. Due to health benefits, fish is more demanded compared to the red meat.

Table 10: fish farming projects in KRI in 2019-2021

Year	Sand pond projects		Concrete pond project		Cage pond projects		Closed pond projects		Total projects	Total capacity of projects
	No.	Capacity/tonne annually	No.	Capacity/tonne annually	No.	Capacity/tonne annually	No.	Capacity/tonne annually	No.	Capacity/tonne annually
2019	351	905	16	1,237	22	690	4	202	393	3,034
2020	358	966	16	1,237	22	690	4	202	400	3,095
2021	360	983	16	1,237	24	763	4	202	404	3,185

Fish is considered an important part of livestock and due to more demand compared to other types of meats has become of interest to citizens and creating opportunities to expand work in this sector. According to the general directorate of animal resources and veterinary of Kurdistan region, fish projects of sand ponds have increased due to the low cost of the project comparing to other kinds.

The total number of fishery projects in Kurdistan region for 2021 of all types (sand ponds, concrete, cages and closed ponds) is 404 projects and majority with sand ponds accounting for 89% followed by cage ponds accounting for 6%, which are built only in lakes and rivers to keep water continuously flowing, then concrete ponds with 4% and closed ponds with 1%% make the total fishery projects in Kurdistan region. Fish meat production in Kurdistan region for 2020 amounted about 10,738 tons. Due to lack of independent data in Halabja, the data has been presented with Sulaymaniyah governorate.

Table 11: fish farming projects in the level of governorates and KRI in 2021 by types of ponds

Governorates	Sand pool project		Concrete pool project		Cage pool project		Closed pool project	
	Number	Capacity/tonne annually	Number	Annual capacity/tons	Number	Annual capacity/tons	Number	Annual capacity/tons
Erbil	176	319	4	138	1	18	3	192
Sulaymaniyah	74	265	8	685	11	594	1	11
Duhok	43	109	4	413	10	121	0	0
Garmyan administration	67	289	0	0	2	28	0	0
KRI	360	982	16	1,236	24	761	4	203

There are 360 sand ponds fishery projects in Kurdistan region, of which 49% located in Erbil governorate, 20% in Sulaymaniyah governorate, Garmyan administration accounts for 19% and Duhok governorate accounts for 12%. Of the 16 concrete ponds projects, 8 are located in Sulaymaniyah (50%), 4 projects in each Erbil and Duhok governorates accounting for 25%. Garmyan administration has no fish pond of this type. Of 24 cage ponds projects in Kurdistan region, 46% are located in Sulaymaniyah governorate, 42% in Duhok governorate, 8% in Garmyan administration and the least projects are located in Erbil governorate with 4%. Also, of the total of 4 closed fish ponds projects, only Erbil and Sulaymaniyah governorates have this type of project with 75% and 25% respectively. Halabja governorate is calculated with Sulaymaniyah governorate due to lack of independent data.

Water resources

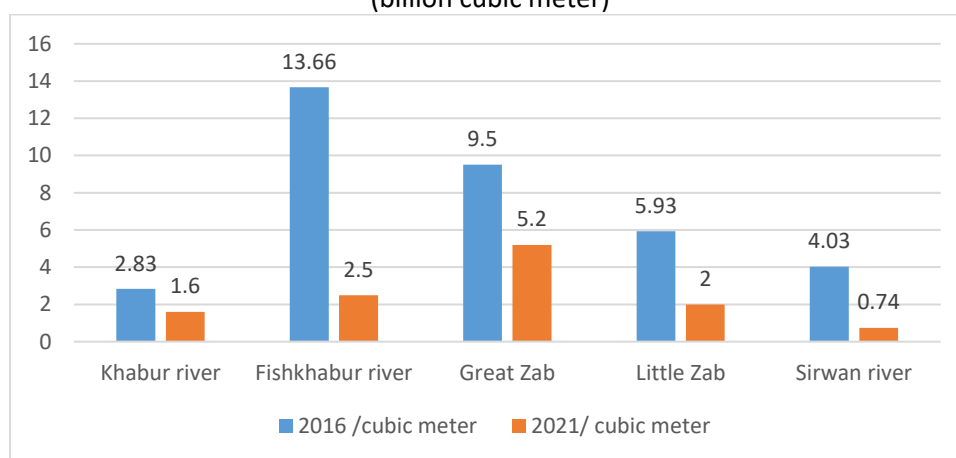
Water resources data is another part of the data of the Agriculture and Environment department that have their own importance in terms of clarifying the conditions of surface water and groundwater that affect water security in Kurdistan region. Water resources data include the number of rivers and their length, the number of sand dams and their storage capacity, lakes and their storage capacity as well as artesian and conventional wells of all types in Kurdistan region.

Table 12: water volume of rivers in Kurdistan region by rivers 2021

Number	River/ tributaries	River basin/km ²	Length (Km)	Water volume in 2021/billion m ³	Water volume rate	
					Inside Iraq	Outside Iraq
1	Khabur	6,240	160	1.6	42%	58%
2	Fishkhabur	54,900	1,840	2.5	0%	100%
3	Great Zab	26,470	473	5.2	58%	42%
4	Little Zab	22,250	456	1.9	64%	36%
5	Sirwan (Dyala)	32,000	386	0.74	41%	59%

According to the general directorate of water resources in Kurdistan region, there are five main rivers, each with its own drainage basin area and length. The water volume of these five rivers is decreasing annually due to low rainfall and drought in the region. In 2016, their average annual water was about 36 billion cubic meters, but in 2021 the amount of water significantly decreased to about 12 billion cubic meters, a decrease of about 66%.

Figure 4: comparison between rivers' water volume in Kurdistan region by rivers in 2016 and 2021 (billion cubic meter)

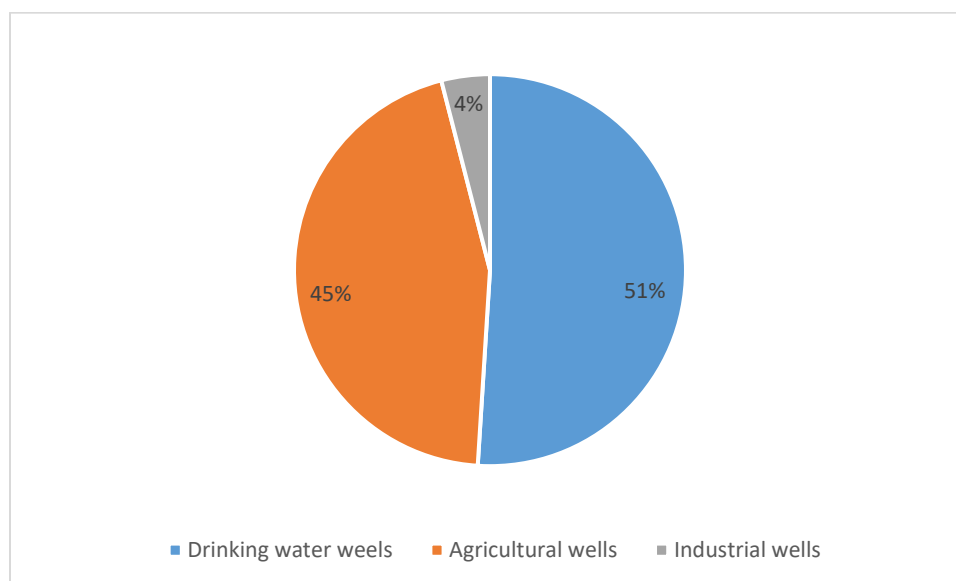


As shown in the figure, in 2016, the water volume of the Great Zab river reached about 9.5 billion cubic meters, but in 2021 decreased by 45% and reached 5.2 billion cubic meters, and the Little Zab river lost about 66% of its water, Sirwan river lost about 82%, and Khabur's water level with 2.83 billion cubic meters in 2016 decreased to 1.6 cubic meters in 2021 accounted for 43%. Unlike these four rivers, the water of the Fishkhabur River has decreased dramatically with 13.66 billion cubic meters in 2016 against 2.5 billion cubic meters in 2021 that is significant accounting for 81%.

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Decrease of water flowing in rivers in large scale is due to drought and low rainfall, in addition to the construction of dams by Turkey and Iran, which has a significant impact on the decrease in water levels of the Fishkhabur and Sirwan rivers. The water supplies of these river are likely to much decrease in the future and causing water crisis.

Figure 5: percentage rate of licensed wells in Kurdistan region in 2021



According to the general directorate of water resources, there are 24,310 licensed wells of all types in Kurdistan region. Of the total wells in Kurdistan region, 12,374 are used for drinking water, 10,986 for agriculture and 950 for industry.

Table 13: Number of licensed wells at the level of KRI and governorates 2021

Governorat	Drinking water wells	Agricultural wells	Wells for Industrial projects	Total
Erbil	4,220	4,831	164	9,215
Sulaymaniyah	6,170	3,028	488	9,686
Duhok	1,477	2,017	119	3,613
Garmyan administration	507	1,110	179	1,796
KRI	12,374	10,986	950	24,310

At the governorates level, for all three types of wells shown in table 13, 38% of the wells are in Erbil, 40% in Sulaymaniyah, 15% in Duhok and 7% in Garman.

By the end of 2016, 22,560 wells had been illegally dug, including 380 in Erbil, 17,910 in Sulaymaniyah, 250 in Duhok and 600 in Garman administration. Some of them are currently dried up due to the lowering of the ground water.

Due to lack of data on Halabja governorate, it is calculated with Sulaymaniyah governorate.

According to the directorate of the groundwater for 2021, the groundwater levels in most basins, both Grains and Karstic are continuously declining. In some Karstic basins, where the water contact line was in depth of 100m – 120 m had dried up and now the water contact line is 150 and to reach water we need to dig to a depth of 120m.

For example, in “Pirmam basin”, replacement wells have been dug instead of most of the wells and the water level of the remaining wells decreased such as “Kore well 3”, where in depth of 130m, its static water level was 8.14m in 2000 and in 2021 at the same depth (130m) the static water level decreased to 71.58m or 63.44m deeper. Also, “Armawa well 1” with depth of 112m and static water level of 27.90m in 2000 declined to 53.49m in 2021 or 25.29m deeper.

Regarding the Grains basins in the central and northern of the Dashti Hawler, groundwater levels have significantly declined. For example, in the northern part, the static water level of Mala Omar well has decreased about 98 m in 2021 compared to 2000 and the static water level of Qushtapa well number 12 has decreased about 104 in 2021 compared to 2001.

In Duhok governorate, the basin of Bard rash- Akre had more than 150 naturally flowing wells, while there are no naturally flowing wells anymore and there is need for trumpets in order to extract water from these wells. The remained wells, the level of water has been decreased such as Sarkiza well that was 200m deep with static water level of 24m in 2004 and reached 34.1m in 2021 or 10.1m deeper.

Regarding Sulaymaniyah governorate, the water level in most of the naturally flowing wells in the basin of Dashti Sharazoor have decreased, for example, in 2012, the 400 m deep well in Sarchnar with stand water of 21.31m deep fell down to 23.92m in 2021, in other words 2.61m deeper. Also, 121m deep well of Hawari shar with stand water of 11.72m deep decreased to 17.04m or 5.3m deeper.

As explained above, the groundwater level has significantly decreased in Erbil governorate compared to other places, especially in the central district and Dashti Hawler district.

Kurdistan Region 2018-2022 Indicators

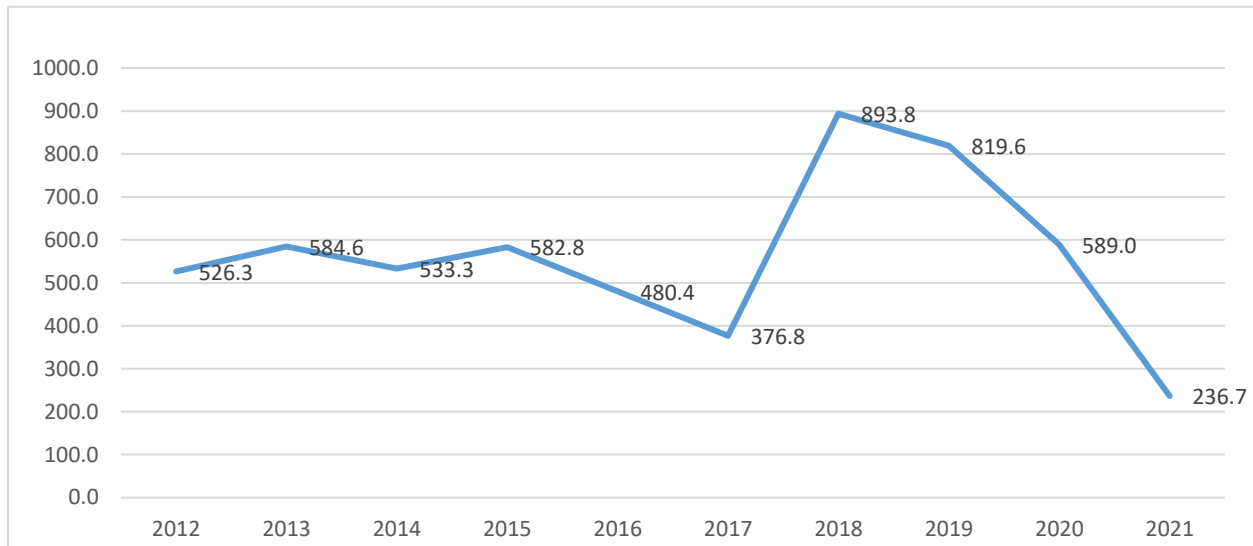
As it explained above, the groundwater level in Erbil governorate has significantly decreased, especially in the central district and Dashti Hawler district, where the water level of wells has decreased significantly compared to other places.

Relying on these indicators, we need to be concerned about the future and have an appropriate plan to combat the water crisis in Kurdistan region and. We should take advantage of water resources by building dams to store river water and build concrete canals to transfer water from lakes and rivers, as well as use of advanced irrigation methods instead of old methods, and many other scientific measures to decrease the effects of drought, and avoiding waste of water. According to general directorate of water and sewerage, 30 % of drinking water is wasted.

Rainfall

It is amount of rain gathered in different places after rainfall according to the climate and geographical location measured at meteorological stations.

Figure 6: amount of rainfall (mm) in KRI, 2012-2021



According to general directorate of weather and earthquake, a significant change can be seen in rainfall over the past 10 years. The rainfall rates are relatively close to each other in 2012-2015, but in 2018 and 2019, the rainfall level was about 893 mm and 819 mm respectively which is a large amount compared to other years. 2021 recorded the lowest rate about 236 mm.

Table 14: rainfall amount (mm) at the level of governorates and KRI, 2012-2021

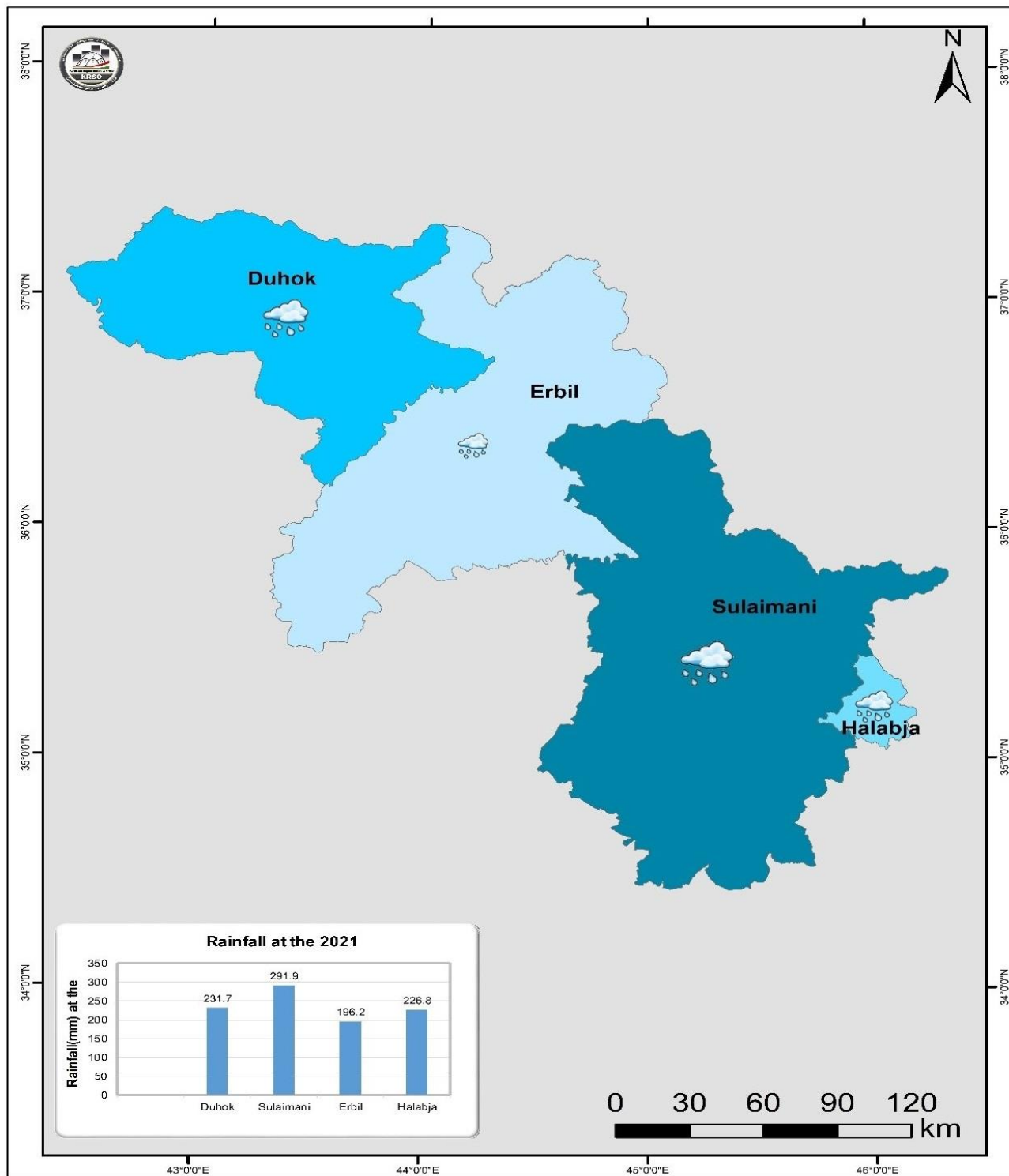
Year	Erbil	Duhok	Sulaymaniya h	Halabjah	KRI
2012	366.4	529.2	683.2		526.3
2013	431.8	729.4	624.7	552.6	584.6
2014	388.6	699.1	685.9	359.6	533.3
2015	422.3	505.8	791.2	612	582.8
2016	375.8	511.1	655.3	379.2	480.4
2017	265.6	358.4	484.8	398.4	376.8
2018	733.6	953	1235.2	653.3	893.8
2019	602	909.4	1028	739	819.6
2020	417.2	696	739.7	503.2	589.0
2021	196.2	231.7	291.9	226.8	236.7

Note: In 2012, the rainfall in Halabja governorate was recorded together with Sulaymaniyah governorate.

In 2012, the highest level of rainfall was recorded in Sulaymaniyah governorate (about 683.2 mm) and the lowest level in Erbil (about 366.4 mm). In 2021, Sulaymaniyah governorate recorded the highest amount of rainfall followed by Duhok and Halabjah governorates and Erbil governorate with the lowest level of rainfall compared to other governorates (Above table).

During 10 years, between 2012 and 2021, the highest rainfall in all governorates has been recorded in 2018 with a considerable rainfall which revived water resources and agricultural sector.

Map 6: rainfall (mm) at the level of governorates in KRI, 2021



Kurdistan Region 2018-2022 Indicators

Temperature

It refers to the records of temperature during the months of the year, which are constantly changing and measured by temperature measurement tools in weather recording stations in different units. The most important measuring units are degrees Celsius (°C) and Fahrenheit (°F) but degrees Celsius (°C) is more widely used.

Table 15: temperatures in the government of Kurdistan region for the years 2018-2021

Erbil													
Year	Temperature	Mmonths											
		Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
2018	Lowest	6.60	8.10	13.50	15.70	20.60	25.70	28.90	27.60	25.40	20.90	12.20	8.60
	Highest	14.70	16.70	23.20	26.70	31.00	37.90	42.00	41.50	38.30	30.50	19.70	14.4
2019	Lowest	6.00	6.70	8.50	10.96	19.80	25.70	25.40	29.50	23.50	19.90	11.00	8.50
	Highest	13.00	14.90	16.30	20.47	32.60	40.30	40.80	40.20	36.80	30.90	22.20	16.00
2020	Lowest	5.60	6.50	19.40	13.40	19.50	30.70	30.00	27.30	26.10	19.20	13.30	7.10
	Highest	12.50	13.20	11.60	24.00	32.30	37.70	42.70	39.40	39.30	32.40	20.90	16.40
2021	Lowest	6.20	7.30	9.70	15.60	22.50	24.00	28.70	28.40	21.80	17.90	12.20	7.20
	Highest	15.40	17.10	19.50	29.10	35.60	39.60	42.70	41.80	36.10	29.90	22.80	15.60

Continued 15

Sulaymaniyah													
Year	Temperature	Months											
		Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
2018	Lowest	3.2	5.9	10.7	12.7	17.1	23.3	26.5	25.9	22.3	17.3	9.8	5.6
	Highest	12.7	14.6	21.3	23.8	28.1	36.3	40.9	40.2	36.7	27.7	17.5	12.5
2019	Lowest	2.7	4.3	6.2	10.2	18.4	25.6	25.7	27.4	22	17.2	9.7	6.4
	Highest	11.5	13	14.2	19.3	30.3	37.8	39.2	40.8	35.5	28.8	19.8	14
2020	Lowest	3.2	3.6	8.6	12.6	18.5	23.1	28.5	25.7	24.2	16.6	10.4	3.8
	Highest	10.5	11.7	18.7	22.6	30.8	36.6	41	38.6	37.9	32.5	20.9	16.3
2021	Lowest	2.7	4.6	7.7	13.9	20.3	22.6	27.4	26.6	21	16.6	9.8	5.7
	Highest	15.3	17.5	20.2	29.4	35.4	40	43.2	43	36.1	28.5	20.2	14.9

Kurdistan Region 2018-2022 Indicators

Continued 15

Duhok													
Year	Temperature	Months											
		Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
2018	Lowest	4.8	6.6	10.9	13.3	17.5	22.3	25.5	25.1	22.3	17.9	10.1	7.1
	Highest	13.2	15	21.8	25.2	29.3	36.3	40.9	40.2	36.9	29.1	18.3	13.1
2019	Lowest	4.0	5.3	6.9	10.2	18.3	24.2	24.1	26.0	21.0	17.4	8.8	7.3
	Highest	11.6	13.5	14.9	20.0	31.1	38.6	39.5	41.6	35.7	30.2	21.4	15.0
2020	Lowest	3.2	4.2	9.4	12.4	17.6	22.3	27.5	25.0	23.5	16.8	11.4	5.4
	Highest	11.1	12.3	18.9	23.2	30.9	36.9	41.9	39.9	38.7	31.7	20.5	15.5
2021	Lowest	4.2	5.9	8.4	14.3	20.1	22.2	27.3	26.6	20.5	15.5	10.5	6.1
	Highest	14.6	16.1	18.2	27.8	34.8	37.7	42.1	41.2	35.6	28.7	22.5	15.5

Continued 15

Halabja													
Year	Temperature	Months											
		Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
2018	Lowest	3.97	6.6	10.11	14.06	14.32	27	31.94	31.56	28.8	14.61	8.49	5.3
	Highest	13.09	14.76	24.04	23.54	30.68	37.1	40.48	36.62	35	30.04	19.93	15.9
2019	Lowest	2.4	4.3	6.1	9.4	16.02	41	42.8	25.9	21.1	16.5	8.63	5.58
	Highest	12.1	14.1	15.7	21.2	32.3	23.3	24.5	43.4	38.1	30.5	21.04	12.7
2020	Lowest	3.19	3.59	8.21	10.99	16.12	21.49	26.85	23.51	23.98		7.78	3.77
	Highest	12.13	13.3	19.84	24.1	33.38	39.5	43.87	41.24	41.62		17.72	14.28
2021	Lowest	2.27	4.78	6.79	11.91	19.56	27.38	26.84	26.4	20.77	15.46	9.27	4.95
	Highest	14.66	16.77	20	29.75	36.77	41.47	43.88	42.7	38.03	31.03	21.35	15.5

Sources

- Agriculture and environment statistics department 2022, Ministry of agriculture and water resources in KRG- Receiving information by official letter 2022, KRI: KRSO,
- Agriculture and environment statistics department 2022, Ministry of transportation and communication, general directorate of weather and earthquak- receiving information by official letter 2022, KRI: KRSO,

Consumer Price Index (CPI) and National account

Consumer Price Index (CPI)

Consumer price index indicator is used in economic research and planning, because it reflects the changes that occur in the sectors of production and consumption in society. It is used to calculate inflation and deflation and changes in the purchasing power of the national currency and measuring national account to estimate economic activities and expenditures.

In order to calculate the consumer price index, we need an appropriate basket of goods and services. The basket was selected based on the results of the second round of the household socio-economic survey (IHSES 2) conducted in 2012. This year is selected as the base year and CPI is equal to 100 in this year. In 2021-2018, CPI is measured based on 2012 (variable) is calculated based on the base year.

For more clarification, below refers to some concepts and definitions.

Consumer Price Index (CPI): That is, the average change in the price of goods and services used by the consumers within a specific time period.

Monthly inflation: that is the difference between CPI of a certain month and the its previous month.

Annual inflation: that is the different between CPI of a reference year and the previous year.

Base year: due to economic stability, security and lack of crisis in 2012, the year 2012 was selected as the base year. The consumers' goods and services were weighed relying on household socio economic survey that was conducted in this year. CPI in this year is equal to 100.

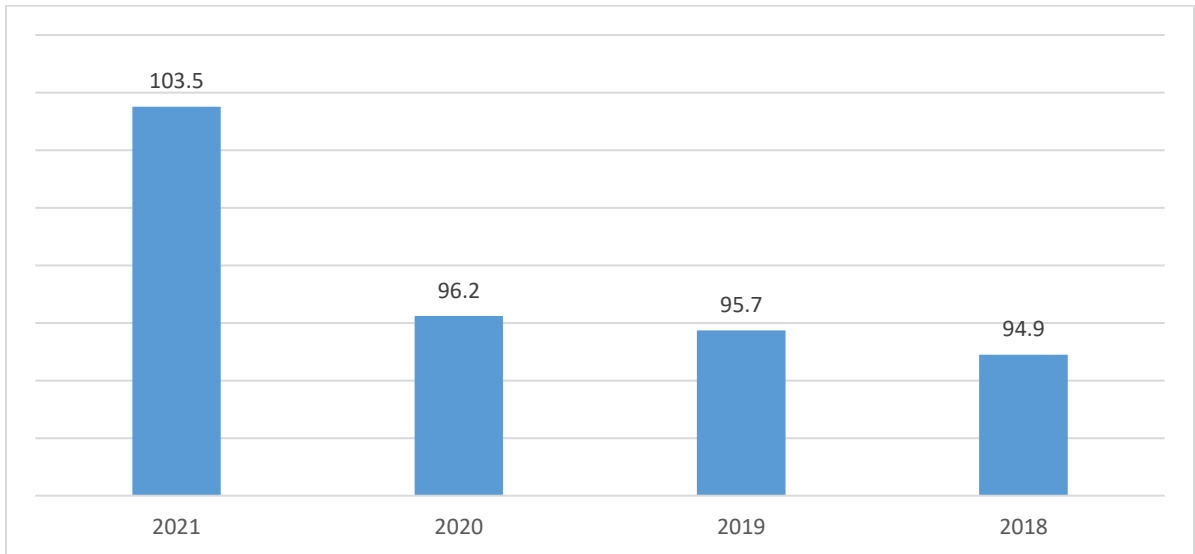
Table 1: CPI and average inflation rate in KRI in 2018-2021

	Year	CPI	Inflation / deflation rate based on 2012	Inflation / deflation rate based on the previous year
KRI	2018	94.9	-5.1	0.9
	2019	95.7	-4.3	1
	2020	96.2	-3.8	0.5
	2021	103.5	3.5	7.5
Erbil	2018	96.0	-4	2.4
	2019	97.2	-2.8	1.2
	2020	95.2	-4.8	-2.1
	2021	102.6	2.6	7.8
Sulaymaniyah	2018	92.6	-7.4	0.4
	2019	93.6	-6	1.1
	2020	95.3	-4.7	1.8
	2021	102.9	2.9	8
Duhok	2018	97.7	-2.3	-0.4
	2019	97.5	-2.5	-0.2
	2020	98.0	-2	0.6
	2021	106.1	6.1	8.2

Note: for the years 2018-2021, CPI is measured by base year 2012

As it is noted (above table), in Kurdistan region, CPI was not stable over the years 2018-2021 and started to increase especially between 2020 and 2021 which we can attribute to economic growth due to the end of finance crisis, rising of oil prices, and decreasing or removing salary saving system.

Figure 1: CPI in average in Kurdistan region for the years 2018-2021 according to the base year 2012



In 2018, coincident with the end of finance crisis in Kurdistan region, CPI reached 94.9 and rose to 95.7 In 2019 due to removing the salary -savings system and paying the full salaries of employees that increased consumers purchasing power. The increase continued and reached 96.2 in 2020. The price change was not only in food prices, but also in the price of residential units and rental prices. In 2021, CPI noticeably rose to 103.5 because of stability in financial and economic situation after COVID-19 that hit all countries.

Map 6: CPI in average at the level of governorate for the years 2018-2021 based on 2012 (base year)

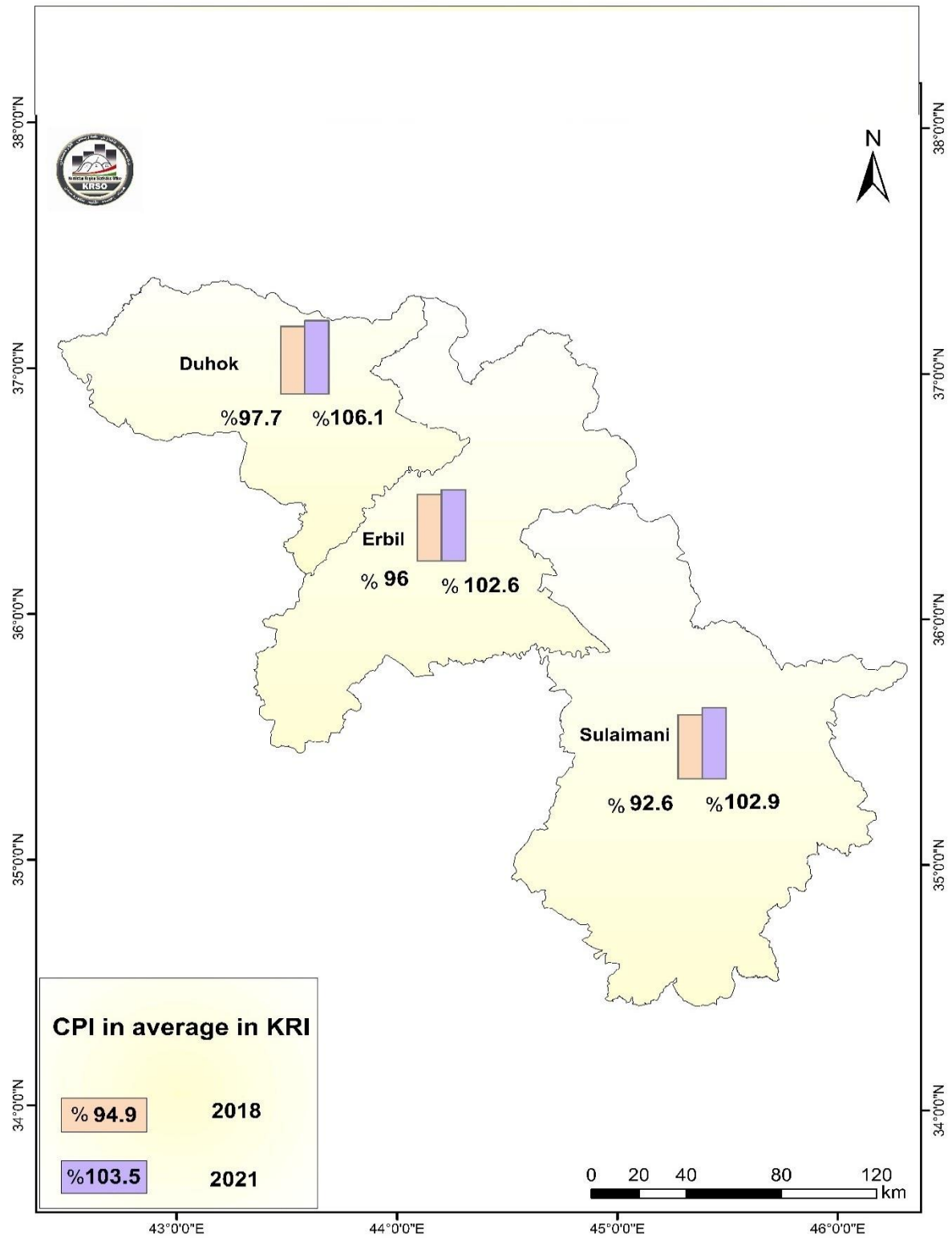
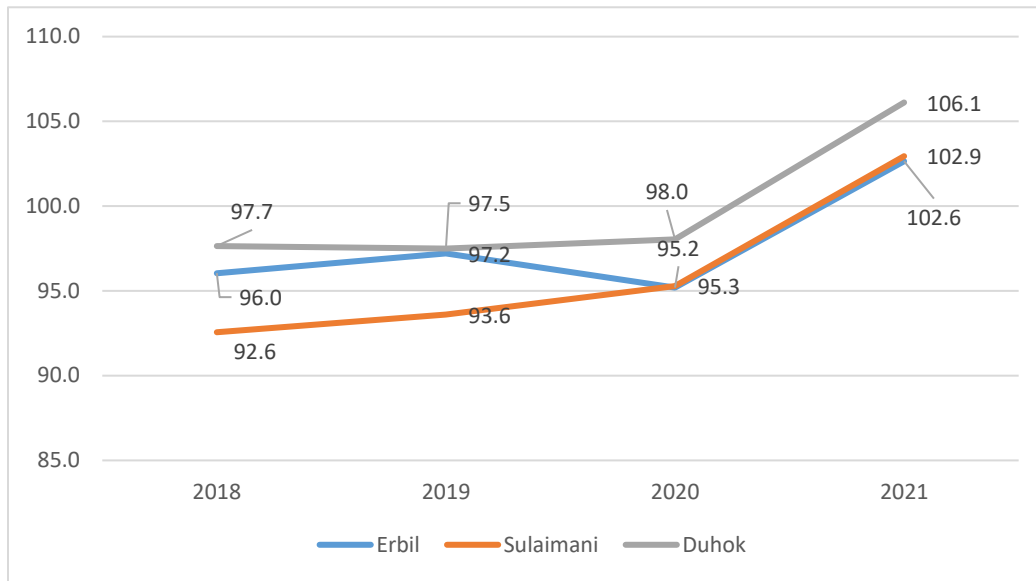
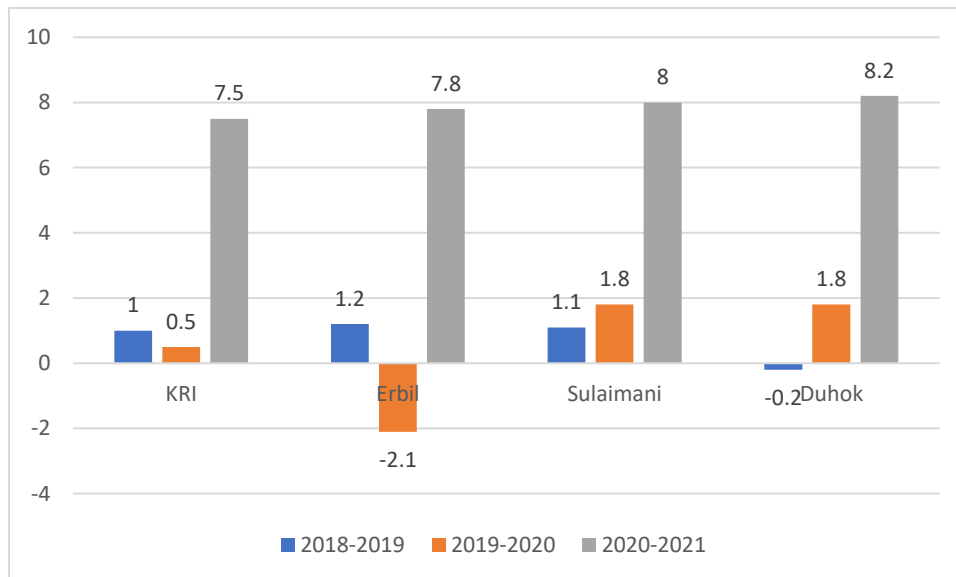


Figure 2: CPI by governorate in KRI for the years 2018-2021



Regarding governorates, in all governorates (Erbil, Sulaymaniyah and Duhok), CPI shows significant increase in 2021 compared to 2020, approximately in parallel with each other and mostly in Duhok governorate following by Sulaymaniyah and Erbil. In Sulaymaniyah governorate, CPI is continuously increasing in 2018 up to 2021 unlike Duhok and Erbil governorates where we can see a decrease in CPI in 2019 and 2020 in Duhok and Erbil governorate respectively.

Figur 3: Comparison between CPI annual chang in Governorates and KRI during 2018 -2021



Map7 : inflation/ deflation rate at the level of KRI and governorates for the years 2018-2021

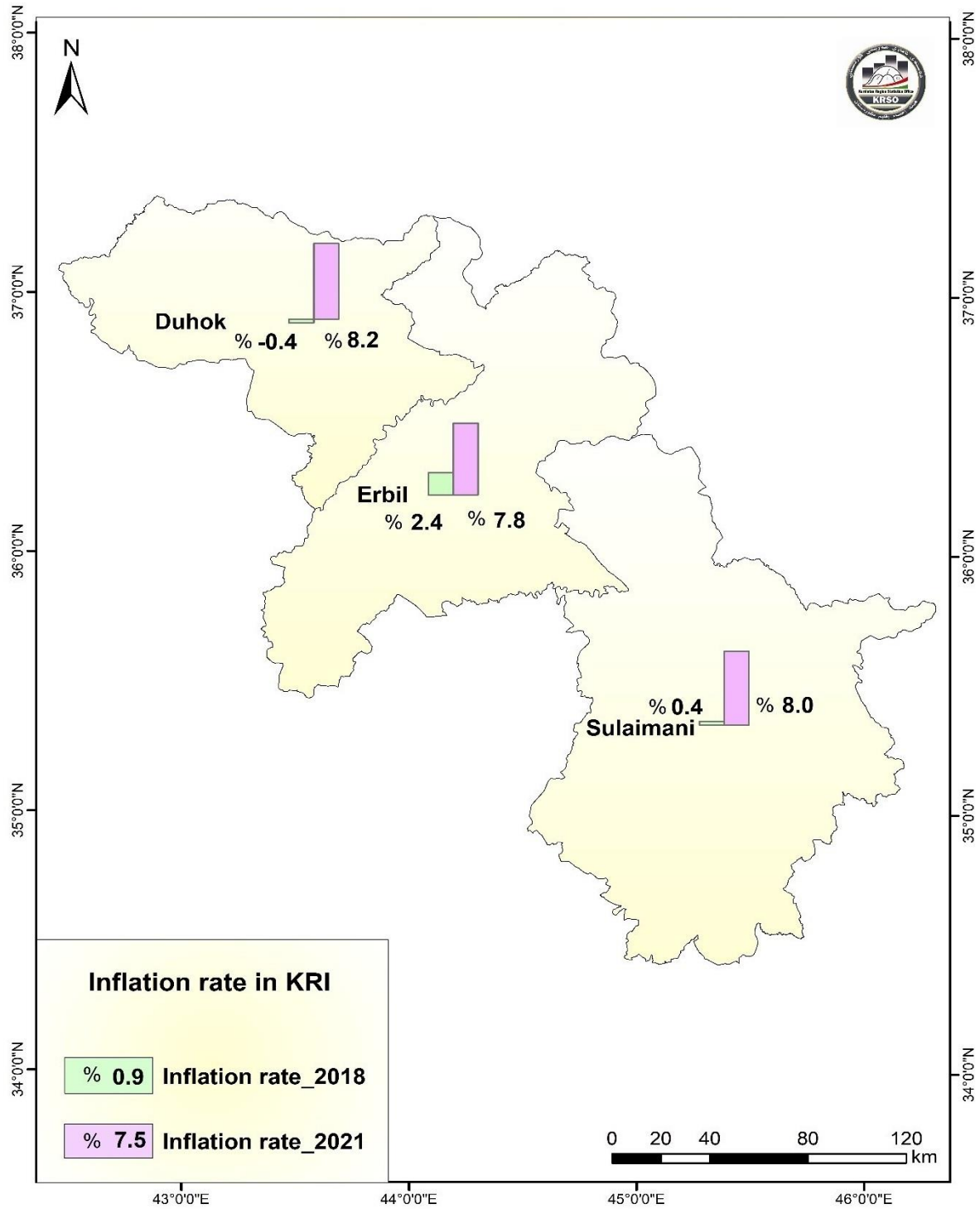


Figure 4: comparison between CPI for the years 2018 and 2021 in KRI by main groups

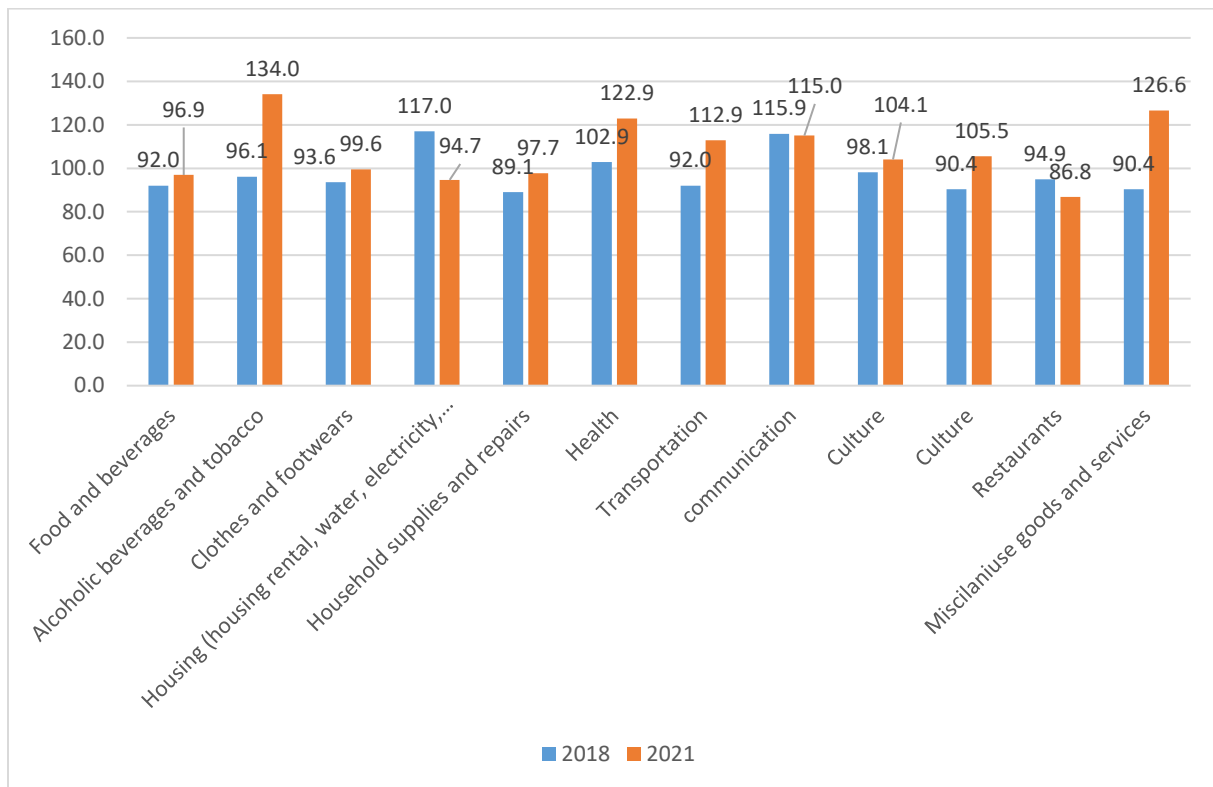


Figure above shows the difference between CPI for the years 2018 and 2021 by the main group of the consumer basket. In 2021, CPI for all group of the consumer basket except for housing and restaurants is higher compared to 2018. CPI decline in 2018 is largely due to the financial crisis in Kurdistan region. In 2021, CPI increased due to full payment of salaries on a regular basis and the end of war against the terrorist organization (ISIS) which led to market vibrancy.

National Account

National account refers to all different economic information that is collected in a country (individuals, business establishments, government units, etc.) in a unified account. national account shows the flow of goods, services and income in different sectors of the national economy. National account is a tool to show economic and financial growth during specific period of time, for example during a year or half a year. Economic programs are planed according to the results of national accounts. The national economy is divided into industry sectors such as production (goods and services), consumption, public services or government administration, financial intermediary (banks and insurance companies), export and import sectors.

Gross Domestic Products (GDP): it refers to the monetary value of final goods and services produced in a country in a given period of time.

Table 2: GRP and GDP in 2018, Million ID

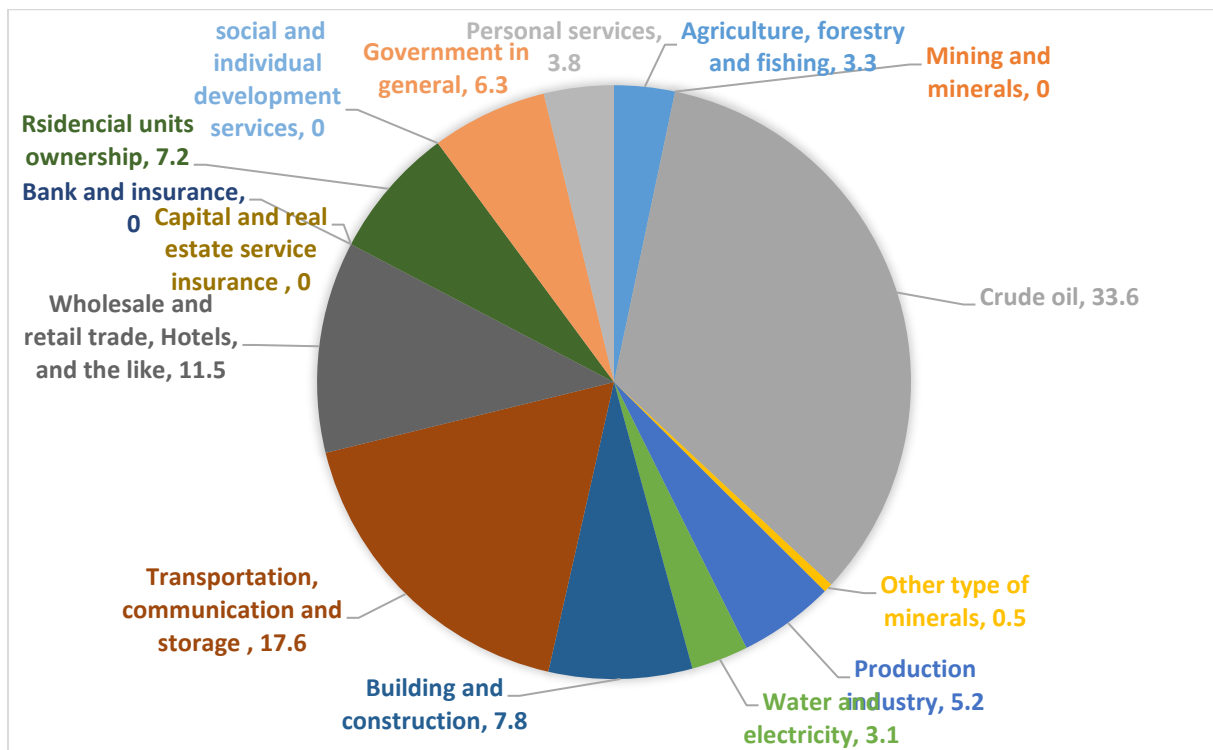
	Economic activities	KRI	Relative Importance (%)	Iraqi governments	Relative Importance (%)	Iraq	Relative Importance (%)	Ratio of KRI to Iraq (%)
1	Agriculture, forestry and fishing	1054596.5	3.3	6517668.6	2.9	7572265.1	2.9	13.9
2	Mining and minerals	-	-	-	-	-	-	-
2.1	Crude oil	10640225.3	33.6	109534096.8	48.4	120174322.1	46.6	8.9
2.2	Other type of minerals	149386.1	0.5	254460.7	0.1	403846.8	0.2	37
3	Production industry	1656742	5.2	3807629.6	1.7	5464371.6	2.1	30.3
4	Water and electricity	995608.8	3.1	6154570.3	2.7	7150179.1	2.8	13.9
5	Building and construction	2477709.8	7.8	9632953.5	4.3	12110663.3	4.7	20.5
6	Transportation, communication and storage	5568239.1	17.6	18390512.4	8.1	23958751.5	9.3	23.2
7	Wholesale and retail trade, Hotels, and the like	3650887.6	11.5	13660571.8	6.0	17311459.4	6.7	21.1
8	Capital, insurance and real estate service	-	-	-	-	-	-	-
8.1	Bank and insurance	-	-	-	-	-	-	-
8.2	Residential units' ownership	2272330.7	7.2	14043565.2	6.2	16315895.9	6.3	13.9
9	social and individual development services	-	-	-	-	-	-	-
9.1	Government in general	1995656	6.3	36924015.8	16.3	38919671.8	15.1	5.1
9.2	Personal services	1206387.8	3.8	7457318.6	3.3	8663706.4	3.4	13.9
	Total	31,667,769.7	100	226,377,363.3	100	258,045,133.0	100	12.27

Above Table (2), the total regional production in Kurdistan region for 2018 is 31.6 trillion dinars that makes 12.3% of the total domestic product of Iraq. regarding the contribution of economic activities in the region to the value added of economic activities in Iraq, we see that the activity of other types of minerals comes first with a contribution rate of 37% in GDP,

followed by production industry with 30.3% %, while transportation, communication and storage activities stand in the third rank with a contribution rate of 23.2%.

However, in term of relative importance of economic activities of regional production, crude oil activity ranks first with 33.6%, while transportation and storage activities accounted for 17.6% and wholesale and retail trade activities, hotels and the likes have a relative importance of 11.5%. The table 2 also shows the difference in relative importance of economic activities between the region and Iraq as a whole. Contribution rate of some activities in GRP is higher than what it is in GDP and for some activities is opposite. In terms of GDP, we note that the contribution of all economic activities to GRP is higher compared to GDP excluding crude oil activities and social development services. This indicates that the economic diversification in Kurdistan region is more than what it is in other governorates of Iraq.

Figure 5: Percentage of relative importance of economic activities in KRI, 2018



Above figure shows the share of all economic activities in the RDP in Kurdistan region for 2018. As it shows, the highest share goes to the oil activity, accounts for more than one-third (33.6%) of the RDP. The second highest share goes for transportation and storage activities with 17.6%, and wholesale and retail trade, hotels and the likes activities stand in third position at 11.5%.

Kurdistan Region 2018-2022 Indicators

It is worth mentioning that other economic activities contribute to RDP with smaller scale but different rate.

Figure 6: relative importance (%) of economic activities in RDP (KRI) and GDP (Iraqi Governorates) for 2018

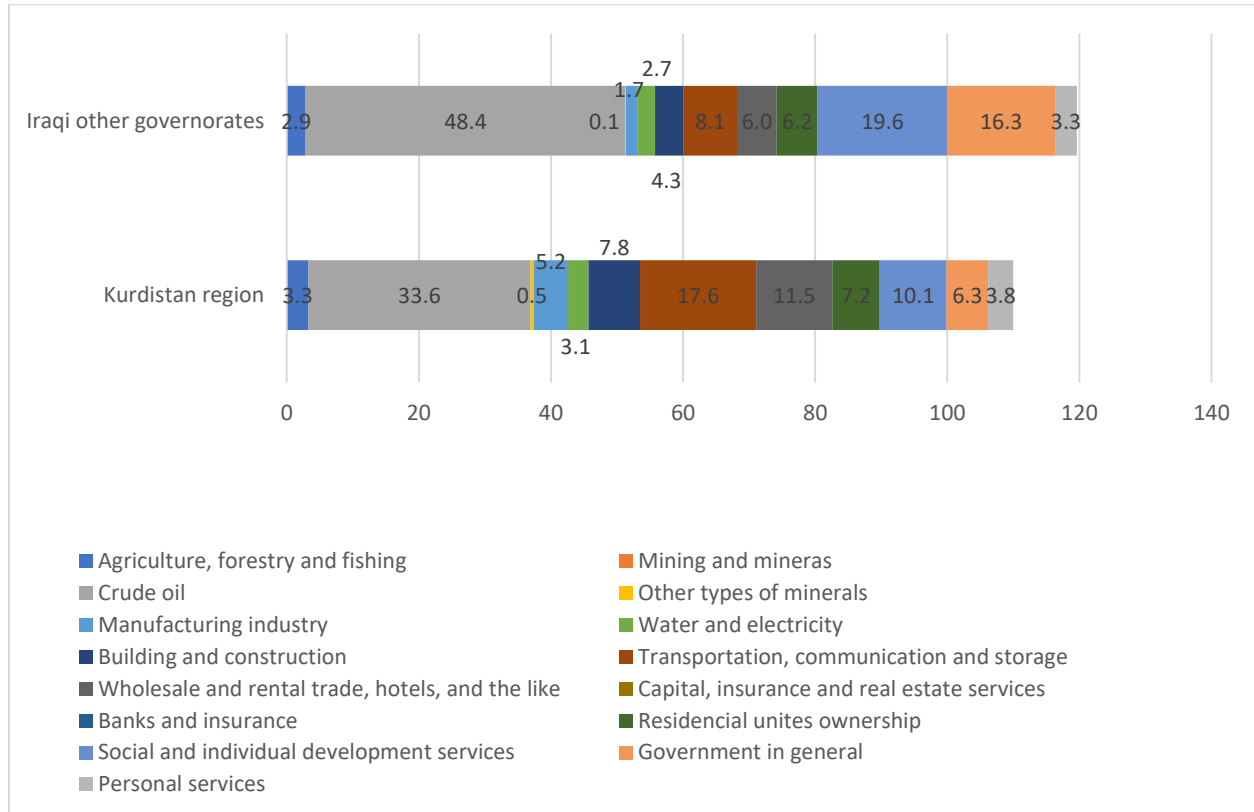


Figure above shows the comparison between the percentage of relative importance of economic activities in RDP (regional domestic production for KRI) and GDP (gross domestic production for Iraq as a whole) for the year 2018. As we can see, relative importance of crude oil activity for both RDP and GDP stand first with 33.6% and 48.4% for RDP and GDP respectively. Relative importance of all economic activities in RDP is higher than in GDP except for crude oil and government in general. More detail is presented in above figure.

Table 3: RDP in Kurdistan Region for 2018, Trellion ID

		Production value	Suplies value	Value added	Employees compensation	Operating Surplus
1	Agriculture, forestry and fishing	1.4502296	0.3956331	1.0545965	0.3639715	0.690625
2	Mine and minerals	0	0	0	0	0
2.1	Crude oil	11.2039413	0.563716	10.6402253	0.2496305	10.3905948
2.2	Other type of minerals	0.1963462	0.0469601	0.1493861	0.0149768	0.1344093
3	Manufacturing industry	4.5523351	2.8955931	1.656742	0.2902882	1.3664538
4	Electricity and water	1.5529203	0.5573115	0.9956088	0.2356635	0.7599453
5	Building and construction	4.3621652	1.8844554	2.4777098	0.5649178	1.912792
	Goods and comodities	0	0	16.974269	0	0
6	Transportation, communication and storage	8.6235904	3.0553513	5.5682391	2.9326006	2.6356385
7	Wholesale and retail trade, hotels and the likes	5.4162946	1.765407	3.6508876	0.5812798	3.0696078
8	Capital, insurance and retail estate services	0	0	0	0	0
8.1	Banks and insurance	0	0	0	0	0
	Distribution activities	0	0	9.219127	0	0
8.2	Residencial units activities	2.6260308	0.3537001	2.2723307	0.0004547	2.271876
9	Social and personal development services	3.5998951	0.3978513	3.2020438	2.2960187	0.9060251
9.1	Government in general	1.995656	0	1.995656	1.9244513	0.0712047
9.2	Personal services	1.6042391	0.3978513	1.2063878	0.3715674	0.8348204
	Total service activities	0	0	5.474375	0	0
	Total	43.5837486	11.9159789	31.6677697	7.5298021	24.1379676

Employee Compensation: the source of this indicator is the accounts that used in calculating GDP in the form of distributed incomes, which include all cash and non-cash wages and salaries paid to employees for all economic activities such as agriculture and industry in all sectors (general, public and private).

Operating Surplus: it measures the difference between revenue and expenditure. In other words, this indicator is the result of excluding both employees' compensation and value of depreciation of fixed assets (supplies) from GDP or

$$\text{GDP} = \text{Production value} - (\text{employee compensation} + \text{Supplies value})$$

Kurdistan Region 2018-2022 Indicators

The gross regional product (GRP) for Kurdistan region in 2018 is shown in Table 3 by the values of production, supplies (needs), value added, compensation of employees and operating surplus for each economic activity. Gross regional product (GRP) for Kurdistan region for activities excluding banking and insurance is more than 31.6 trillion Iraqi dinars, where production value is 43.6 trillion dinars, value of supplies (needs) is 11.9 trillion dinars, compensation of employees is 7.5 trillion dinars and operating surplus amounts to 24.1 trillion dinars.

Table 4: value added and percentage of value added by economic activities in KRI in 2012 and 2018 (million IDs)

Economic activities	Value added		%	
	2012	2018	2012	2018
Agriculture, forestry and fishing	840,100	1,054,597	3.1	3.3
Mines and minerals	42,500	–	0.2	–
Crude oil*	–	10,640,225	–	33.6
Other kind of minerals	–	149,386	–	0.5
Manufacturing industry	1,681,500	1,656,742	6.1	5.2
Electricity and water	555,900	995,609	2	3.1
Building and construction	5,130,800	2,477,710	18.7	7.8
Transportation, telecommunication and storage	1,752,900	5,568,239	6.4	17.6
Wholesale and retail trade, hotels and the kinds	2,499,000	3,650,888	9.1	11.5
Capital, insurance and real estate services	–	–	–	–
Accommodation and food services	854,500	–	3.1	–
Information and communication (big companies)	1,844,300	–	6.7	–
Banks and insurance	305,300	–	1.1	–
Residential units' ownership	2,355,000	2,272,331	8.6	7.2
social and personal development services	1,999,600	3,202,044	7.3	10.1
Government in general	–	1,995,656	–	6.3
General administration*	7,577,300	–	27.6	–
Personal services	–	1,206,388	–	3.8
Total	27,438,700	31,667,770	100	100

Note: table 4 shows comparison for value added between the years 2012 and 2018 by economic activities. It is noted that there are missing values for some activities in 2012 and/or in 2018, of which we can refer to:

*Oil Activity: In 2012 there was no export for oil as the federal government was the only party engaged in oil exportation, therefore value Added was not calculated for oil activity, but in 2018, the value added for oil exports for Kurdistan region was calculated amounted to 10.6 trillion dinars.

Kurdistan Region 2018-2022 Indicators

**Public administration activity: in 2012, this activity was the result of the Kurdistan budget share of Federal Iraq. In 2012, this activity was the same budget received from the central government in Baghdad. In this base, the data was not available to calculate the value added in KRI. in 2018, as Kurdistan region had its own budget from income of oil exportation, value added for public administration was calculated.

Other activities have been calculated based on the available information, except for the difference between income in 2012 and 2018.

Sources

•Department of Statistics of CPI and National account statistics department 2022, KRSO/ National account/ Gross regional production report 2018. Other sources: ministries and other relevant parties outside KRSO which include: Government final accounts / Ministry of Finance, balance of payments / Central Bank of Iraq / Kurdistan branch, crude oil production and export data / Ministry of natural resources, government final accounts and total budgets of public and mixed companies / Financial assessment office, final accounts and the general budget of banks and insurance. Local sources: KRSO/ technical departments: big, medium and micro industrial establishments survey/ industry statistics department, water and electricity statistics/ industry statistics department, consumer price index/ CPI statistics department, Vegetable and crops report/ agriculture and environment statistics department, poultry report/ agriculture and environment statistics department, seasonal questionnaire for production of the slaughterhouses/ agriculture and environment statistics department, results of private sector vehicles survey/ transportation and communication statistics department, communication companied/ transportation and communication statistics department, IWISH report/ Health, education and social statistics department, mining and mineral survey for private and public sectors/ industry statistics department, KRI: KRSO.

Trasportation and Communication Statistics

Air transportation

Transportation sector is considered to be one of the most important sectors in providing services for the transportation of citizens, tourists and goods within the country or between countries. Transportation development is a factor in strengthening the economic infrastructure of countries. Transportation by air is considered to be the most important, safest and fastest mode of transportation compared to other modes of transportation. Due to creating job opportunities inside and outside airports- good transportation, providing services- has an active contribution to the country's economic growth and GDP.

Transported passengers: it refers to the number of tourists (Arriving- leaving).

Domestic flight: it refers to number of flights (arriving, leaving) within the country.

International flight: it refers to the flight (arriving, leaving) between countries.

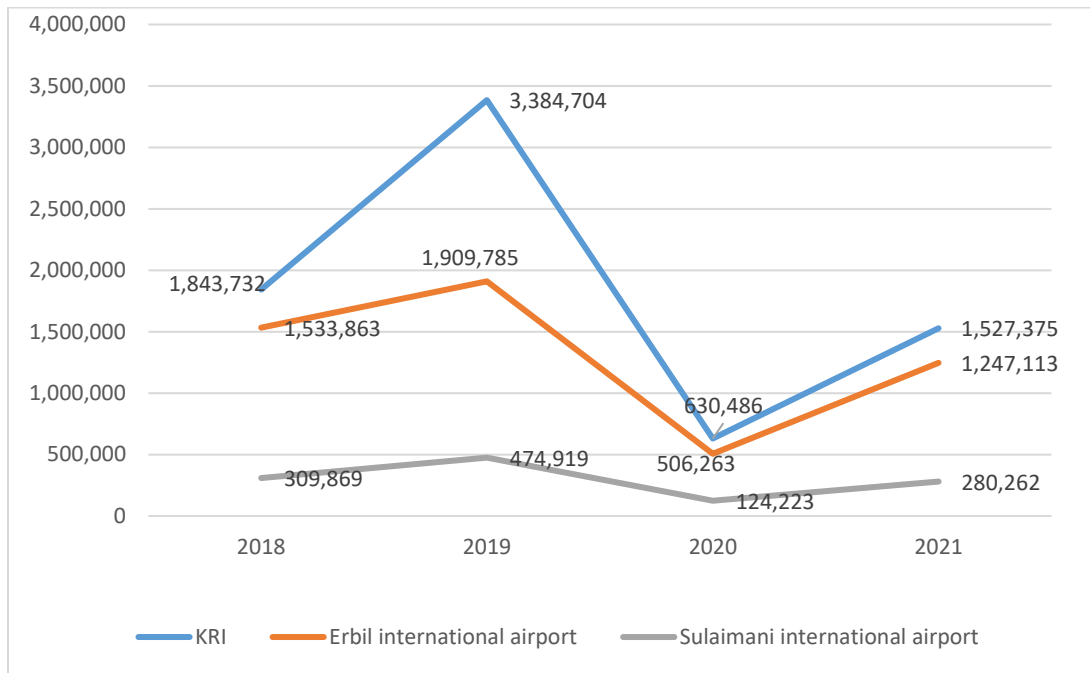
Volume of goods: it refers to the weight of goods (tons) transferred at airports (loaded, unloaded).

Table 1: statistics of air transport activities at the airports in KRI, 2021

Indicator	KRI	Erbil	Sulaymaniya h
Number of domestic passengers	300,195	251,588	48,607
Number of international passengers	1,227,180	995,525	231,655
Total	1,527,375	1,247,113	280,262
Number of domestic flights	4,570	3,197	1,373
Number of international flights	13,684	10,773	2,911
Total	18,254	13,970	4,284
Volume of unloaded goods, tons	21,139	14,966	6,173
Volume of loaded goods, tons	1,738	1,506	232
Total	22,877	16,472	6,405
Source: Erbil and Sulaymaniyah international airports			

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Figure 1: Transported passengers at the Airports in KRI for the years 2018-2021



A total number of 1,527,375 passengers were transferred at KRI's airports in 2021, of which 1,247,113 passengers at Erbil airport and 280,262 passengers at Sulaymaniyah airport. In 2020, the number of transferred passengers at KRI' airport was 630,486 passengers, of which 506,263 at Erbil international airport and 124,223 passengers have been transferred at Sulaymaniyah international airport. The number of passengers rose by 58.7% in 2021 compared to 2020 due to easing the rules against COVID-19.

Registered vehicles

Currently, vehicles of all kinds and sizes are the most common means of transportation in Kurdistan region. This mode of transportation plays a significant role in economic growth and domestic and foreign trade. Land transportation, despite its positive points, is not away from risks, of which we can mention traffic accidents; pollution especially in big cities; and congestion due to increased number of vehicles.

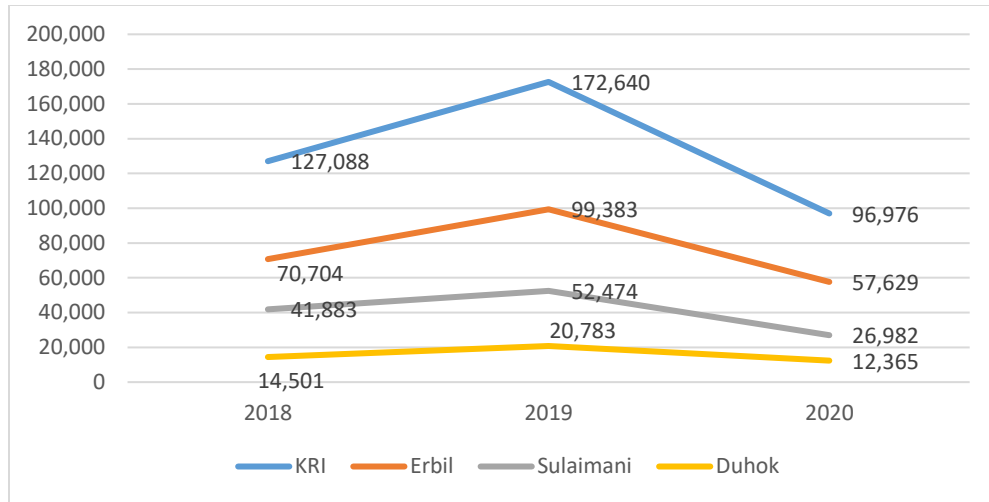
Passenger vehicles: it refers to that vehicles used to transport passengers, whether private or rental (Saloon, Saltation, and Bus).

Truck: it refers to vehicles used to transport goods such as pickup trucks, tanker, and lorry.

Table 2: No. of registered vehicles excluding government vehicles by governorates in 2020

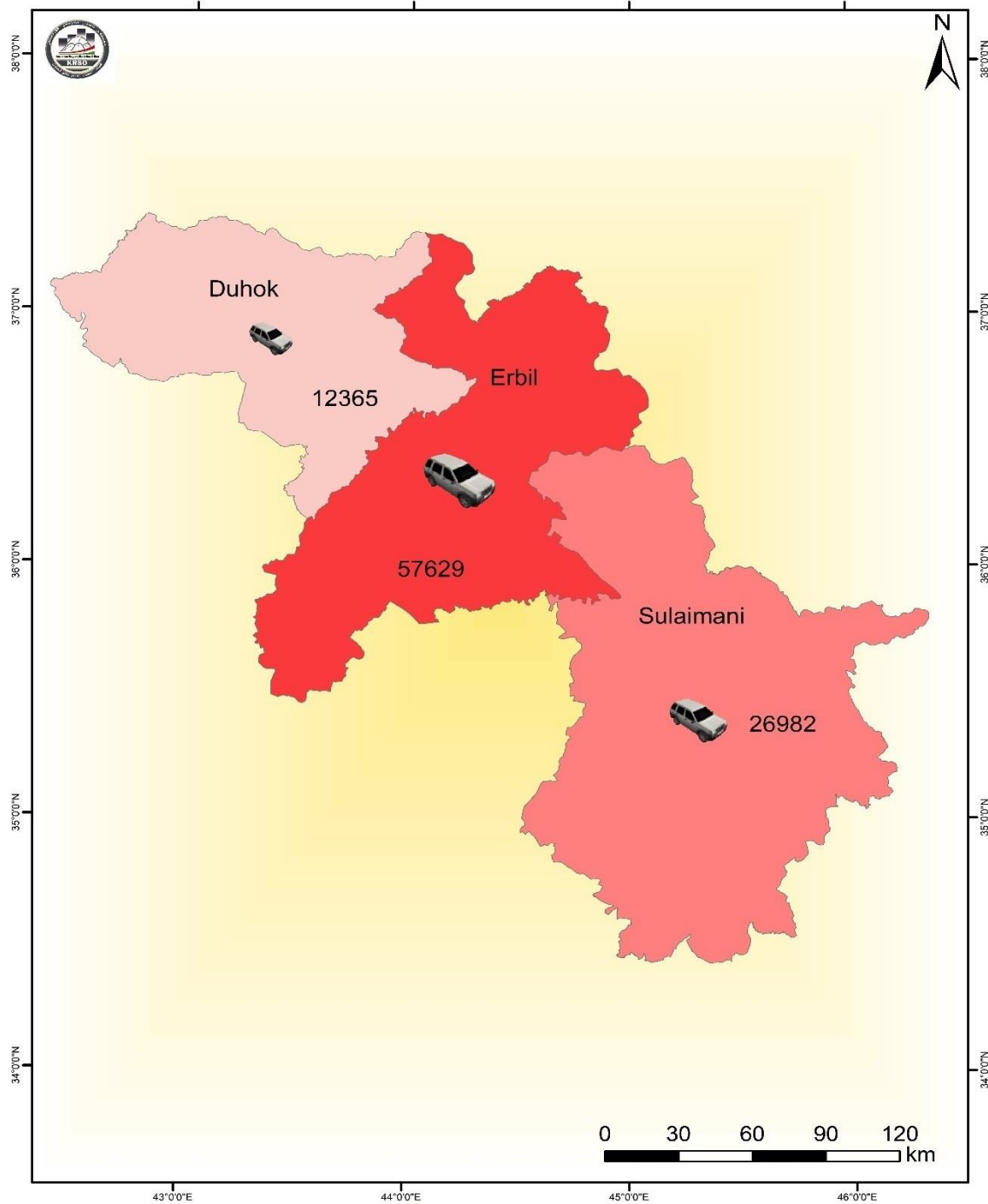
Indicaor	Erbil	Sulaymaniyah	Duhok	KRI
No. of vehicles registered in traffic directorates in governorates	57,629	26,982	12,365	96,976
No. of passenger vehicles /private	46,686	22,274	10,562	79,522
No. of passenger vehivles/ rental	548	663	28	1,239
No. of truck vehicles	10,395	4,045	1,775	16,215
No. of vehicles that use gasoline	52,928	25,955	11,615	90,498
No. of vehicles that use diesel	4,616	1,027	750	6.393
No. of vehicles use other kind of fuels and energy	85	0	0	85
Source; traffic directorates (Erbil, Sulaymaniyah, Duhok)				

Figure 2: No. of registered vehicles except government vehicles by governorate in 2018 -2020



At the level of KRI, the number of registered vehicles shows a significant decrease in 2020 (96,976) compared to 2019 (172,640) accounting for 78% due to economic crises and government measures against COVID-19. Decline can be also seen at the level of governorate in 2020, the highest number was recorded in Erbil governorate (57,629) and the lowest in Duhok governorate (12,365).

Map 8: No. of registered vehicles excluding government vehicles by governorates, 2020



Traffic accidents

Traffic accident is an accident that occurs without prior planning. There are various reasons behind accidents, where it causes a collision between two or more moving vehicles or between a moving vehicle and animals, pedestrians or with a ton on a public road and causes material and human damage. Below are some concepts and definitions related to traffic:

Road: A street or alley or railway or any open space used by people to reach a destination, whether far or near, one-side or two-side, main road or sub road, or a village road.

Collision: It is a collision between two or more vehicles or between a vehicle and a moving object (pedestrians, cyclists, animals...) or fixed objects (trees, stones, walls, electricity poles...) that result in casualties and property damages.

Overturning: Loss of balance of a transportation vehicle that causing a vehicle rollover onto its side of roof resulting in life casualty and property damage.

Runover: A collision of a moving vehicle with a soft object such as a person or animal resulting in casualty and property.

Table 3: Traffic Accidents by governorates in KRI for 2020

Indicator	KRI	Erbil	Sulaymaniyah	Duhok
Total number of traffic accidents in the governorates of KRI	2413	748	1019	646
Number of deaths	371	120	193	58
Number of injured	4335	715	2984	636
The number of accidents caused death	249	97	103	49
The number of accidents caused injuries	2164	651	916	597
Source: General traffic directorate of KRI, Traffic directorate of Erbil, Duhok and Sulaymaniyah and Garmyan				

Figure 3: Number of Accidents Causing Deaths and Injuries by governorate in KRI for the years 2018-2020

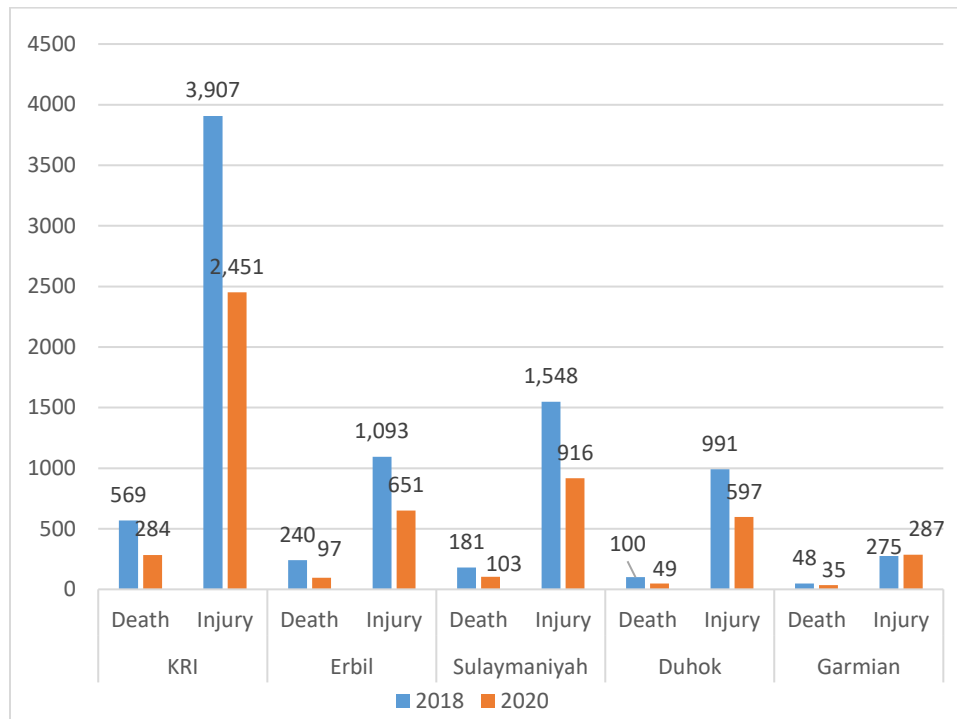
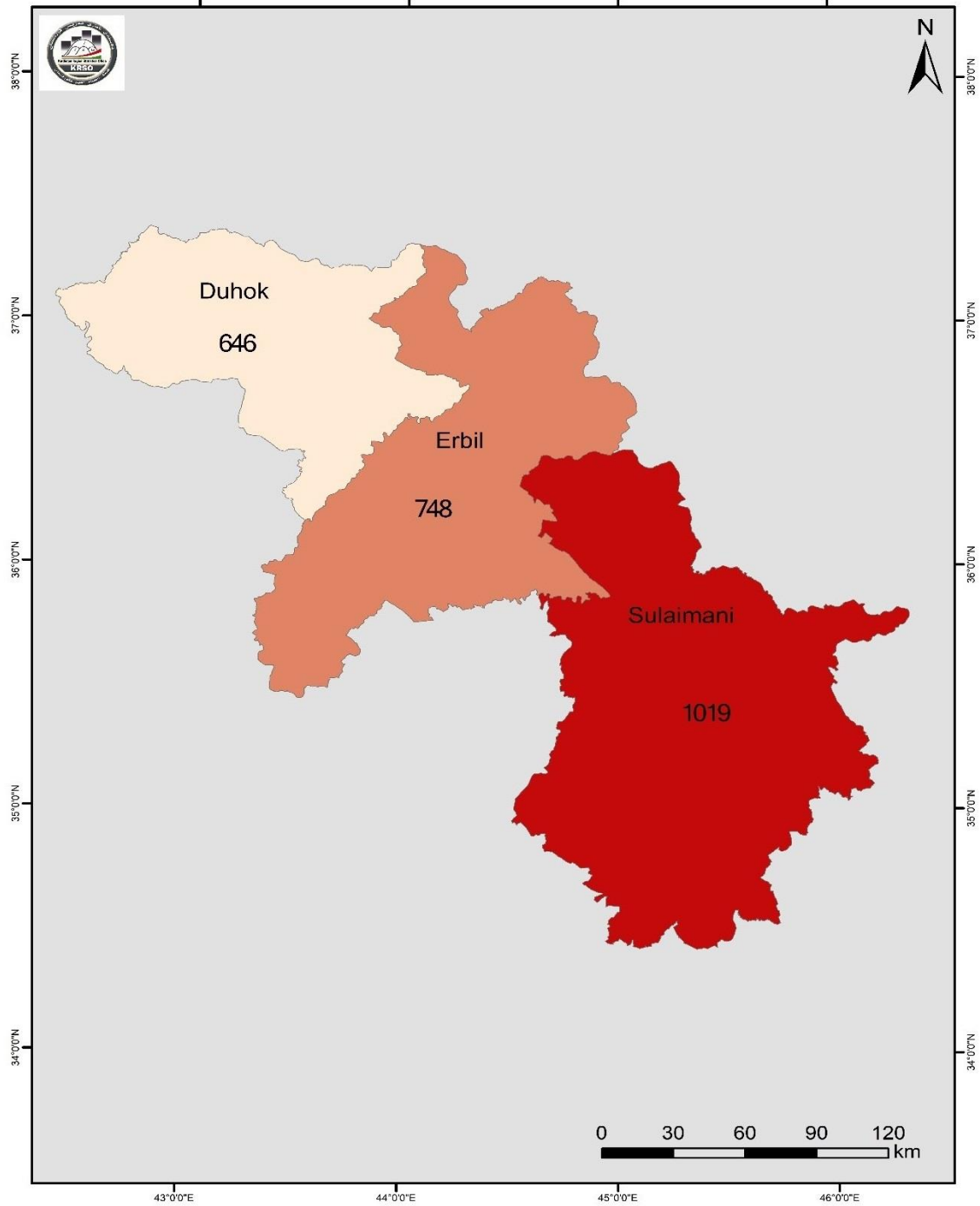


Figure 3 shows the number of accidents that caused deaths and injuries at the level of Kurdistan region and governorates for the years 2018 and 2020. Of the total traffic accidents in 2020 (2,413), 249 accident caused death and in 2,164 accidents no death has been reported. In 2018, there was 4,476 accidents, of which 569 traffic accidents caused death and 3,907 accidents were without death. Comparing the traffic accidents in 2020 and 2018, it shows a decline at 38.9% in 2020 compared to 2018 that attributed to the government measures (curfew) against COVID-19 within cities and between cities. At the level of governorates, in 2020, Sulaymaniyah governorate had the highest number of accidents that 103 accident resulted deaths and 916 with injuries, while the lowest number of accidents was in Duhok governorate, of which 49 caused deaths and 597 with injuries.

Map 9: No. of traffic accidents by governorates in KRI, 2020



Sources

- Communication and transportation statistics department, ministry of transportation and communication/ Erbil and Sulaymaniyah international airports- obtaining information through official letter 2022, Kurdistan region: KRSO,
- Communication and transportation statistics department, ministry of transportation and communication/ General traffic directorate of KRI, traffic directorate of Erbil, Duhok and Sulaymaniyah and Garman- obtaining information through official letter 2022. Kurdistan region: KRSO.

Trade statistics

Tourism sector

Tourism sector is considered an important economic resource in terms of income, creating job opportunities, and marketing. The income earned from this sector has a significant role in increasing GDP. Kurdistan region is one the region that many tourists visit for its attractive nature, historical places, security and stability. Kurdistan region statistics office (KRSO) in collaboration with the General Board of Tourism works according to the annual plan to collect data on tourism establishments, the conditions of these places, the number of domestic and foreign tourist and the number of overnight stays.

Tourism establishments: it refers to the place tourists use instead of their own homes during their stay, which includes hotels, motels, apartments and tourism complexes that provide basic facilities and services from a special administration unit. In Kurdistan region, tourism establishment are classified according to the type of service provided, ranging from excellent establishments with five stars to national establishments without stars.

Hotel: it is a tourism establishment used as a replacement for tourists' own home that provide basic facilities such as beds, bathrooms, and toilets (WC). A hotel is a large place where a large number of people stay (more than homes) and is run by people who have skills on hotel services.

Motel: it is a tourism establishment that provides accommodation for travelers and tourists on the roads outside and inside the city that has parking and services that are less than those provided in a hotel.

Tourism apartment: it is a tourism establishment that provides accommodation for travelers and tourists with basic services and place for cooking.

Tourism complex: is a type of tourism establishment that have a number of tourism houses with various services that administrated by a special administrative unit.

Number of guests: it refers to all tourists stay in the tourism establishment for a specific period of time which should not be less than one day. These tourists are local or foreign.

Number of nights stay (used beds): it is the total number of nights guests stay in the tourist establishment. Nights stay is determined based on (beds, rooms).

Income from tourism establishments: it is income earned from tourism establishments in exchange for providing services to tourists such as accommodation or rent for overnight stay, in addition to income from rent of shops, markets, restaurants and parking as well as income from providing other services (swimming pool, massage, laundry, renting of private cars, renting of rooms for ceremonies, holding exhibitions and conferences, income from food and

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beverages sold in restaurants or cafeterias). All these incomes make the total income of tourism place.

Number of employees: It is the total number of employees who work in the tourism establishments for payment or without payment as the business owner during one year period.

Total expenditure of tourism establishments: It covers all expenditure such as employee's compensation (cash and non cash donations) and cost of services (goods, supplies, and currency exchange services)

Table 1: No. of establishments, guests, night stays, employees, expenditure and income at the level of governorates for the years 2020 and 2019

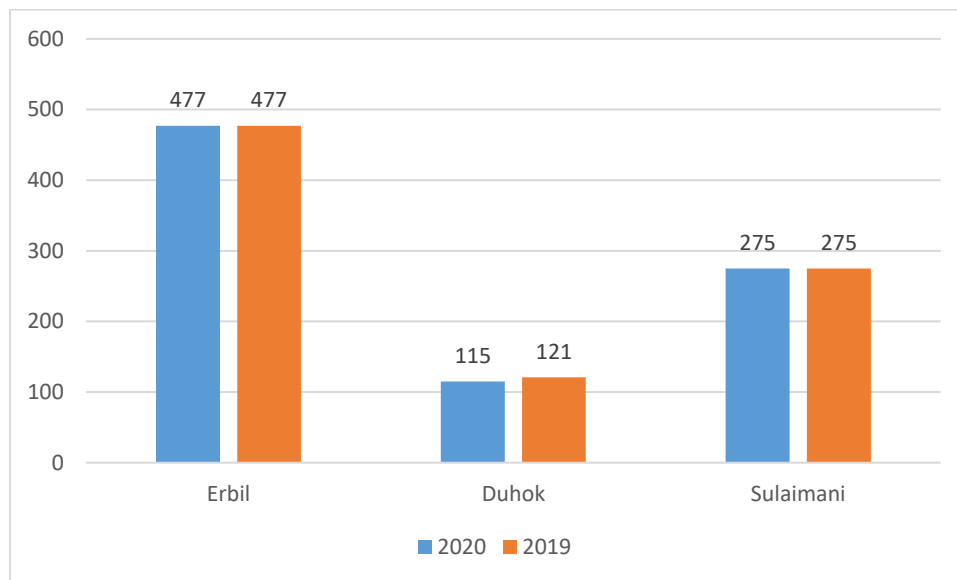
Item	Erbil		Duhok		Sulaymaniyah		KRI	
	2019	2020	2019	2020	2019	2020	2019	2020
No. of tourism establishments	477	477	121	115	275	275	873	867
No. of local duests (Iraqi)	1,572,748	630,070	188,281	85,019	1,273,002	825,160	3,034,031	1,540,249
No. of night stays for Iraqi local guests	2,833,322	1,165,383	487,380	276,516	1,338,625	984,986	4,659,327	2,426,885
No. of guests from outside Iraq (foreign and arab)	405,779	362,706	28,845	12,526	183,997	111,638	618,621	486,870
No. of night stays for non Iraqi guests (foreign and arab)	550,894	461,506	90,719	52,297	297,482	200,874	939,095	714,677
Total No. of guests	1,978,527	992,776	217,126	97,545	1,456,999	936,798	3,652,652	2,027,119
Total No. of night stays	3,384,216	1,626,889	578,099	328,813	1,636,107	1,185,860	5,598,422	3,141,562
No. of employees in tourism establishments	4,385	4,122	781	555	1,916	2,013	7,082	6,690
Total expenditure of tourism establishment (billion dinars)	102.183	72.298	11.451	6.000	46.997	37.809	160.631	116.107
Total incom of tourism units (billion dinars)	224.071	126.984	19.595	10.299	101.104	94.756	344.770	232.039

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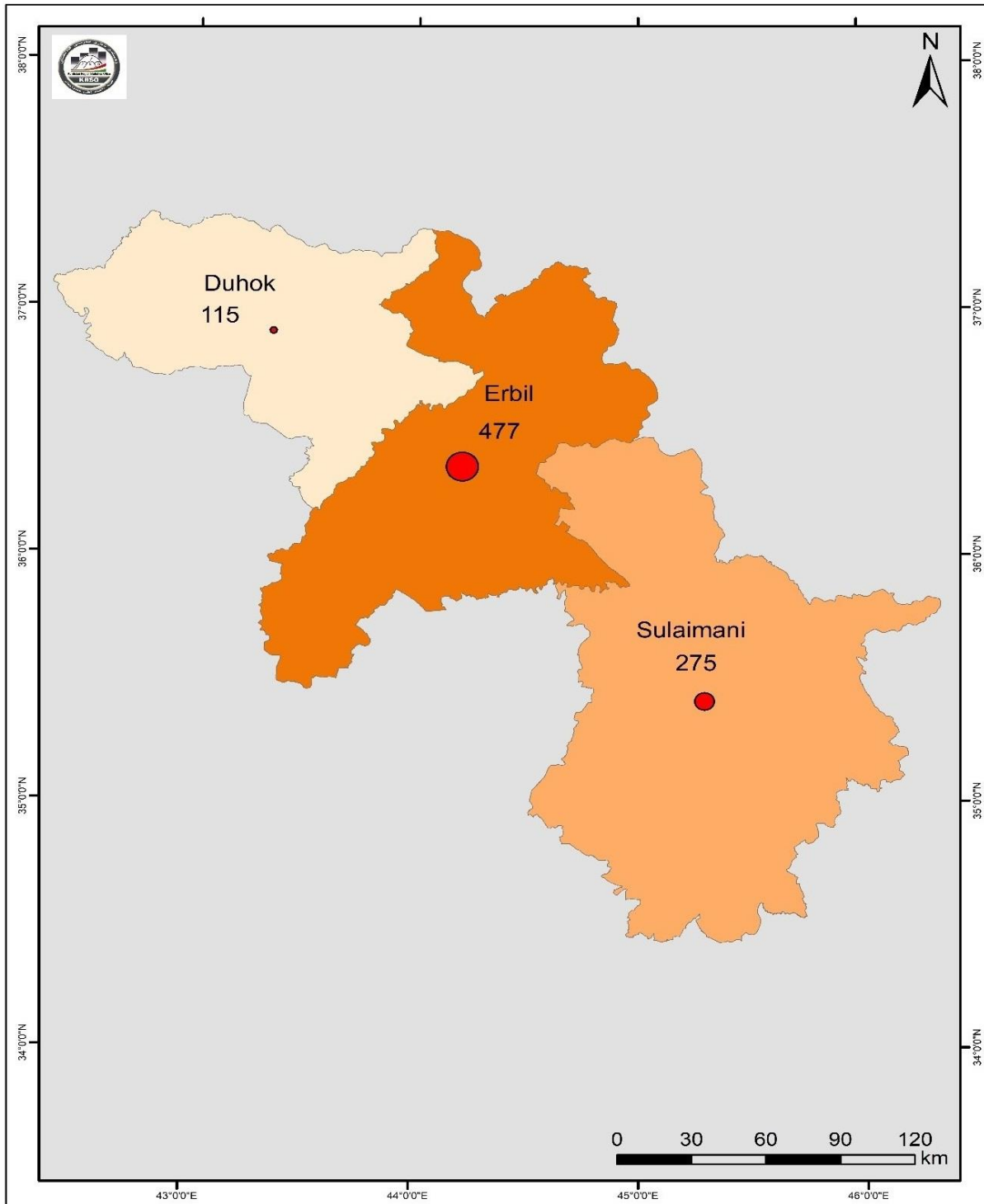
Number of tourism establishments

The number of tourism establishments in Kurdistan region in 2020 (867) decreased by 6% compared to 2019 (873) because of the spread of the coronavirus in the world and Iraq in general and Kurdistan region in particular, where some of the business owners had to temporarily close their place or replace with other business. At the level of governorates, the number of tourism establishments is presented in the following Figure.

Figure 1: comparison between the No. of tourism establishments in 2019 and 2020 by governorates



Map 10: No. of tourism establishments at the level of governorates in KRI, 2020



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Number of tourists

The number of guests in tourism establishments in Kurdistan region decreased by 44.5% in 2020 (2,027,119) compared to the number of guests in 2019 (3,652,652) (Table 1). Likewise, the number of nights stay in 2020 (3,141,562) shows a decrease of 43.8% compared to 2019 (5,598,422). The decline in the number of guests and the number of nights stay was due to economic crises, spread of COVID-19 and curfew orders which prevent domestic and foreign tourist to visit tourism places (Figure 2 and 3).

Figure 2: No. of guests visited tourism establishments at the level of governorates and KRI for the years 2019 and 2020

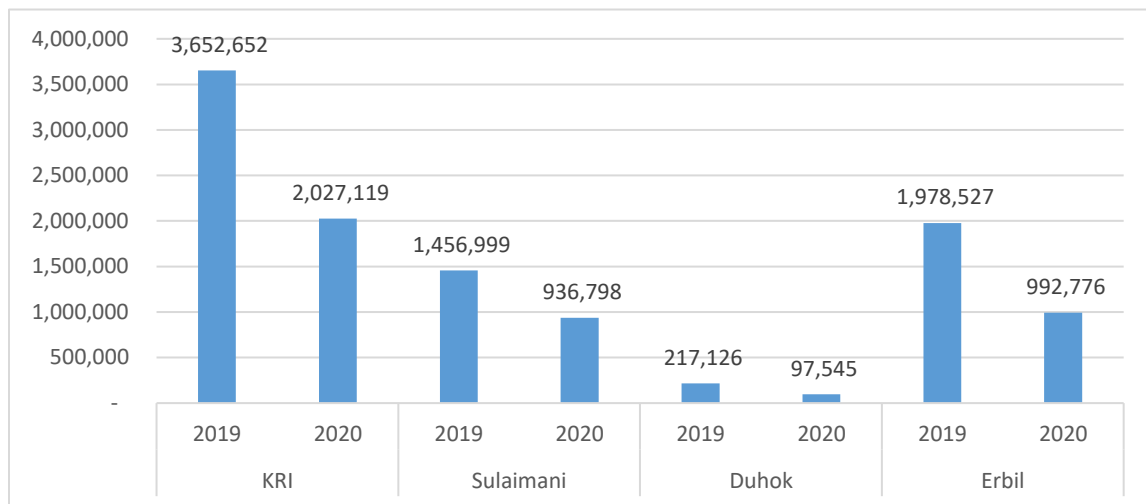
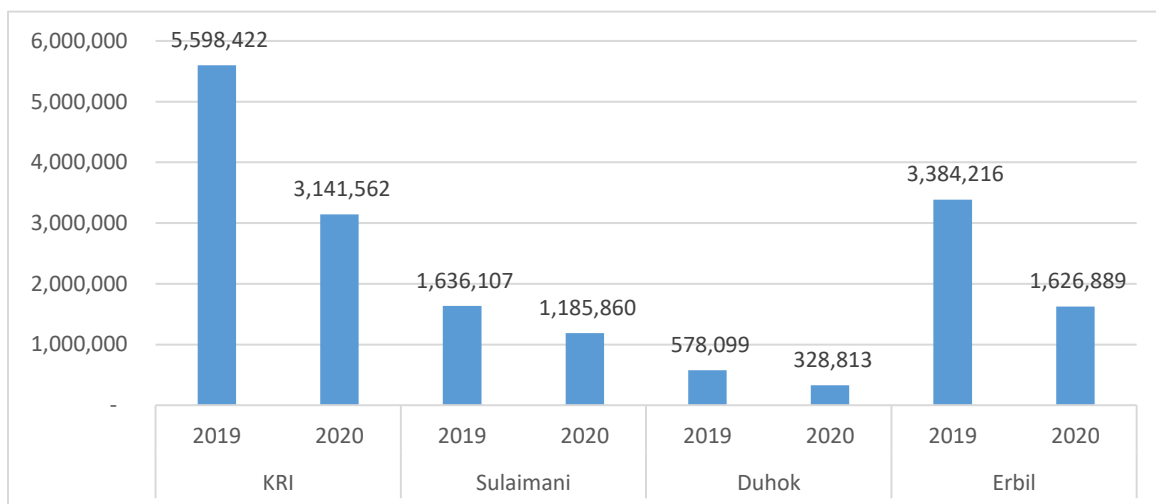


Figure 3: No. of nights stay in tourism establishments at the level of governorates and KRI for the years 2019 and 2020



Number of workers in tourism establishments

Table (1) shows the difference in the number of workers in tourism establishments for the years 2019 and 2020 at the level of Kurdistan region and governorates. In 2020, the number of workers was 6,690 and comparing to 7,082 workers in 2019, it declined by 69.5% due to economic crises, spread of COVID- 19 and curfew orders which prevent domestic and foreign tourist to visit tourism places (Figure 4 and 5).

Figure 4: Comparison between the No. of workers in Tourism Establishments in KRI for the years 2013, 2016, 2019, 2020

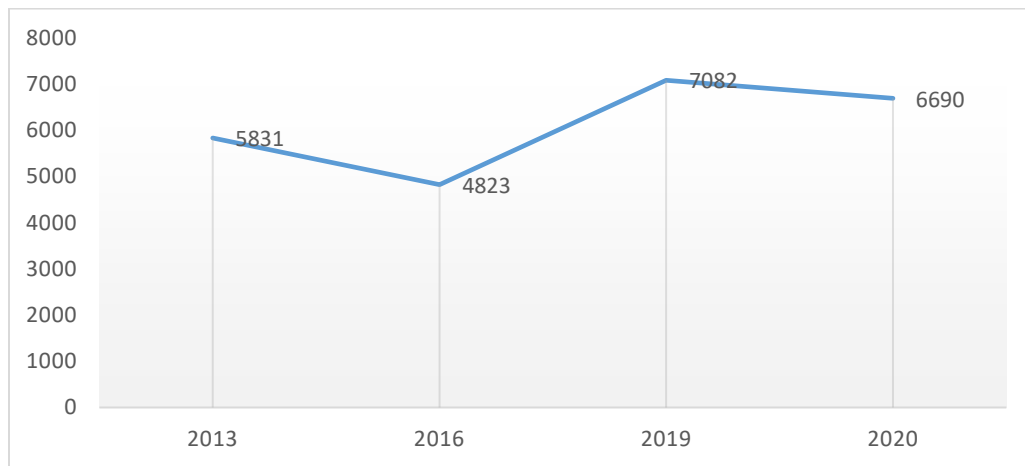
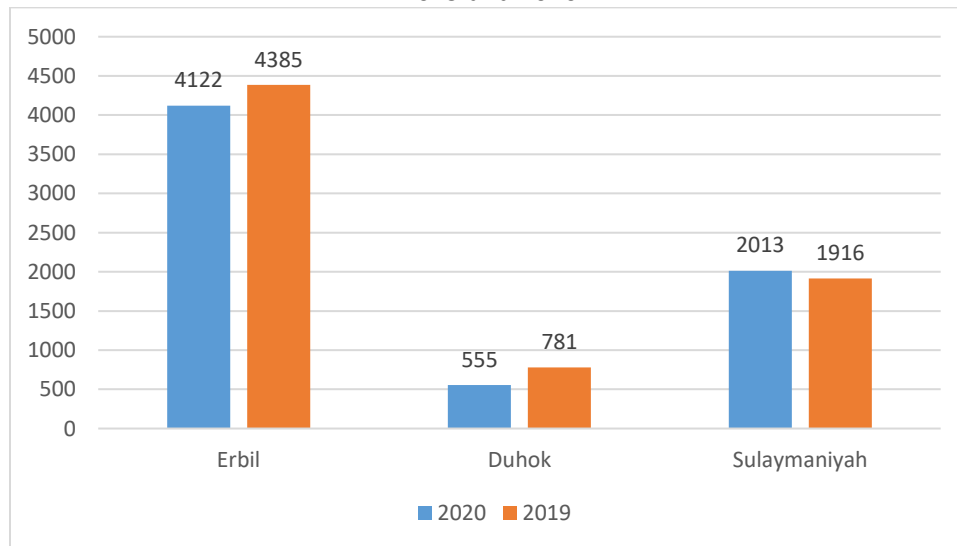


Figure 5: No. of workers in Tourism establishments at the level of governorates in KRI for the years 2019 and 2020



Expenditure in tourism establishments

Figure 6: expenditure in Tourism Establishment at the Level of Governorates and KRI for the years 2019 and 2020 (Billion ID)

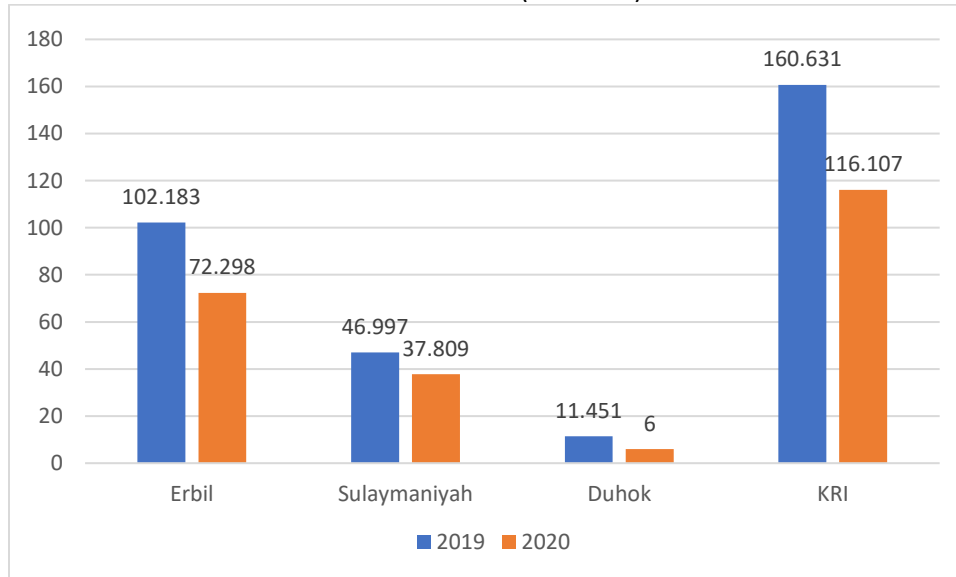


Figure (6) shows the difference between the expenditure in tourism establishments for the years 2019 and 2020 at the level of Kurdistan region and governorates. In Kurdistan region, the total expenditure for tourism establishments in 2020 (116.107 billion ID) in comparison to 160.631 billion ID in 2019 decreased by 27.7%. As figure shows, there is a significant different between governorates due to the difference in the number of tourism establishments at the level of governorates. For instance, Erbil governorate has the highest number of tourism establishments and Duhok has the lowest number which reflected on the expenditures at the level of governorates. As we can see, the total expenditure for tourism establishments in Duhok governorate approximately declined to half (47.5%) in 2020 compared to the previous year.

Income in tourism establishments

Figure 7: Income in tourism establishments at the level of governorates and KRI for the years 2019 and 2020 (Billion IDs)

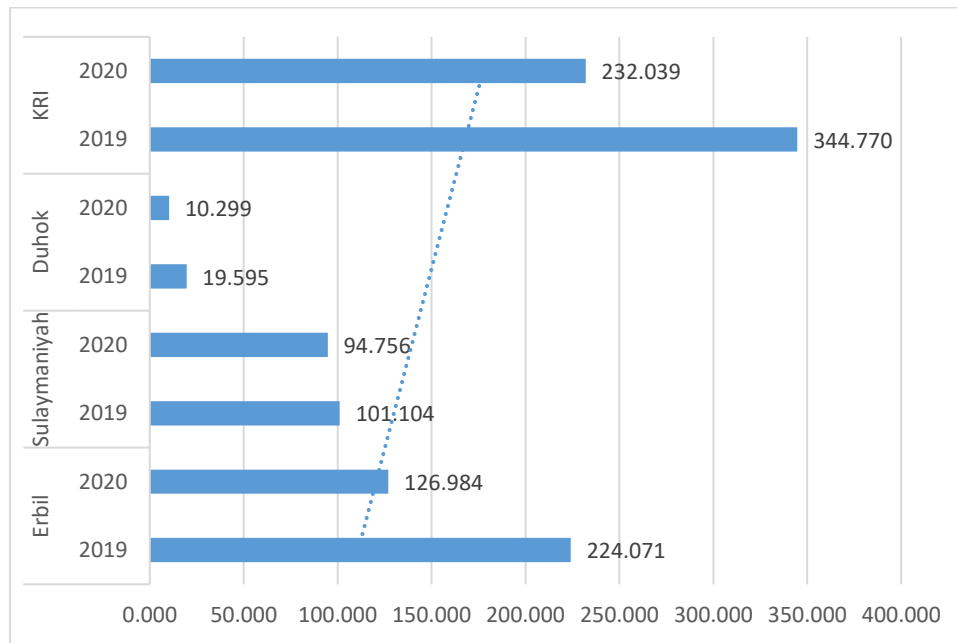


Figure above shows the difference between income in tourism establishments for 2019 and 2020 at the level of Kurdistan region and governorates. At the level of Kurdistan region, the total income of tourism establishments in 2020 reached 232.039 billion IDs, where it shows a decline by 32.6% compared to 344.770 billion IDs in 2019. The figure shows that in 2020, the total income from tourism establishments in both Erbil and Duhok governorates is close to the half of the total income in 2019.

Domestic trade

Domestic or internal trade is considered an important economic activity within the national economy as it contributes to the gross domestic product by creating job opportunities and increasing income. To improve and develop the performance of this sector and economy in general, this sector needs to be taken into consideration. Due to the importance of this sector in the development of the economy, Kurdistan Region Statistics Office in coordination with the Central Statistics organization in Baghdad conducted the domestic trade survey (wholesale and retail trade, sale and repair of motor vehicles and motorcycles) for private sector in 2021 relying on economic sampling frame to draw sample (trade, industry and restaurants 2021). The frame includes all commercial places located in the center of the governorates in high-traffic commercial areas (districts and sub-districts) to provide statistical information about economic places that focuses on the main activities of the wholesale and retail trade, sales and repair of motor vehicles and motorcycles. This survey was conducted in Iraq and Kurdistan region (urban and rural areas) based on the fourth revision of the international standard for industrial classification of all economic activities (ISIC Rev 4).

Concepts and definitions

Main economic activity: it refers to an activity carried out by a business unit according to the international classification of economic activities, which has a greater contribution to value added if there are several activities in the business unit.

Legal status: it legally determines the type of ownership of companies (enterprises) and includes the following four types of ownership:

1. **Sole company:** the owner of this type of company is an ordinary person who is responsible for the affairs of the company and is not limited to all affiliates of the company.
2. **Partnership or Joint venture company:** this type of company comprises of several person –not less than 5 persons- who have their own share out of the total share and have the responsibly for the depts by the value of their share.
3. **Limited liability Company:** this type of company comprises of several persons- not more than 25 persons- who have their own share and have the responsibility of all related to company each by the value of their share.
4. **Cooperative (Joint stock) Company:** is a company that comprises of several common persons (2-10) who have their own share and have jointly unlimited responsibility of all related to the company.

Employees: employees are those who work in the enterprises (men and women), whether not paid and work as job owners, or those who work for wages regardless of the mechanism of receiving wages.

Total product value: is the value of the trading edge and income from other activities.

Tax on products: it is the cash or non-cash and other taxes resulting from production paid by the production unit to the government for goods and services produced or sold.

Value added (income - supplies): it is amount of money added to domestic production by the enterprises for their activities. In other words, value added is obtained by subtracting supplies from production value.

Operations surplus: it measures the difference between value added and employees' compensations.

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Domestic business (wholesale and retail, sale and repair of motor vehicles and motorcycles)

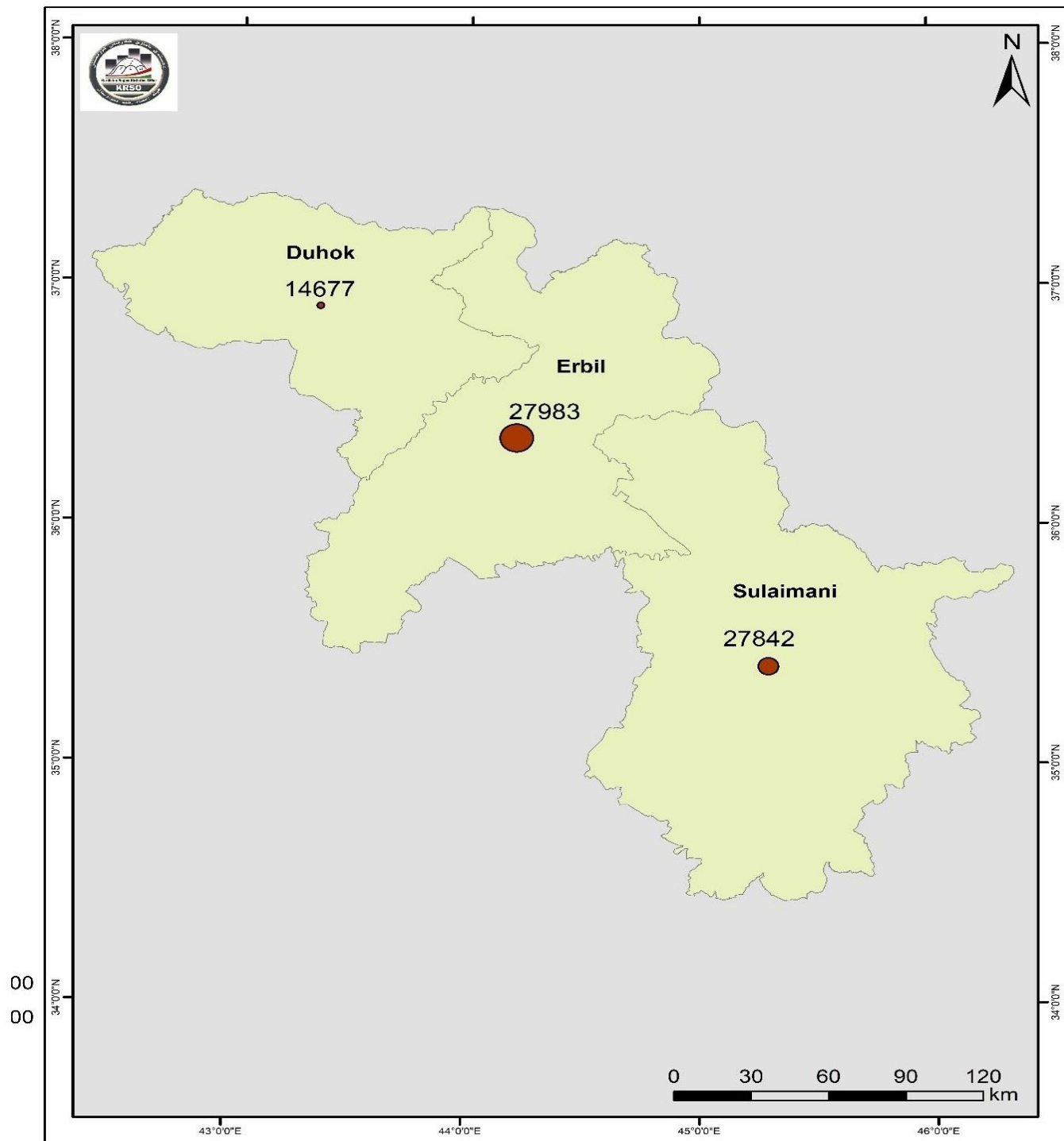
Table 2: the number and percentage distribution of domestic business establishments by activity, environment and governorate in 2021

Economic activity																	Governorate	Environment
Total				Retail trade				Wholesale trade				retail and wholesale, sale and repair of motor vehicles and motorcycles						
KRI	Erbil	Sulaymaniyah	Duhok	KRI	Erbil	Sulaymaniyah	Duhok	KRI	Erbil	Sulaymaniyah	Duhok	KRI	Erbil	Sulaymaniyah	Duhok			
70140	27914	27697	14529	46890	17107	19126	10657	6632	3194	2563	875	16618	7613	6008	2997	Urban	No.	
99.5	99.8	99.5	99	99.7	99.8	99.9	99.1	99.5	100	100	96.2	99	99.6	98	99.6	Urban %	%	
362	69	145	148	163	41	22	100	35	0	0	35	164	28	123	13	Rural	No.	
0.5	0.2	0.5	1	0.3	0.2	0.1	0.9	0.5	0	0	3.8	1	0.4	2	0.4	%Rural	%	
70502	27983	27842	14677	47053	17148	19148	10757	6667	3194	2563	910	16782	7641	6131	3010	Total	No.	
100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	%Total	%	

According to the results of domestic business (retail and wholesale, sale and repair of motor vehicles and motorcycles survey 2021), the number of domestic business establishments reached 70,502 in the private sector at the level of KRI, of which (70140) 99.5% located in urban areas and (362) 0.5% in rural areas.

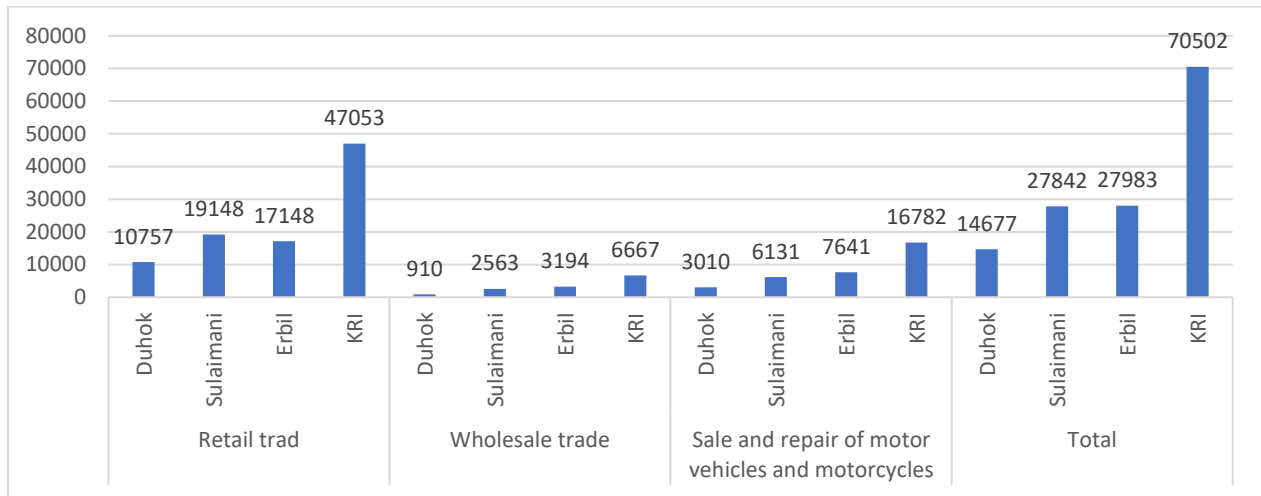
Kurdistan Region 2018-2022 Indicators

Map 11: Distribution of domestic business establishments at the level of governorates in Kurdistan region



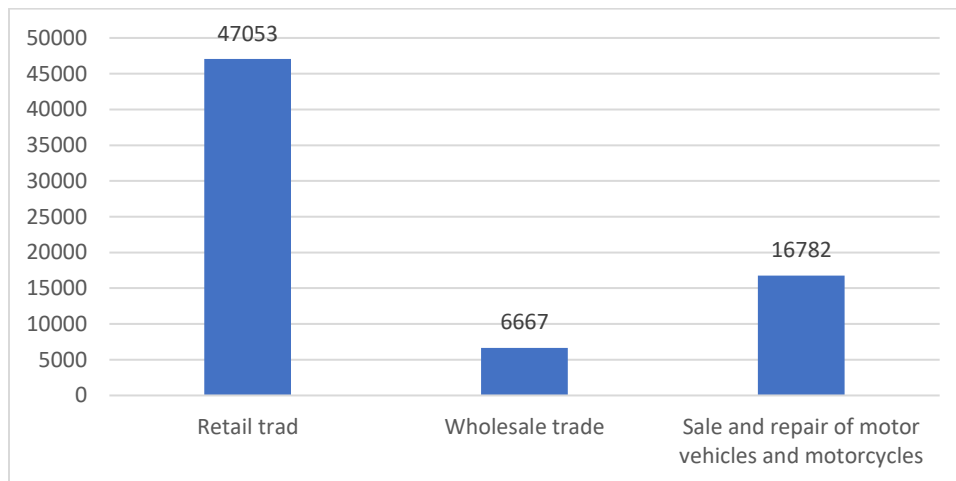
Kurdistan Region 2018-2022 Indicators

Figure 8: the number of business establishment in private sector in KRI by governorates and economic activities in 2021



According to the above Figure, the highest number of business establishments was in Erbil governorate (27,983) accounting for 39.7%, followed by Sulaymaniyah governorate (27,842) with 39.5% and Duhok governorate with the lowest number (14,677) at 20.8%.

Figure 9: No. of business establishments in private sector in KRI by the main economic activity, 2021



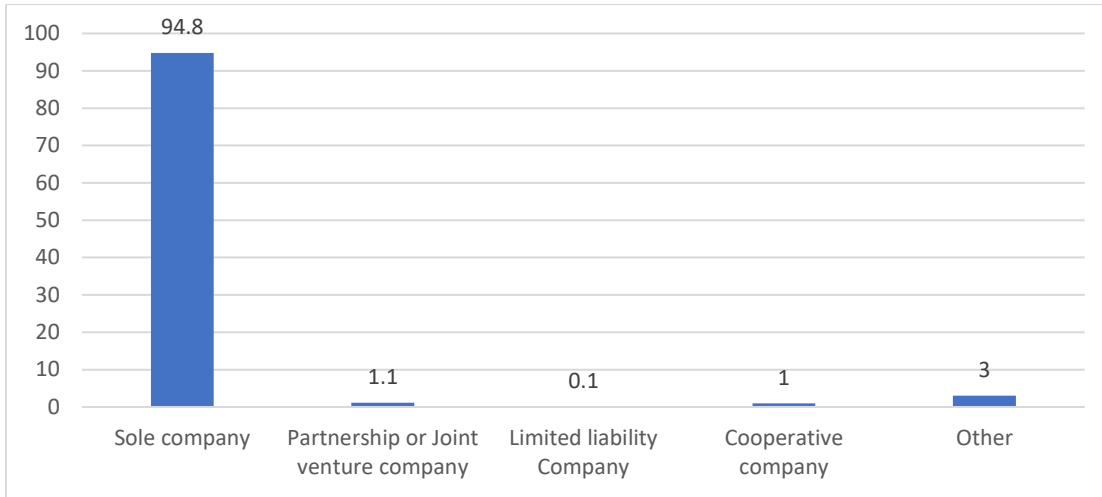
According to the results of domestic trade (retail and wholesale, sale and repair of motor vehicles and motorcycles survey 2021), retail trade has the largest number of business establishments (47,053) at the level of Kurdistan region followed by sale and repair of vehicles and motorcycles (16,782), and wholesale trade, which is the lowest with 6,667 establishments (Figure 9)

Legal status of business establishments

Table 3: the number of business establishments by legal status and business activities at the level of KRI and governorates, 2021

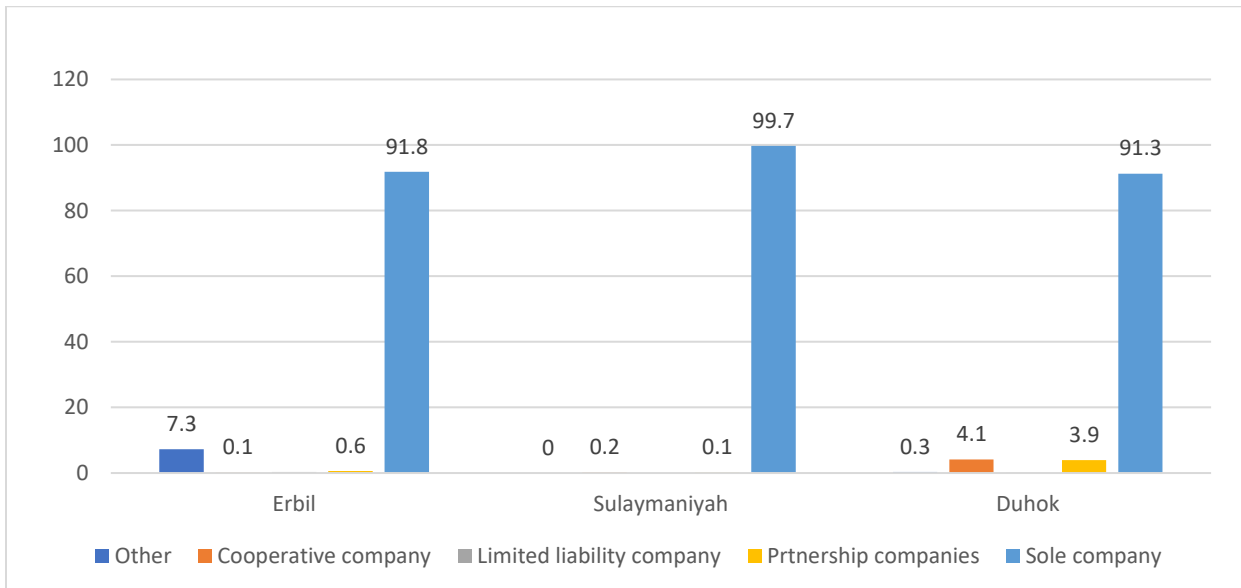
Governorate		Duhok				Sulaymaniyah				Erbil				KRI			
		Total				Total				Total				Total			
Type of economic activity	sale and repair of motor vehicles and motorcycles	Wholesale trade	Retail trade	Total	sale and repair of motor vehicles and motorcycles	Wholesale trade	Retail trade	Total	sale and repair of motor vehicles and motorcycles	Wholesale trade	Retail trade	Total	sale and repair of motor vehicles and motorcycles	Wholesale trade	Retail trade	Total	
Legal status	Sole company	2840	740	9816	13396	6131	2563	19075	27769	6194	3109	16380	25683	15165	6412	45271	66848
	Partnership or Joint venture company	129	27	420	576	0	0	23	23	34	0	121	155	163	27	564	754
	Limited liability Company	17	0	0	17	0	0	0	0	0	52	31	83	17	52	31	100
	Cooperative (Joint stock Company)	24	101	520	645	0	0	50	50	0	0	20	20	24	101	590	715
	Other	0	42	1	43	0	0	0	0	1413	33	596	2042	1413	75	597	2085
	Total	3010	910	10757	14677	6131	2563	19148	27842	7641	3194	17148	27983	16782	6667	47053	70502

Figure 10: Percentage of business establishments at KRI level by legal status in 2021



In term of legal status, 94.8% of business companies are sole (Figure 10), partnerships companies accounting for 1.1%, limited companies 0.1%, cooperatives 1% and other kinds accounting for 3%.

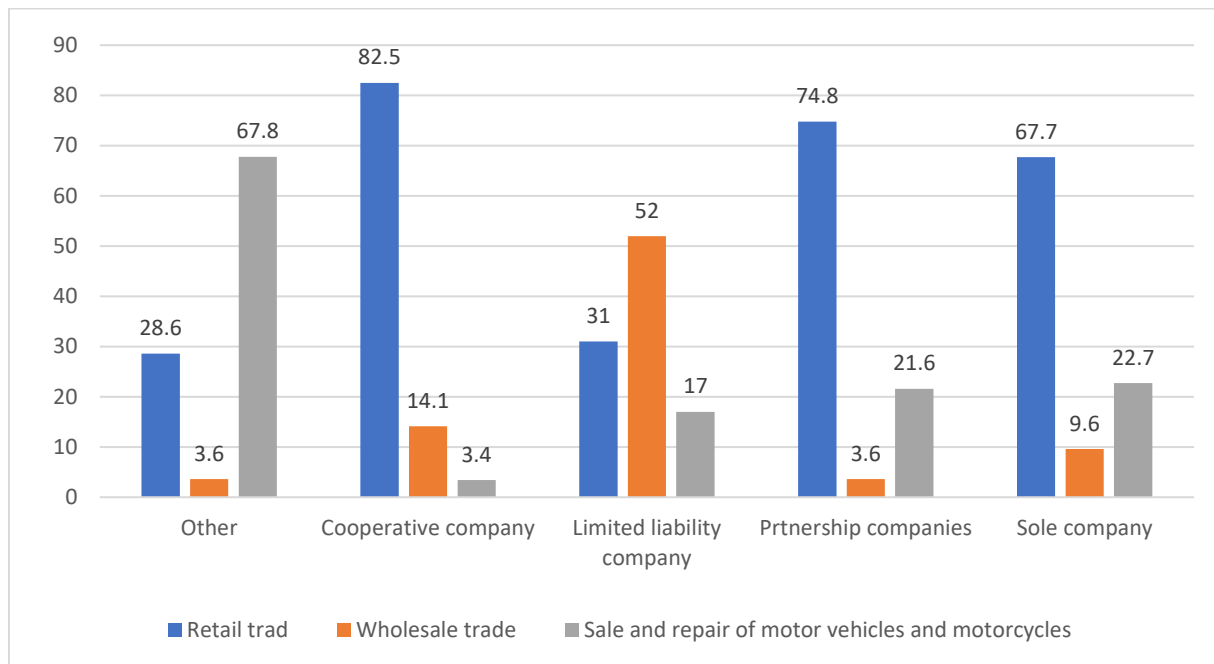
Figure 11: Percentage distribution of business establishments at the level of governorates by legal status in 2021



Kurdistan Region 2018-2022 Indicators

At the level of governorates, sole companies recorded a high percentage rate, ranking as follows: Sulaymaniyah with the highest rate accounting for 99.7%, followed by Erbil and Duhok governorates with 91.8% and 91.3% respectively. Regarding other companies (partnership, limited, cooperatives, and other kinds), they recorded a very low rate in Erbil and Sulaymaniyah governorates comparing to Duhok governorate, (Figure11).

Figure 12: Percentage distribution of business establishments by type of activities and legal status in KRI, 2021



Retail trade recorded the highest rate for cooperatives (82.5%), partnerships (74.8%) and sole companies (67.7%), as shown in figure 12.

Kurdistan Region 2018-2022 Indicators
Workers in domestic business establishments

Table 4: the number of workers in domestic business in private sector at the level of KRI and governorates in 2021

Governorate		Duhok	Sulaymaniyah	Erbil	KRI
No. of workers in local business establishments	Male	30967	51275	60405	142647
	Female	858	3873	2138	6869
	Youths under 18 years old	634	118	270	1022
	Total	32459	55266	62813	150538

According to the local business establishments in the private sector, the number of workers in Kurdistan region in 2021 was 150,538, of which 142,647 (94.7%) were male and 6,869 (4.5%) were female. The number of youth under the age of 18 who worked in these establishments reached 1022 (0.6%).

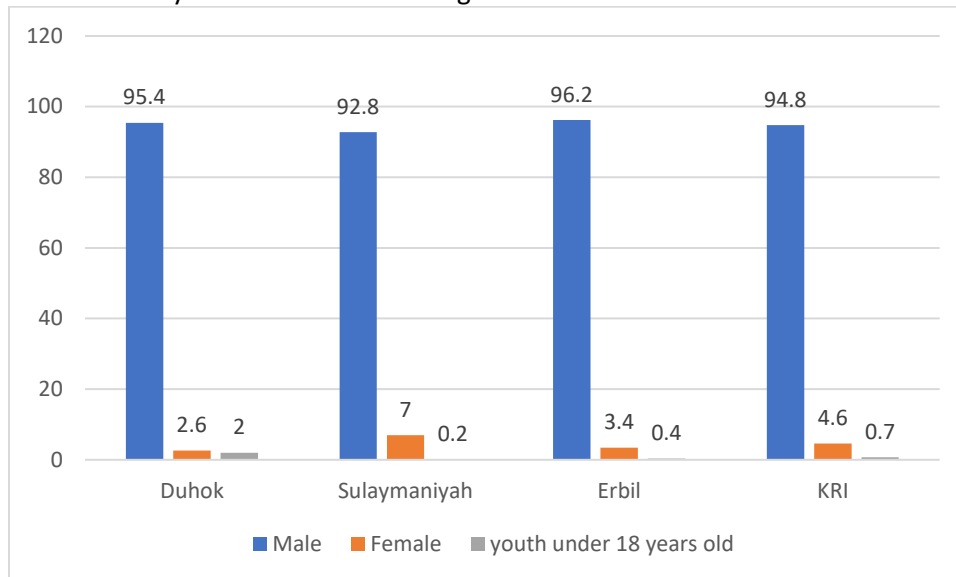
Table 5: the number of workers in business establishments in private sector by type of economic activity at the level of governorates and KRI in 2021

Type of business activity		sale and repair of motor vehicles and motorcycles				Wholesale business				Retail business			
Governorate		Duhok	Sulaymaniyah	Erbil	KRI	Duhok	Sulaymaniyah	Erbil	KRI	Duhok	Sulaymaniyah	Erbil	KRI
Total number of workers	Male	7804	13569	17266	38639	3334	6198	9141	18673	19829	31508	33998	85335
	Female	0	0	0	0	59	265	76	400	799	3608	2062	6469
	Youths under 18 years old	330	0	0	330	49	68	0	117	255	50	270	575
	Total	8134	13569	17266	38969	3442	6531	9217	19190	20883	35166	36330	92379

According to the type of local business establishments in the private sector for 2021 (Table 5), the highest number of workers are engaged in retail business reached 92379. The number of workers engaged in selling and repairing of cars and motorcycle was 38969, and for the wholesale business it was 19,190 workers.

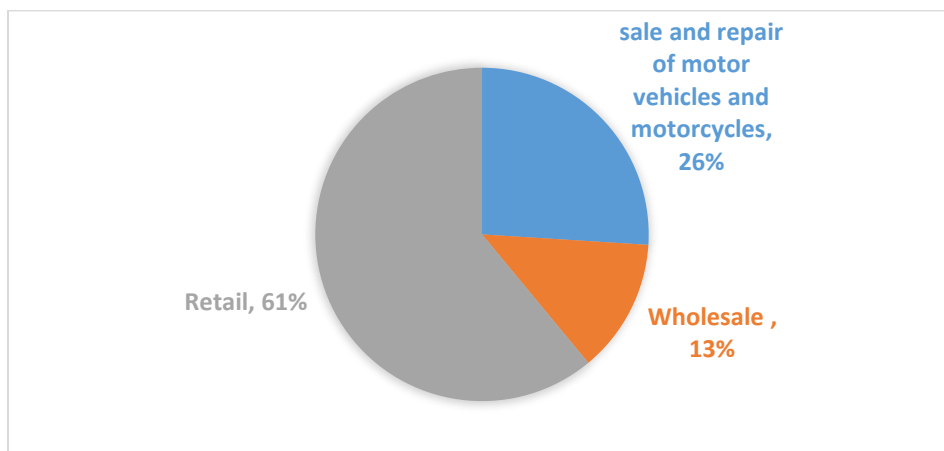
Kurdistan Region 2018-2022 Indicators

Figure 13: Percentage distribution of workers in private sector businesses by sex and youth under 18 years old at the level of governorates and KRI in 2021



(Figure 13) in Kurdistan region, the rate of male workers is significantly higher than that of females and youth under 18 years of age with the highest rate in Erbil governorate (96.2%), followed by Duhok (95.4%) and Suleimani (92.8%) governorates. It is worth mentioning that Sulaymaniyah governorate had the highest of female workers (7%) in the private sector compared to Erbil (3.4%) and Duhok (2.6%) governorates.

Figure 14: Percentage distribution of workers in private sector businesses by sex and youth under 18 years old at the level of KRI in 2021



According to the above figure, the majority of workers in the private sector are engaged in retail trade (61%), sale and repair of cars and motorcycles accounting for 26% and the lowest rate is recorded for wholesale trade accounting for 13%.

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Compensation of workers

Table 6: the Number of paid workers in private sector businesses at the governorates and KRI in 2021

Governorate		Duhok	Sulaymani yah	Erbil	KRI
The number of paid workers	Male	16,010	24,102	24,478	64,590
	Female	796	3,387	1,797	5,980
	Youth under 18 years old	474	0	170	644
	Total	17,280	27,489	26,445	71,214

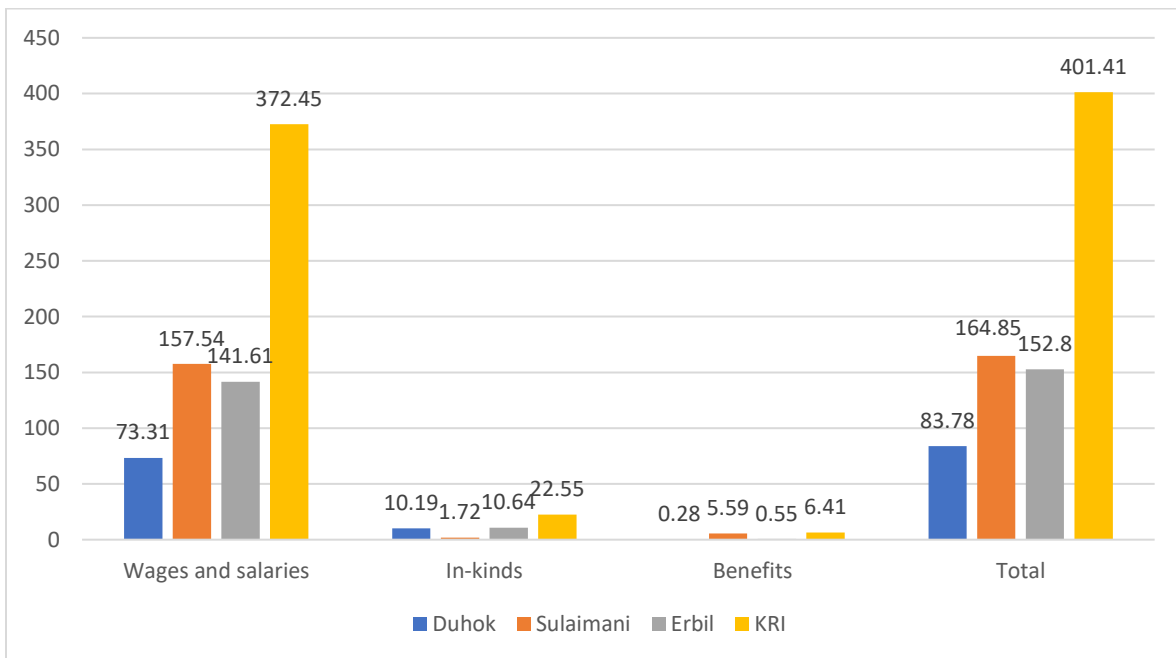
At the level of Kurdistan region, the number of paid workers was 71214 which is dominated by male (64590) at 90.70% against the number of Females workers (5980) at 8.40%, the lowest rate goes for youth workers under 18 years old (644) at 0.90% (Table 6).

Table 7: compensation (Wages and allowances) for workers by sex at the level of governorates and KRI (billion IDs)

Governorate compensations		Duhok	Sulaymaniyah	Erbil	KRI
Wages and salaries value	Male	68.04	138.24	130.75	337.02
	Female	4.50	19.31	10.42	34.22
	Youth under 18 years old	0.77	0	0.45	1.22
	Total	73.31	157.54	141.61	372.45
In-kind value		10.19	1.72	10.64	22.55
contribution of institutions for the benefit of workers		0.28	5.59	0.55	6.41
Total		83.78	164.83	152.80	401.42

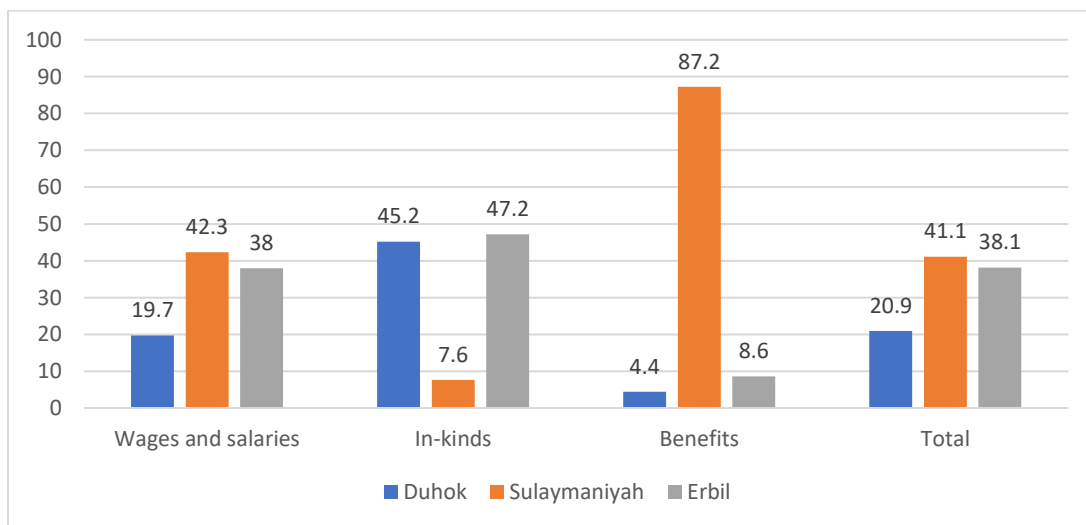
Kurdistan Region 2018-2022 Indicators

Figure 15: workers' compensation in business establishments in the private sector by kinds at the level of governorates and KRI for 202, billions IDs



(Table 7 and Figure 15) show the compensation of workers in local businesses establishments in the private sector for 2021. At the level of Kurdistan region, total compensation of workers reached 401.42 billion dinars. Regarding the governorates, Sulaymaniyah governorate recorded the highest compensation (164.83 billion dinars), followed by Erbil governorat (152.80 billion dinars) and Duhok governorate with the lowest compensations (83.78 billion dinars).

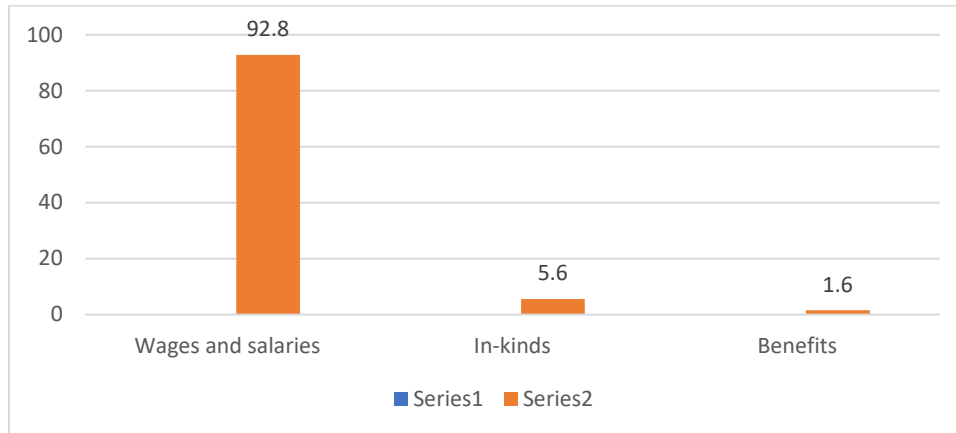
Figure 16: percentage rate of compensations in business establishments in the private sector by kinds and governorates in 2021



Kurdistan Region 2018-2022 Indicators

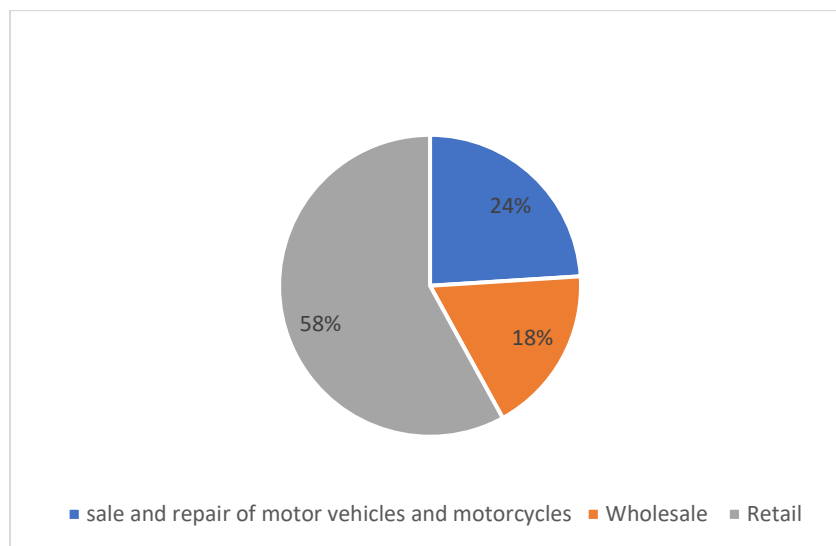
Figure 16 shows the total workers' compensation by governorates, where the highest rate has been recorded in Sulaymaniyah governorate with 41.1%, followed by Erbil governorate with 38.1% and the lowest rate in Duhok governorate with 20.9%.

Figure 17: percentage rate of compensations in the private sector by kinds at the level of KRI in 2021



At the level of KRI, the total value of workers' compensation reached 401.413 billion dinars (Table 7), of which 372.453 billion dinars (93%) goes for wages and salaries, while in-kinds value was 22.545 billion dinars (6%) and the contribution of institutions for the benefit of workers was 6.414 billion dinars (1%).

Figure 18: Percentage of workers' compensation in the private sector by type of business in KRI, 2021



(Figure 18) shows the highest value of workers' compensation by type of business activity. The retail business contributes to the highest value of workers' compensation at 58%, followed by sales and repair of cars and motorcycles at 24%, and wholesale business at 18%.

Table 8: total value added of domestic trade activities at the regional and provincial levels (billion dinars) for 2021

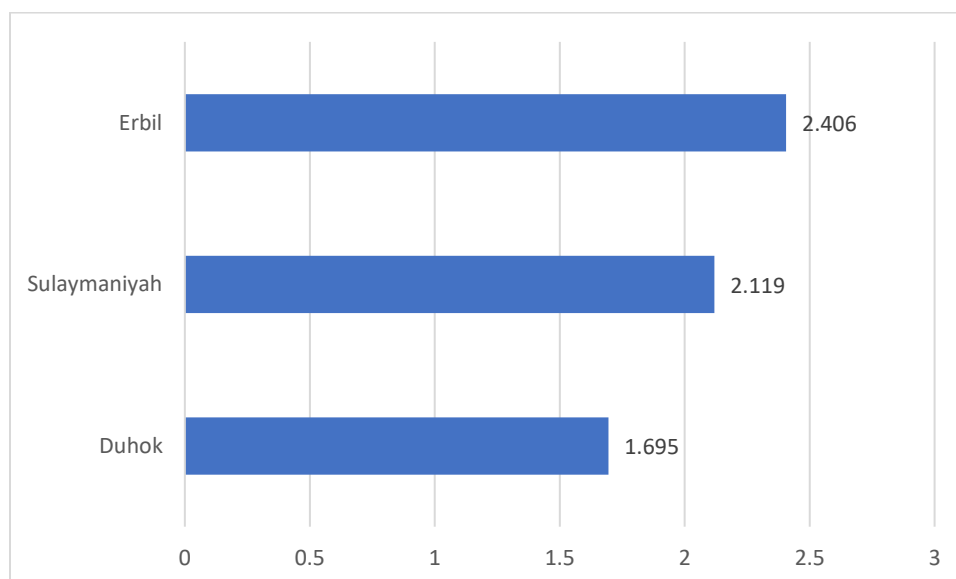
Operating surplus	Compensation of workers	Value added at basic prices	* Taxes on products and imports	value added at producer prices	Value of services	Value of goods	*Total production value	Governorate
1.394	83.779	1.478	9.072	1.487	154.038	54.243	1.695	Duhok
1.485	164.834	1.650	21.410	1.671	369.300	78.864	2.119	Sulaymaniyah
1.633	152.799	1.786	73.309	1.859	401.666	145.077	2.406	Erbil
4.512	401.413	4.914	103.791	5.017	925.003	278.183	6.221	KRI

Total production value= the total income (net sales - purchase value – first inventory + last inventory + revenues from sales of products produced by the business establishment + e-commercial income + other income)

Taxes on products and imports= sales tax + business and license tax + customs tax + Stamp tax + other taxes

The total income of domestic businesses in the region is 6.221 billion dinars (Table 8).

Figure 19: Total income of domestic business establishments by governorates in 2021, billion IDs



The highest value added at the governorates level for domestic business activities is in Erbil governorat with 2.406 billion IDs (39%), followed by Sulaymaniyah governorat with 2.119 billion IDs (34%), and Duhok governorate had the lowest level with 1.695 billion IDs (27%).

Kurdistan Region 2018-2022 Indicators

Micro, Small and Medium-sized establishments Survey (MSMEs) in private sector

The Survey of Micro, Small and Medium Enterprises (MSMEs) in the Private Sector is one of the most important economic surveys conducted in all four governorates of Kurdistan region in 2022. This survey provides important data and information on business establishments by size (Micro, small and medium), human resources, women entrepreneurs, finance and impacts of the covi-19 on the important indicators of this field. KRSO conducted this survey in the Kurdistan region of Iraq in 2022 with the technical support from UNDP and financial support from the United States Agency for International Development (USAID).

Number of business establishments and employees by governorates, sex of employer (ownerships) and type of establishment

The sample size of the MSMEs survey in Kurdistan region was 2016 business establishments with majority (740) in Sulaymaniyah governorate. It was found from the results that, there is a significant disparity in between male and female ownership n, as the majority of MSMEs are owned by male accounting for 87% against 13% owned by female (Table 9).

Table 9: Distribution of MSMEs by governorates and the sex of owners in KRI, 2022

KRI		Duhok		Halabja		Sulaymaniyah		Erbil		Sex
%	No.	%	No.	%	NO.	%	NO.	%	NO.	
87	1747	95	526	85	34	85	630	81	557	Male
13	269	5	26	15	6	15	110	19	127	Female
100	2016	100	552	100	40	100	740	100	684	Total

Kurdistan Region 2018-2022 Indicators

Figure 20: Distribution of MSMEs and Employees by the Size of enterprises in KRI

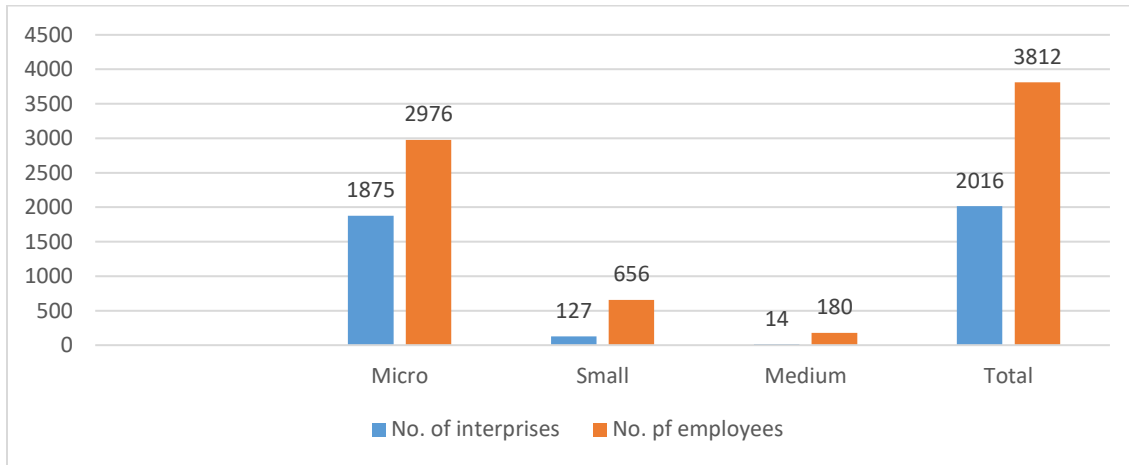
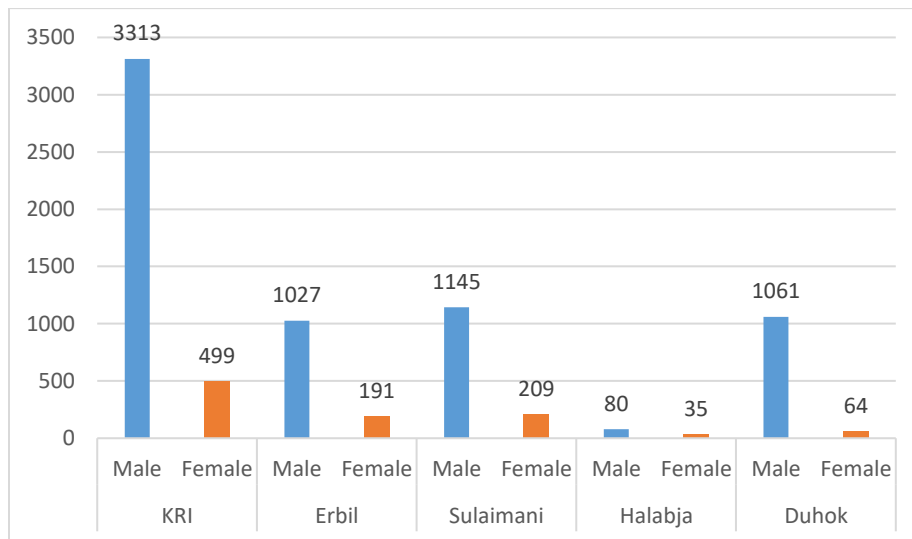


Figure 20 shows the distribution of MSMEs and the number of employees in Kurdistan region. The total number of MSMEs that were involved in interviewing was 2016 and the number of employees was 3812 employees. Micro establishments comprise the highest number amount to 1875 with 2975 employees compared to 127 small-sized establishments with 656 employees, and only 14 medium-sized establishments with 180 employees.

Figure 21: No. of employees in MSMEs by sex at the level of governorates in KRI, 2022



The results show that the highest number of employees for both male and female are in Sulaymaniyah governorate with 1,354 employees, Erbil comes next with 1218 employees followed by Duhok (1125) and Halabja (115) with the lowest number compared to other governorates. As for female employees, the highest number (209) are working in Sulaymaniyah governorate followed by Erbil (191), Duhok (64) and Halabja with the lowest number (35), Figure 21.

Kurdistan Region 2018-2022 Indicators

Distribution of MSMEs by type of business activities and sex

Depending on the results, 31.5% of the business owners are involved in wholesale and retail trade activities, 15.6% involved in transportation and storage activities, 15.2% in agricultural and fishing activities and the next is technical professionals activities by 11.8%. Other activities come with different rates and smaller scale as shown in the following table, where administrative and support services activities and Industry of electrical and electronic equipment and components making up the lowest rate.

As for women's participation in various activities, the highest percentages (60.2%) appears in technical professional activities (hairstylist, technician, ..) and agriculture and fishing (14%), Table 10.

Table 10: Business Activities by the sex of owners, MSMEs' survey 2022

Business Sector	KRI		sex			
			Male		Female	
	No.	%	No.	%	No.	%
Wholesale and retail trade	636	31.5	613	35.1	23	8.6
Transportation and storage	314	15.6	314	18	0	0
Agriculture and fishing	307	15.2	269	15.4	38	14.1
Technical Professional (hair stylist, technician,)	238	11.8	76	4.4	162	60.2
Building and construction works	129	6.4	129	7.4	0	0
Food Industry	122	6.1	101	5.8	21	7.8
Car and motorcycle repair and maintenance	41	2	41	2.3	0	0
Metal Products Industry	38	1.9	37	2.1	1	0.4
Accommodation, restaurant and hotel services activities	37	1.8	37	2.1	0	0
craft work	36	1.8	17	1	19	7.1
Repair of equipment, machinery and equipment	31	1.5	31	1.8	0	0
real estate activities	23	1.1	23	1.3	0	0
Industry of electrical and electronic equipment and components	17	0.8	15	0.9	2	0.7
Administrative and support services activities	10	0.5	9	0.5	1	0.4
Other services	37	1.8	35	2	2	0.7
Total	2016	100	1747	100	269	100

Table 11: Business Activities at the level of KRI and Governorates, MSMEs' Survey 2022

Business Activities	KRI		Erbil		Sulaymaniyah		Halabja		Duhok	
	No.	%	No.	%	No.	%	No.	%	No.	%
Wholesale and retail trade	636	31.5	219	32.0	254	34.3	10	25.0	153	27.7
Transportation and storage	314	15.6	114	16.7	92	12.4	5	12.5	103	18.7
Agriculture and fishing	307	15.2	49	7.2	134	18.1	17	42.5	107	19.4
Technical Professional (hair stylist, technician,...)	238	11.8	139	20.3	68	9.2	1	2.5	30	5.4
Building and construction works	129	6.4	39	5.7	44	5.9	0	0.0	46	8.3
Food Industry	122	6.1	39	5.7	52	7.0	3	7.5	28	5.1
Car and motorcycle repair and maintenance	41	2.0	11	1.6	15	2.0	1	2.5	14	2.5
Metal Products Industry	38	1.9	15	2.2	15	2.0	0	0.0	8	1.4
Accommodation, restaurant and hotel services activities	37	1.8	11	1.6	19	2.6	2	5.0	5	0.9
craft work	36	1.8	9	1.3	2	0.3	0	0.0	25	4.5
Repair of equipment, machinery and equipment	31	1.5	15	2.2	13	1.8	1	2.5	2	0.4
real estate activities	23	1.1	5	0.7	9	1.2	0	0.0	9	1.6
Industry of electrical and electronic equipment and components	10	0.5	4	0.6	3	0.4	0	0.0	3	0.5
Administrative & support services activities	5	0.2	4	0.6	1	0.1	0	0.0	0	0.0
Other services	49	2.4	11	1.6	19	2.7	0	0.0	19	3.6
Total	2016	100	684	100	740	100	40	100	552	100

Retail and wholesale trade activity has the highest rate compared to other activities. At the level of governorate, Sulaymaniyah governorate has the highest rate of retail and wholesale trade activity with 34.3%, followed by Erbil governorate accounting for 32%. The highest rate of agricultural and fishing activities is in Halabja governorate with 42.5%. It is noted that the wholesale and retail trade, transportation and storage, agriculture and fishing, technical professional are the top four activities that have the highest rate in all governorates but not in the same order.

Kurdistan Region 2018-2022 Indicators

Figure 22: percentage distribution of Business Activities by MSME Size in KRI, MSMEs' Survey 2022

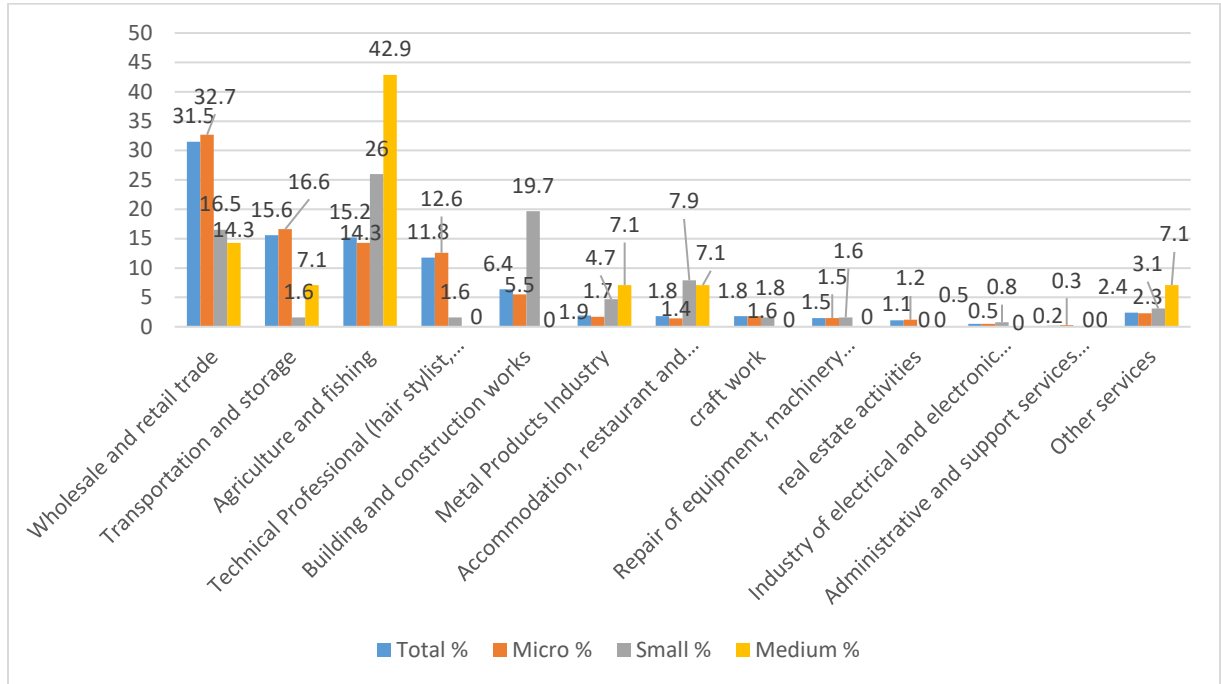
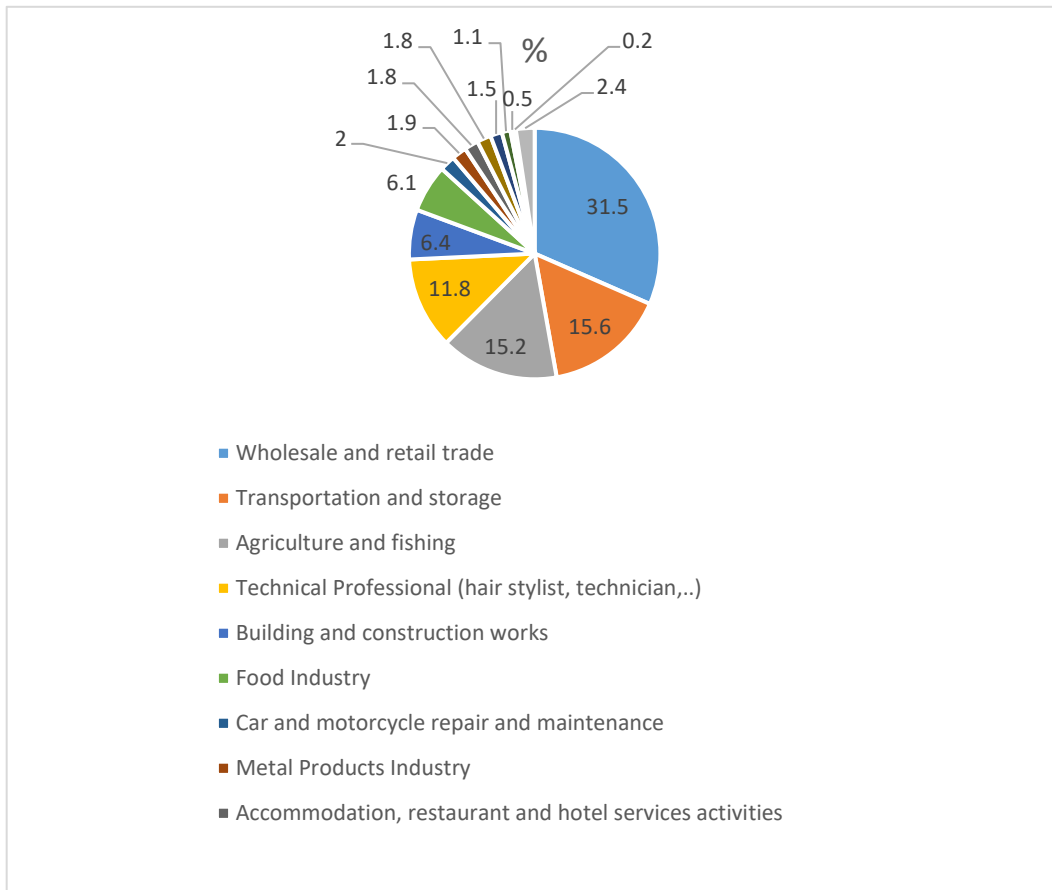


Figure above shows the type of activities by the size of the business activities. It is noted that 43% of medium-sized businesses are involving in agriculture and fishing activities, 14.3% in wholesale and retail trade and food industry. 26% of small-sized business are engaged in agricultural and fishing activities and about 20% in construction activities. 32.7% of wholesale and retail trade activities and 16.6% of transportation and storage activities go for micro-sized business.

Kurdistan Region 2018-2022 Indicators

Figure 23: Percentage Distribution of Business Activities by size in KRI, Survey 2022



The

results show that the wholesale and retail trade activities have the highest rate compared to other activities in Kurdistan region accounting for 31.5%, each of transportation and storage, agricultural and fishing activities stand next by 15.6%. Other activities come with different rates. Each of the administrative services, electrical and electronic industry accounting for less than 1% (Fihure 23).

MSMEs registration status

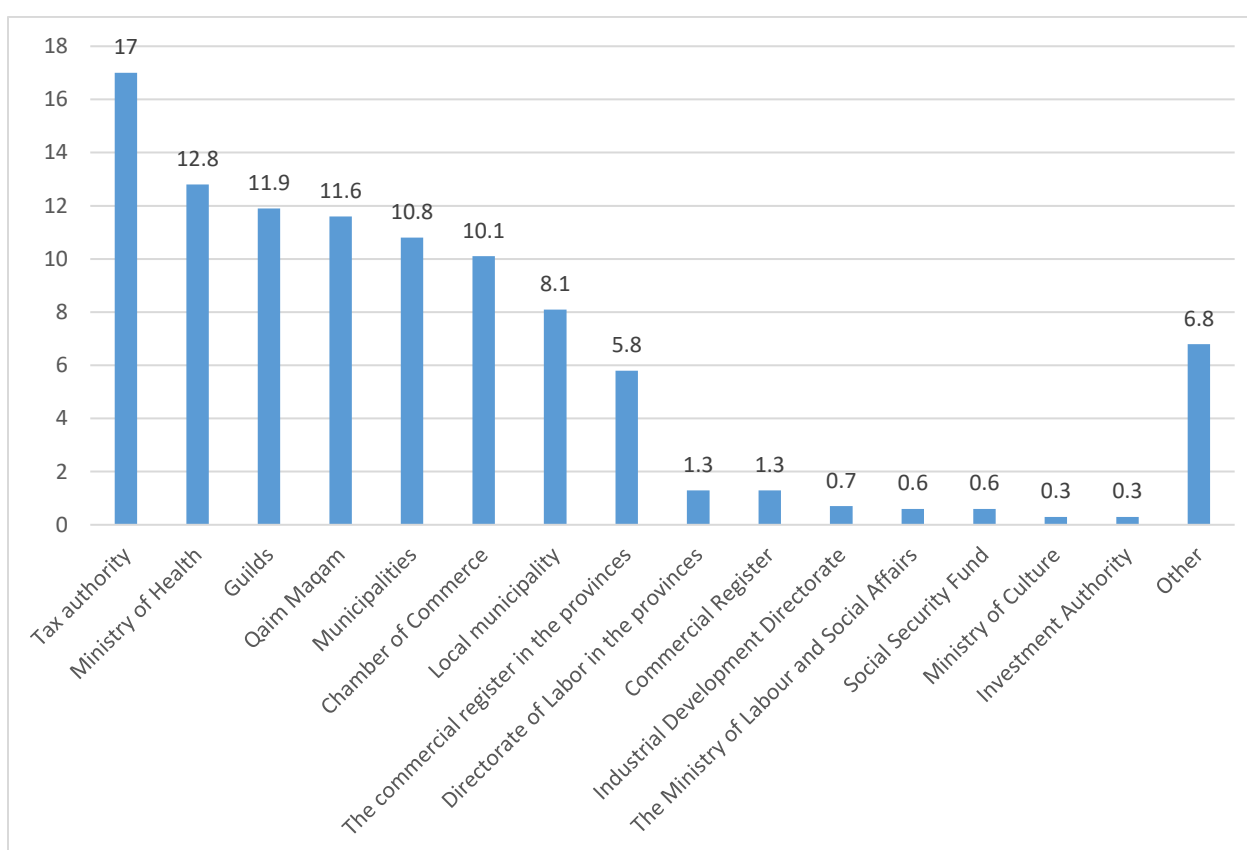
According to the survey 2022, more than half of the business in the survey are not registered with any entity which accounting for 60% against 40% for registered MSMEs. The highest registration rate for MSMEs is observed in Halabja governorate at 55%.

Kurdistan Region 2018-2022 Indicators

Table 12: Registration Status of MSMEs by Governorate in KRI, Survey 2022

Registration status	Total (KRI)		Erbil		Sulaymaniyah		Halabja		Duhok	
	No.	%	No.	%	No.	%	No.	%	No.	%
Not registered	1205	60	411	60	454	61.3	18	45	322	58
Registered	811	40	273	40	286	38.7	22	55	230	42
Total	2016	100	684	100	740	100	40	100	552	100

Figure 24: Percentage distribution of MSMEs Registration Site by Governorate (multiple answers) in KRI, Survey 2022



As shown in above figure, most of businesses (17%) in KRI have been registered with tax directorate and about 13% with ministry of health. At the level of governorates (Table 13), most business have been registrered with tax directorate in Duhok and Sulaymaniyah governorates accounting for 22.6% and 20.6% respectively.

Kurdistan Region 2018-2022 Indicators

Table 13: MSMEs registration site at the level of Governorates and KRI, Survey 2022 (multiple answers)

Business registration sites	KRI		Erbil		Sulaymaniyah		Halabja		Duhok	
	No.	%	No.	%	No.	%	No.	%	No.	%
Tax authority	216	17.0	35	8.6	96	20.6	1	3.8	84	22.6
Ministry of Health	163	12.8	33	8.1	70	15.0	8	30.8	52	14.0
Guilds	152	11.9	52	12.8	59	12.6	2	7.7	39	10.5
Qaim Maqam	147	11.6	34	8.4	80	17.1	9	34.6	24	6.5
Municipalities	137	10.8	90	22.1	32	6.9	1	3.8	14	3.8
Chamber of Commerce	129	10.1	29	7.1	51	10.9	1	3.8	48	12.9
Local municipality	103	8.1	73	17.9	9	1.9	1	3.8	20	5.4
The commercial register in the provinces	74	5.8	30	7.4	25	5.4	3	11.5	16	4.3
Directorate of Labor in the governorates	16	1.3	2	0.5	4	0.9	0	0.0	10	2.7
Commercial Register	16	1.3	1	0.2	5	1.1	0	0.0	10	2.7
Industrial Development Directorate	9	0.7	1	0.2	5	1.1	0	0.0	3	0.8
The Ministry of Labour and Social Affairs	8	0.6	1	0.2	4	0.9	0	0.0	3	0.8
Social Security Fund	8	0.6	2	0.5	6	1.3	0	0.0	0	0.0
Ministry of Culture	4	0.3	0	0.0	2	0.4	0	0.0	2	0.5
Investment Authority	4	0.3	2	0.5	2	0.4	0	0.0	0	0.0
Other	86	6.8	22	5.4	17	3.6	0	0.0	47	12.6
Total	1272	100	407	100.0	467	100	26	100	372	100

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Table 14: MSMEs registration sites by MSMEs Size at the level of KRI, Survey 2022 (Multiple Answers)

KRI		Medium		Small		Micro		Business registration sites
%	.NO	%	.NO	%	.NO	%	NO.	
17.0	216	13.0	3	18.1	21	16.9	192	Tax authority
12.8	163	17.4	4	11.2	13	12.9	146	Ministry of Health
11.9	152	4.3	1	7.8	9	12.5	142	Guilds
11.6	147	8.7	2	11.2	13	11.7	132	Qaim Maqam
10.8	137	4.3	1	10.3	12	10.9	124	Municipalities
10.1	129	17.4	4	15.5	18	9.4	107	Chamber of Commerce
8.1	103	4.3	1	11.2	13	7.9	89	Local municipality
5.9	75	13.0	3	4.3	5	5.9	67	The commercial register in the provinces
1.3	16	0.0	0	0.9	1	1.3	15	Directorate of Labor in the governorates
1.3	16	0.0	0	3.4	4	1.1	12	Commercial Register
0.7	9	4.3	1	0.9	1	0.6	7	Industrial Development Directorate
0.6	8	4.3	1	0.0	0	0.6	7	The Ministry of Labour and Social Affairs
0.6	8	4.3	1	0.9	1	0.5	6	Social Security Fund
0.3	4	0.0	0	0.0	0	0.4	4	Ministry of Culture
0.3	4	4.3	1	1.7	2	0.1	1	Investment Authority
6.7	85	0.0	0	2.6	3	7.2	82	Other
100	1272	100	23	100	116	100	1133	Total

As shown (Table 14), the highest registration rate of Micro business is with Tax directorate, 13% with ministry of health and 12% with guilds. Other sites show lower redistration rates. Small businesses are registered by 18% with tax directorate and 15.5% with the chamber of commerce. High rate of Medium enterprises (17.4%) are registered with each of the ministry of health and the chamber of commerce and 13% with each of tax directorate and commercial registration in governorates. More details are presented in above table.

Kurdistan Region 2018-2022 Indicators

Table 15: Reasons for Not Registering a business at the level of governorates and KRI, Survey 2022
(multiple answers)

Reasons for not registering the business	Total		Erbil		Sulaymaniyah		Halabja		Duhok	
	No.	%	No.	%	No.	%	No.	%	No.	%
My business doesn't require registration	1135	91.8	383	91.4	423	89.6	16	84.2	313	96.0
Long routine and complicated procedures	35	2.8	10	2.4	21	4.4	0	0.0	4	1.2
Reporting requirements that may result from registration	20	1.6	9	2.1	9	1.9	1	5.3	1	0.3
Difficulty understanding the information and the registration process	16	1.3	11	2.6	3	0.6	1	5.3	1	0.3
Legal status of the business as a result of registration	12	1.0	3	0.7	8	1.7	1	5.3	0	0.0
Other	18	1.5	3	0.7	8	1.7	0	0.0	7	2.1
Total	1236	100	419	100	472	100	19	100	326	100

Reasons for Not Registering an Enterprise

Regarding the reasons for not registering the enterprises with any entities, 91% of respondents stated that their business does not need to be registered, about 3% attribute this to long routines and complicated procedures when registering their business. At the level of governorates, most of them believe that their work does not need to be registered, so that 91.4% in Erbil, 89.6% in Sulaymaniyah, 84.2% in Halabja and 96% in Duhok which is the highest (Table 15).

Table 16 Level of Difficulty in Setting Up a Business at the level of governorates and KRI, Survey 2022

Level of Difficulty to set up a business	KRI		Governorate							
	No.	%	Erbil		Sulaymaniyah		Halabja		Duhok	
			No.	%	No.	%	No.	%	No.	%
Difficult	1238	61.4	546	82.0	430	58.1	9	22.5	253	44.4
Easy	778	38.6	120	18.0	310	41.9	31	77.5	317	55.6
Total	2016	100	666	100	740	100	40	100	570	100

The survey showed that more than half of MSMEs (61.4%) found difficulties in establishing their businesses. Erbil governorate with the highest rate (82%) finds difficulty in setting up a business followed Sulaymaniyah with 58%, 44.4% in Duhok and 22.5% in Halabja stated that they face difficulty in starting up a business.

Kurdistan Region 2018-2022 Indicators

Table 17: Reasons for the Difficulties to set up a Business at the level of Governorates and KRI
(multiple answers)

Reason for difficulty	Total		Erbil		Sulaymaniyah		Halabja		Duhok	
	No.	%	No.	%	No.	%	No.	%	No.	%
Access to finance	980	63.2	459	65.9	320	59.0	5	50.0	196	64.7
Access to Land	123	7.9	56	8.0	35	6.5	0	0.0	32	10.6
Lack of resources (i.e. equipment, transport, staff)	120	7.7	58	8.3	52	9.6	0	0.0	10	3.3
Strong competition	98	6.3	47	6.8	36	6.6	0	0.0	15	5.0
Licensing	64	4.1	22	3.2	34	6.3	1	10.0	7	2.3
Other	166	10.7	54	7.8	65	12.0	4	40.0	43	14.2
Total	1551	100	696	100	542	100	10	100	303	100

The survey showed that the reasons for difficulty in setting up a business mostly attributed to lack of access to finance (63%) and lack of access to land (8%). At level of governorates, the highest rate of difficulty in accessing finance is in Erbil governorate with about 66%, followed by Duhok governorat with about 65%, Sulaymaniyah with 59%, and Halabja with 50% (Table 17).

Kurdistan Region 2018-2022 Indicators

Employment and human resources

More than half of the owners (about 55%) have intermediate or secondary education degree, 31.5% of the business owners have no official degree, only 6.5% of business owners have university degrees and about 6% have technical institute degrees. At the level of governorate, about 63% of business owners in Erbil, 54.5% in Sulaymaniyah, 52.5% in Halabja and about 46% in Duhok have intermediate or secondary degree as shown in Table 18.

Table 18: educational degree of business owners at the level of governorates and KRI

Education Level	Erbil		Sulaymaniyah		Halabja		Duhok	
	No.	%	No.	%	No.	%	No.	%
Secondary/ Intermediate	429	62.7	403	54.5	21	52.5	252	45.7
No Formal Education	166	24.3	217	29.3	13	32.5	239	43.3
University Degrees	36	5.3	62	8.4	2	5.0	32	5.8
Technical School Certificates	48	7.0	49	6.6	4	10.0	28	5.1
Training Center Certificates	5	0.7	9	1.2	0	0.0	1	0.2
Total	684	100	740	100	40	100	552	100

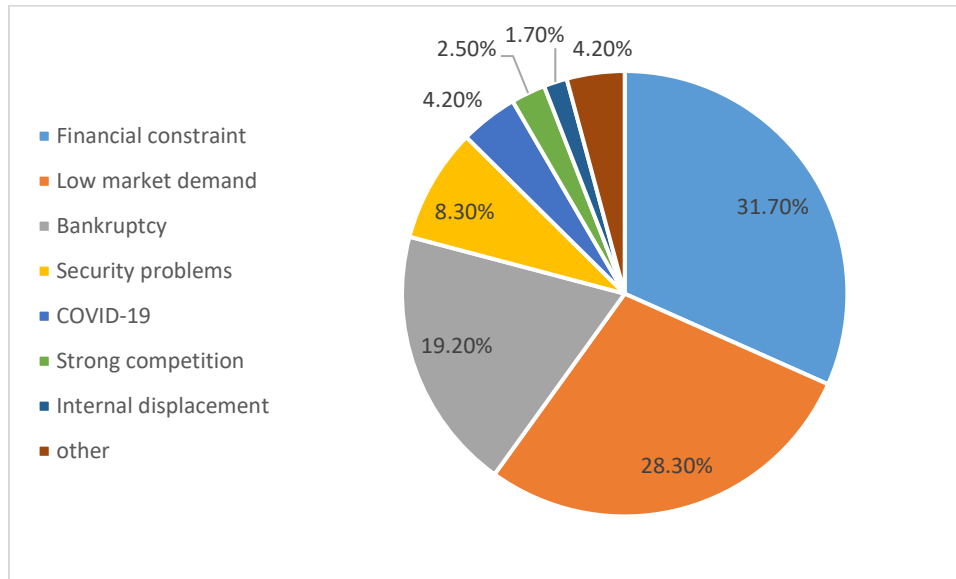
Table 19: Type of Insurance by MSME Size at the Level of Governorate in KRI

Type of insurance	Total		Micro		Small		Medium	
	No.	%	No.	%	No.	%	No.	%
Do not have any insurance	1992	98.8	1860	99.2	121	95.3	11	78.6
Workers compensation insurance	16	0.8	10	0.5	5	3.9	1	7.1
Medical insurance for staff	6	0.3	4	0.2	0	0.0	2	14.3
Property insurance	2	0.1	1	0.1	1	0.8	0	0.0
Vehicle insurance	0	0.0	0	0.0	0	0.0	0	0.0
Total	2016	100	1875	100	127	100	14	100

According to the results, the vast majority of respondents do not have any type of insurance accounting for 98.8%. By the sample size, only 14.3% of medium-sized enterprises have health insurance for their employees. It is also worth noting that 7.1% of medium-sized and 3.9% of small-sized enterprises have adopted Employees compensation insurance for employees (Table 19).

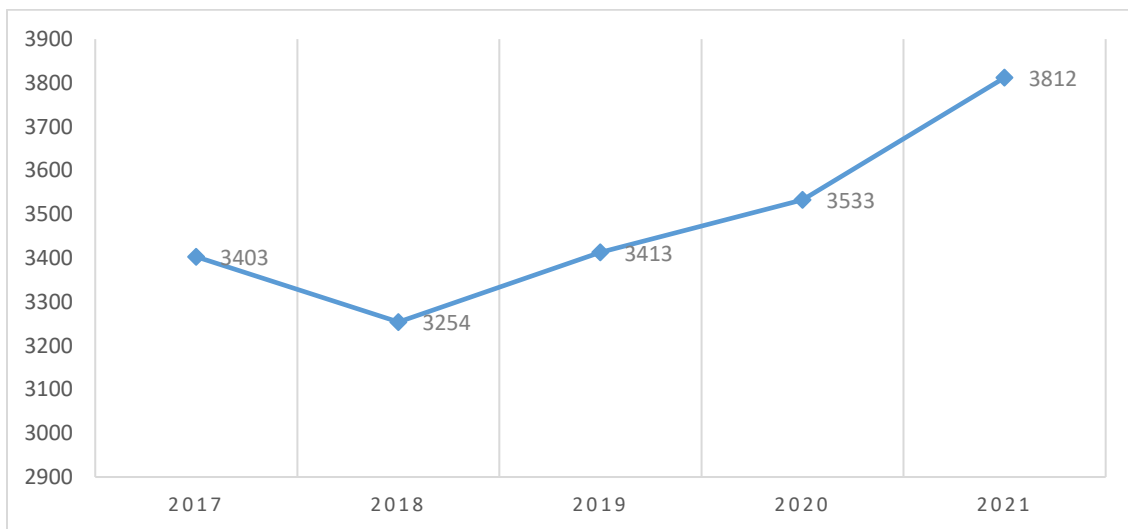
Kurdistan Region 2018-2022 Indicators

Figure 25: Reason for Closure of Previous Enterprise, Survey 2022



The most obvious reason for the closure of previous business in Kurdistan region is financial shortage with 32%, low market demand with 28%, bankrupting with 19%. Other factors come in different rates (Figure 25).

Figure 26: Number of Employees for the years 2017,2018,2019,2020 in business establishments in KRI



As results show, in Kurdistan region, the number of employees in the interviewed establishments increased to 3812 in 2021. In 2018, the number of employees (3254) decreased by 4% compared to 3403 employees in 2017. The outbreak of COVID-19 does not appear to have much impact on markets and reducing labor force in Kurdistan region.

Kurdistan Region 2018-2022 Indicators

Women Entrepreneurs and Women Owned Businesses

Out of 2016 interviews with MSME owners, the number of women was 269 (13%). the percentage of enterprises owned by women is higher in Erbil governorate (47.2%) compared to Sulaymaniyah (about 41%), Duhok (about 10%) and Halabja (2.2%) which is the lowest.

Table 20: Distribution of women owned MSMEs by Governorates in KRI, Survey 2022

KRI		Duhok		Halabja		Sulaymaniyah		Erbil		Distribution of business owned by women
%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	
100	269	9.7	26	2.2	6	40.9	110	47.2	127	Total

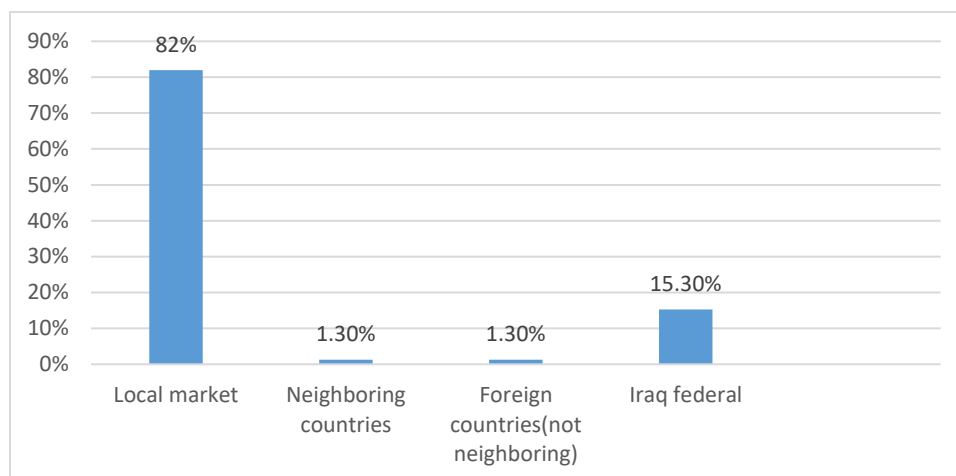
Level of Difficulty in Setting up a Business by women

Table 21: Level of Difficulty facing women in Setting up a Business at the level of governorates and KRI, MSMEs survey 2022

KRI		Duhok		Halabja		Sulaymaniyah		Erbil		Level of Difficulty
%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	
53.2	143	38.5	10	33.3	2	53.6	59	56.7	72	Difficult
31.2	84	38.5	10	50.0	3	29.1	32	30.7	39	Similar to male
15.6	42	23.1	6	16.7	1	17.3	19	12.6	16	easy
100	269	100	26	100	6	100	110	100	127	Total

In Kurdistan region, 53% of the female stated that it is more difficult for them to start a new business than males, and 31.2% stated that it is similar to males, 15.6% stated that it is similar to male, and only 15.6% of female stated that it is easy for them to start a business. At the level of governorates, 56.7% of females in Erbil, 53.6% in Sulaymaniyah, 38.5% in Duhok, and 33.3% in Halabja think that starting a new business is more difficult for them than males (Table 21).

Figure 27: Sales of production in Local Market, Federal Iraq, Neighbor Countries, and Foreign Countries (%)



The figure above shows the MSMEs transaction (marketing). The highest rate of MSMEs products is transacted in local markets (KRI) with 82%, 15.3% is exported to Iraq Federal (not KRI), and to each neighboring countries and foreign countries (not neighboring) is only 1.3% (Figure 27).

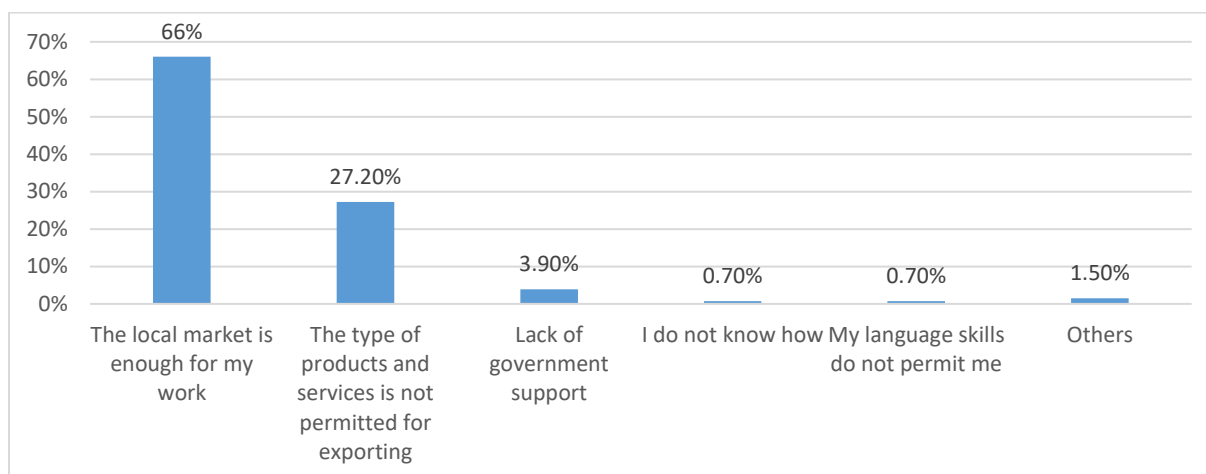
According to the results, in Kurdistan region, 1990 of the interviewed business establishments, which comprises 98.7% of the total business establishments relies on local markets and do not export their products. The remainders which comprise only 1.3% establishments export their products, where Duhok governorate reported the highest rate of establishments compared to other governorates with 5% and the lowest rate is reported in Erbil governorate with 0.4% (Table 22).

Table 22: number and percentage rate of MSMEs that export or do not export their products at the level of governorates and KRI, 2022

Export Activities	Total		Erbil		Sulaymaniyah		Halabja		Duhok	
	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	26	1.3	3	0.4	13	1.8	2	5	8	1.4
No	1990	98.7	681	99.6	727	98.2	38	95	544	98.6
Total	2016	100	684	100	740	100	40	100	552	100

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Figure 28: Reasons for not exporting (Multiple answers)



According to the results, 66% of responses indicated that the local market was enough for their needs, 27.2% of responses stated that their product or services were not permitted for exportation, and 4% noted that lack of government support and too many taxes and routines are the reasons for not exporting their products (Figure 28).

Impact of COVID-19 on Business

in Kurdistan region, the majority of respondents faced a decline in revenues (80.5%) at the beginning of the Corona pandemic in 2020, 15.5% stated that there was no changes in revenues and 4% said they had increase in the revenues.

Table 23: The Impact of COVID -19 on Revenues at the Beginning of the year 2020 by MSMEs Size in KRI

Impact on Turnover	Total (KRI)		Micro		Small		Medium	
	No.	%	No.	%	No.	%	No.	%
Decrease	1622	80.5	1512	3.9	6	4.7	1	7.1
No change	313	15.5	289	15.4	22	17.3	2	14.3
Increase	81	4.0	74	80.6	99	78.0	11	78.6
Total	2016	100	1875	100	127	100	14	100

Table 24: The Impact of COVID-19 on the Number of employees by Governorate and sex in KRI

Number of Staff	Total		Erbil		Sulaymaniyah		Halabja		Duhok		Gender			
	No.	%	No.	%	No.	%	No.	%	No.	%	Male		Female	
											No.	%	No.	%
Decrease the number of staff	54	2.7	15	2.2	21	2.8	0	0.0	18	3.3	52	3.0	2	0.7
Increase the number of staff	13	0.6	2	0.3	10	1.4	0	0.0	1	0.2	11	0.6	2	0.7
No change in the number of staff	1947	96.7	667	97.5	709	95.8	40	100	533	96.6	1684	96.4	265	98.5
Total	2016	100	684	100	740	100	40	100	552	100	1747	100	269	100

Regarding the impact of COVID-19 on the number of employments, the majority of respondents (about 97%) said that COVID-19 did not have notable impact on the number of employees in MSMEs in Kurdistan region and it remained the same in 2020 and 2021.

Table 25: evaluating the Government Action against COVID-19 by the size of MSMEs, governorates and sex in KRI (multiple answers)

Total	Not Suitable	Suitable	evaluating the Government Action :		
1875	596	1279	No.	Micro-sized	Size of business
100	31.8	68.2	%		
127	57	70	No.	Small-sized	
100	44.9	55.1	%		
14	4	10	No.	Medium-sized	
100	28.6	71.4	%		
1747	586	1161	No.	Male	Sex
100	33.5	66.5	%		
269	71	198	No.	Female	
100	26.4	73.6	%		
684	269	415	No.	Erbil	Governorates
100	39.3	60.7	%		
740	254	486	No.	Sulaymaniyah	
100	34.3	65.7	%		
40	6	34	No.	Halabja	
100	15	85	%		
552	128	424	No.	Duhok	
100	23.2	76.8	%		
2016	657	1359	No.	KRI	
100	32.6	67.4	%		

The results shows, 67.4% of business owners in Kurdistan region stated that the government action against covid-19 was suitable and 32.6% believe that the government's measures against spread of the virus was not suitable (Table 25).

Financing

Usage of Banking Services

According to the results of the survey (Table 26), more than 98% of the enterprises in Kurdistan region do not use bank account services. Using bank account is higher in medium enterprises than other enterprises. About 14% of medium-sized enterprises use bank account comparing to 1.3% of micro-sized enterprises and 3.2% small-sized enterprises.

Table 26: Usage of Banking Account by the Size of Enterprises in KRI

KRI		Size of enterprises						Using bank account
%	No.	Medium		Small		Micro		
		%	No.	%	No.	%	No.	
1.5	31	14.3	2	3.2	4	1.3	25	Yes
98.5	1985	85.7	12	96.8	123	98.7	1850	No
100	2016	100	14	100	127	100	1875	Total

Table 27: Reasons for not having a Bank Account by the Size of Enterprises in KRI

KRI		Size of Enterprises						Reasons for not having a Bank Account
%	No.	Medium		Small		Micro		
		%	No.	%	No.	%	No.	
86.3	1714	66.7	8	80.5	99	86.9	1607	My work doesn't need it
9.7	193	33.3	4	16.3	20	9.1	169	Do nNot trust the banks
1.9	38	0	0	1.6	2	1.9	36	High cost
1.1	22	0	0	0.8	1	1.1	21	There Is no bank branch in my area
0.9	18	0	0	0.8	1	0.9	17	Too Much Paperwork
100	1985	100	12	100	123	100	1850	Total

The survey showed that the vast majority of enterprises do not use bank accounts. Above table shows the reasons for not using bank account, where 86.3% of business owners stated that their work doesn't need banking account, 9.7% don't trust banks, and 2% of rspondents believe that opening a bank account is too expensive.

Figure 29: Reasons for Difficulty in Obtaining Finance in KRI

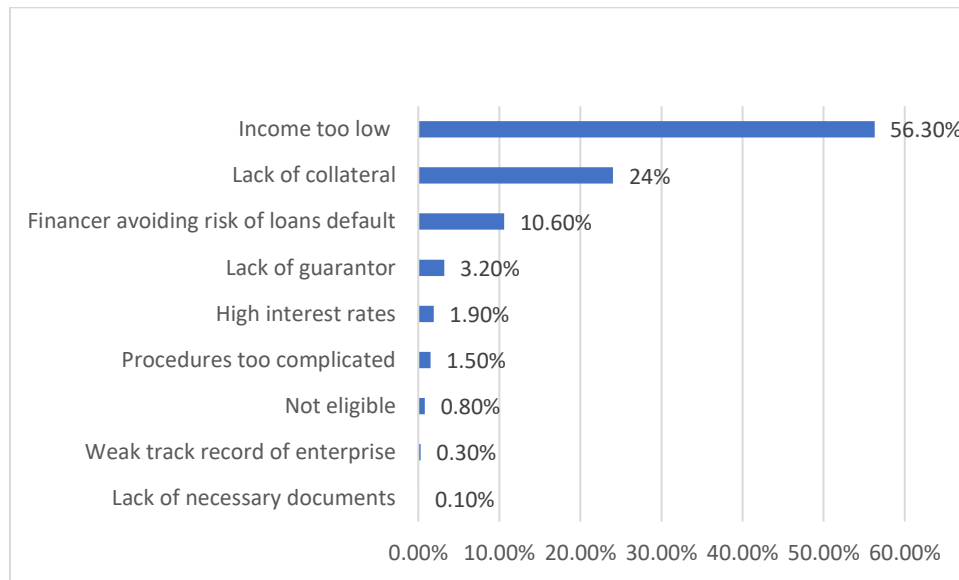
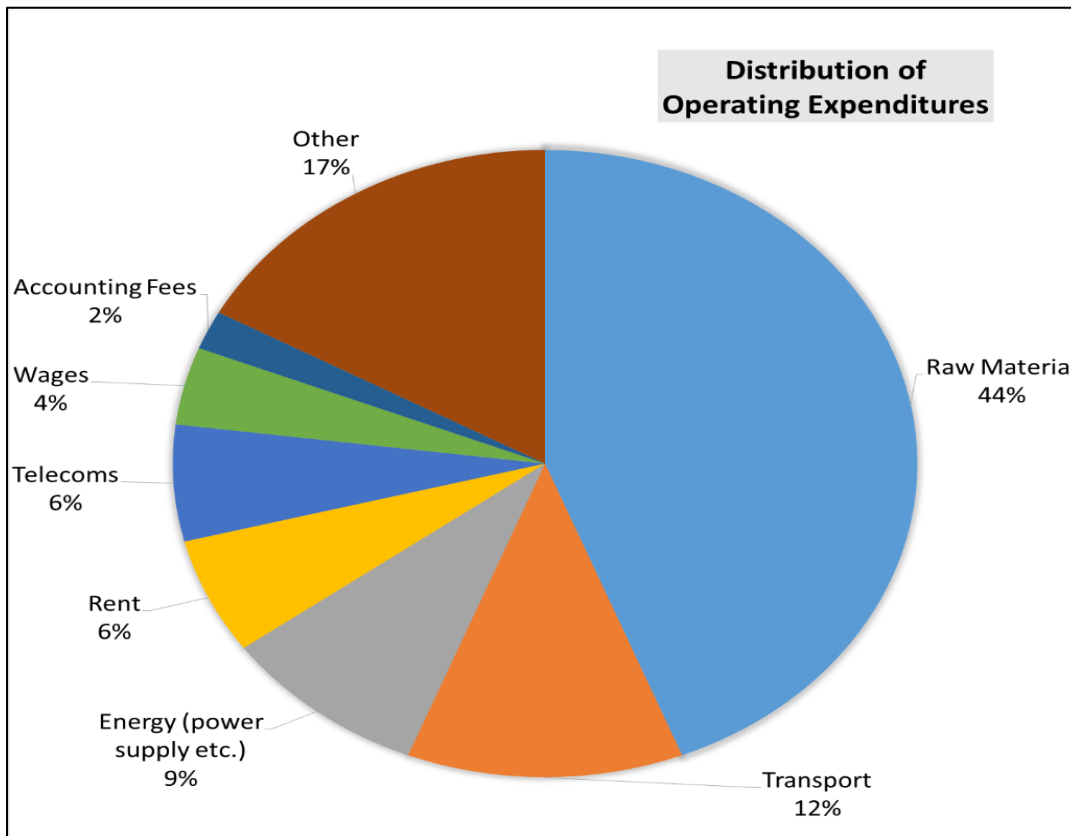


Figure 29 shows the reasons for difficulty in obtaining finance to start a business. It can be seen that more than 56% is attributed to low family income. The second reason (24%) is due to the lack of support (guarantee) in receiving money. Other reasons are presented in Figure above.

Start a business. It is noted that the highest rate that accounts for more than 56% is attributed to low family income. The second reason, accounting for 24% is due to the lack of support when receiving money. The other reasons are shown in the above Figure.

Figure 30: percentage distribution of Expenditure of Items from the operating cost for MSMEs in Kurdistan Region



A large amount of expenditure, accounting for 44% of the total expenditure goes to raw materials. 12% of the expenditure is allocated for transportation. The costs of electricity, heating and cooling are not very high and forms up only 9% of the total costs (Figure 30). The least expenditure is on accounting, salaries and other items.

Business Expectation

The expectations of business owners about the situation of their business for the coming years are as follows: 66.3% of the business owners in Kurdistan region predict that their work will be worst for the coming year, 15.6% thought that it will remain the same and only 10.7% of the respondents declared that their work will be better for the year ahead.

At the level of governorates, the majority of respondents in Sulaymaniyah governorate (about 75%) thought their business would decline next year, while this rate is 62% in Erbil governorate and about 60% in Duhok governorate.

Kurdistan Region 2018-2022 Indicators

Table 28: Perception of MSMEs Owners about how will the overall Business Environment become in the Next Year

KRI		Governorate								Perception
		Duhok		Halabja		Sulaymaniyah		Erbil		
%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	
66.3	1336	59.8	330	72.5	29	74.7	553	62.0	424	Decline
15.6	315	16.5	91	10.0	4	11.9	88	19.3	132	The same
10.7	215	9.8	54	12.5	5	6.9	51	15.4	105	Improve
7.4	150	13.9	77	5.0	2	6.5	48	3.4	23	Don't know
100	2016	100	552	100	40	100	740	100	684	Total

Table 29: Opinion of MSMEs Owners about the Type of Government Support Needed to Improve Businesses (multiple answers) at the governorates and KRI level

KRI		Governorate								Type of support
		Duhok		Halabja		Sulaymaniyah		Erbil		
%	.NO	%	.NO	%	.NO	%	.NO	%	NO.	
23.2	1056	25	287	16.7	20	20.4	383	26	366	Financial Support
19.1	870	17.4	199	15.8	19	20.3	380	19.3	272	Infrastructural support (electricity, water, sewage, paving)
11.0	501	10.6	121	16.7	20	12.4	233	9	127	Raw materials for production and services
10.6	478	11.3	130	18.3	22	11.5	215	7.9	111	Domestic Product Protection
9.4	428	13.2	151	3.3	4	8.1	152	8.6	121	Security support
8.9	405	5.3	61	9.2	11	9.7	181	10.8	152	Support the ration card
7.6	347	6.3	72	8.3	10	7.6	142	8.7	123	To ease the official procedures (routine)
5.4	245	2.7	31	4.1	5	6.7	125	6	84	Fixed locations to practice business
1.5	70	1.1	12	4.2	5	1.8	34	1.4	19	Organizing exhibitions and workshops
3.3	150	7.2	82	3.3	4	1.6	30	2.4	34	Other
100	4550	100	1146	100	120	100	1875	100	1409	Total

Kurdistan Region 2018-2022 Indicators

Table above shows the opinion of the enterprise owners about the government's support to improve their business in Kurdistan region. It shows that the majority of the employers need financial support that accounts for 2%. About 19% of enterprise owners request infrastructure support in terms of electricity, water and roads and 10.6% want domestic production support in Kurdistan region.

Kurdistan Region 2018-2022 Indicators

Sources

- Trade statistics department 2015, KRSO, tourism establishments survey 2013, Kurdistan region: KRSO,
- Trade statistics department 2019, KRSO, tourism establishments survey 2016, Kurdistan region: KRSO,
- Trade statistics department 2022, KRSO in cooperation with CSO, tourism establishments survey 2019 Kurdistan region: KRSO,
- Trade statistics department 2022, KRSO in cooperation with CSO, tourism establishments survey 2020, Kurdistan region: KRSO,
- Trade statistics department 2022, KRSO in cooperation with CSO 2021, domestic trade survey in private sector (retail and Wholesale trade, sell and repair of vehicles and motorcycles) 2021, Kurdistan region: KRSO,
- Trade statistics department 2022, KRSO in cooperation with UNDP financial support by USAID, Medium, small and Micro business establishments (MSME) survey in private sector 2021,, Kurdistan region: KRSO.

Industry Statistics

Industry

Industrial sector plays a significant and effective role in countries' economic development due to the income gained from production and creating job opportunities and contributing to gross regional production (GRP). For this purpose, KRSO works with other relevant parties in the KRG to provide accurate annual statistical information on this sector.

Big-sized industrial establishments

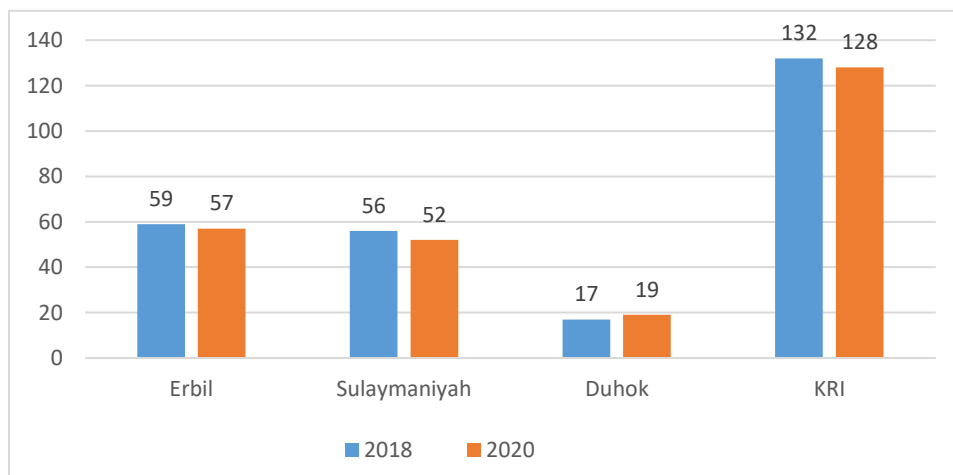
Big-sized industrial establishment refers to an industrial establishment with 30 or more employees.

Number of industrial establishments

According to the results of the Big-Sized Industrial Establishment Survey, the number of big industrial establishments that was operating in 2020 was 128 establishments in Kurdistan region, where it shows a decrease by 3.03% compared to 132 industrial establishments in 2018.

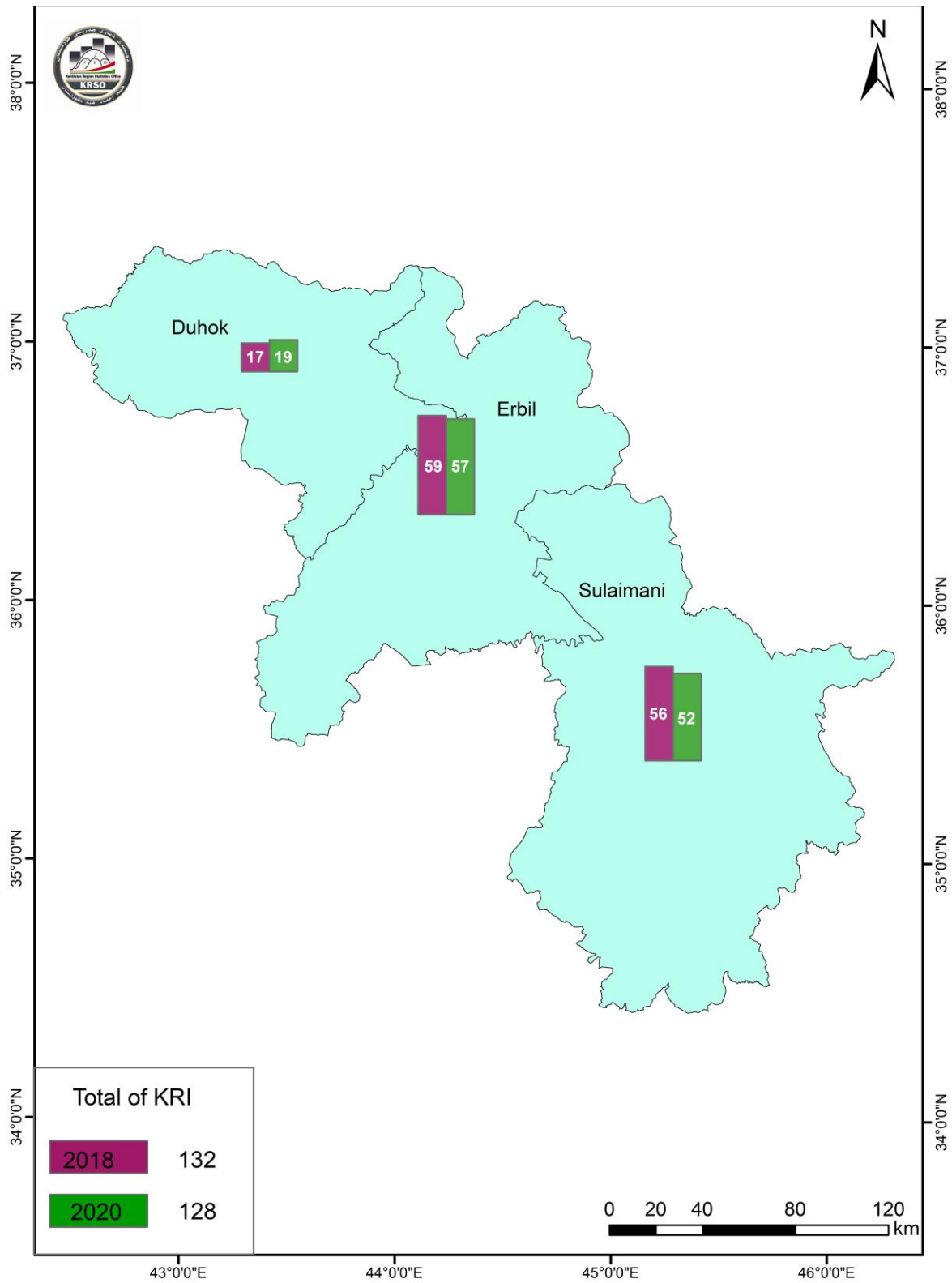
At the level of governorates, it ranges as following: Erbil governorate decreased from 59 establishments in 2018 to 57 establishments in 2020, which had the highest number of large institutions (44%), Sulaymaniyah governorate decreased from 56 establishments in 2018 to 52 establishments in 2020 (41%) and Duhok governorate increased from 17 establishments in 2018 to 19 establishments in 2020 that had 15% of the total Big-sized industrial establishments

Figure 1: the Number of Big Industrial Establishments at the level of KRI and governorates in 2018 and 2020



Kurdistan Region 2018-2022 Indicators

Map 12: the Number of Big Industrial Establishments at the level of KRI and governorates in 2018 and 2020



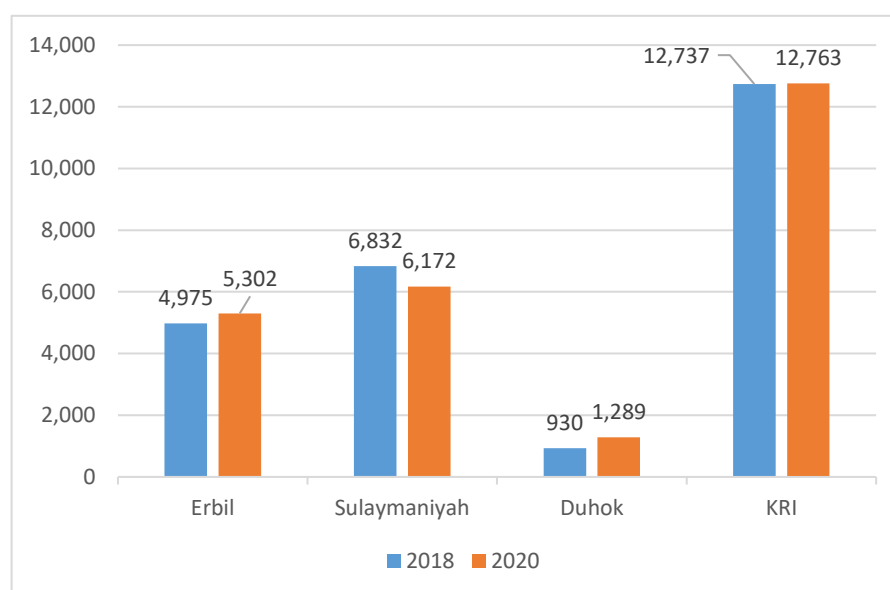
Kurdistan Region 2018-2022 Indicators

Number of employees

According to the results of the big-sized industrial establishments survey in Kurdistan region, the number of employees in big-sized industrial establishments working in 2020 (12,763) shows a slight increase by 0.2% compared to that of 2018 (12,737).

At the government level, the number of employees increased in 2020 compared to 2018 in Erbil (4,975 to 5,284), in Sulaymaniyah governorate it decreased from 6,832 in 2018 to 6,144 in 2020, and Duhok governorate shows increase from 930 employees in 2018 to 1,285 employees in 2020 (Figure 2).

Figure 2: No. of Employees in Big-Sized establishments at the Level of governorates and KRI in 2018 and 2020



Wages, salaries, in-kinds, Supplies and production in big-sized industrial establishments

Wages, salaries, and in-kinds increased from about 160 billion ID in 2018 to more than 170 billion ID in 2020. As for supplies (needs), the value decreased from above 2 trillion ID in 2018 to less than 2 trillion ID in 2020 as it happened to the production value, where it decreased from 3.7 trillion ID in 2018 to 3 trillion ID in 2020

Table 1: Indicators (wages, salaries, In-kinds, value of supplies) and total value of products in Big-sized industrial Establishments in 2018 and 2020

2020	2018	Indicators
170.23	159.741	wages, salaries, In-kinds (billion ID)
1.874895	2.144277	Value of supplies (billion ID)
3.068238	3.722735	production value (trillion ID)

Kurdistan Region 2018-2022 Indicators
Medium –Sized Industrial Establishment

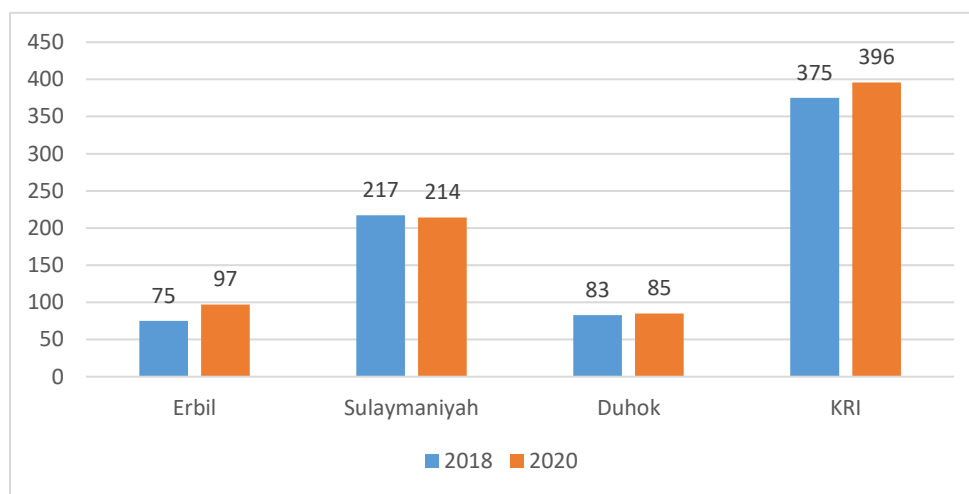
Medium-sized Industrial Establishments refers to that establishment with a number of employees between (10-29) employees

Number of establishments

According to the results of the survey of the medium industry establishments in Kurdistan region, the number of operating establishments was 396 establishments in 2020 and compared to 375 establishments in 2018 it shows an increase by 5.6%.

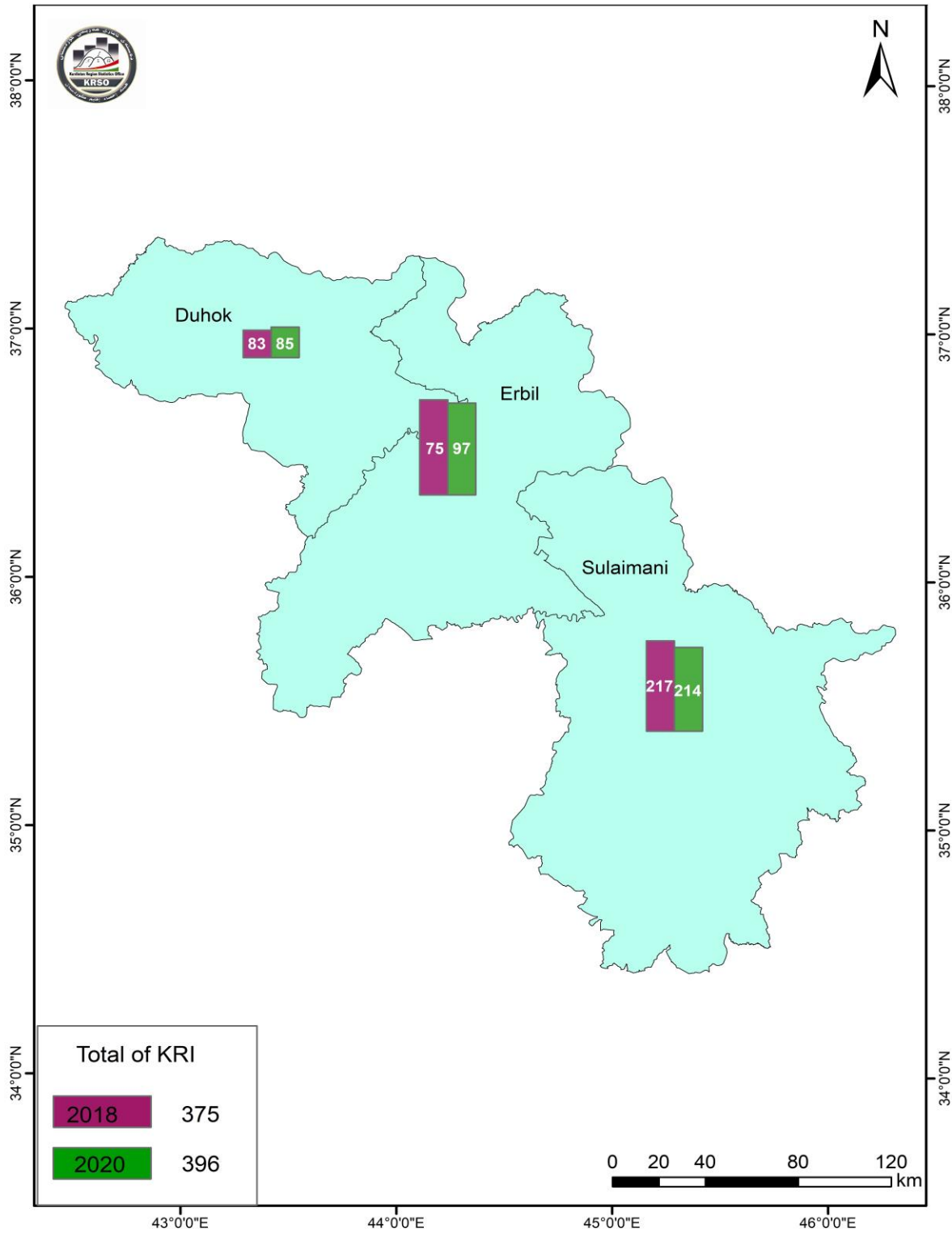
At the level of Governorates, although the number of medium –sized establishment in Sulaymaniyah shows decreases from 217 in 2018 to 214 in 2018, still the highest rate of medium establishments goes for this governorate accounting for 54% followed by Erbil governorate with 75 establishments in 2018 rose to 97 establishments in 2020 with 25% of establishments, then Duhok governorate with 83 establishments in 2018 rose to 85 establishments in 2020 which covers 21% of medium establishment in Kurdistan region (Figure 3).

Figure 3: No. of Medium-sized industrial Establishments at the Level of KRI and Governorates in 2018-2020



Kurdistan Region 2018-2022 Indicators

Map 13: No. of Medium-sized industrial Establishments at the Level of KRI and Governorates in 2018-2020

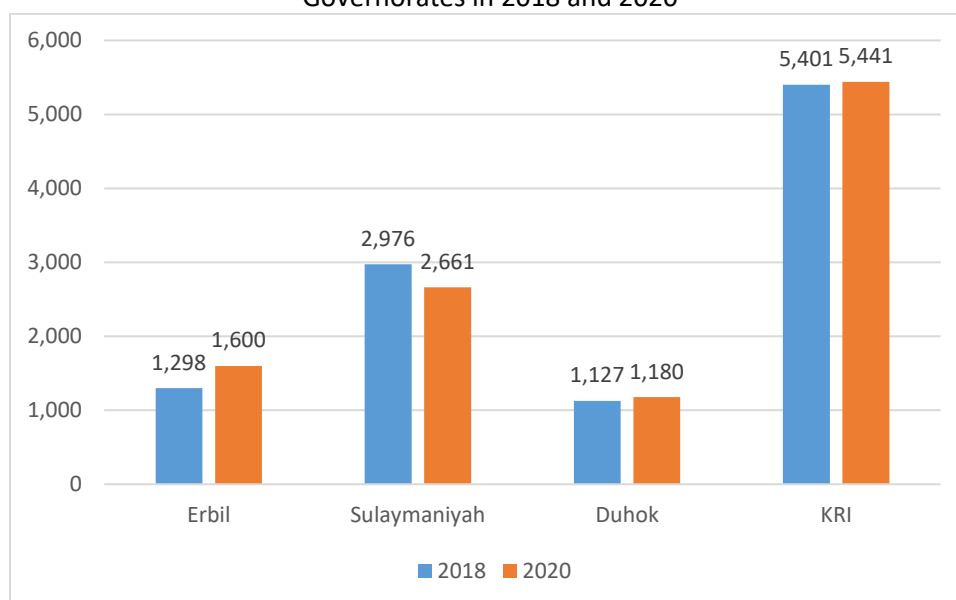


Kurdistan Region 2018-2022 Indicators

Number of employees in medium -Sized establishments

According to the results of the modium-sized industrial survey, the number of employees working in these establishments in 2020 was 5,441, where it shows an increase by 0.7% compared to the 5,401 employees in 2018 (Figure 4). At the government level, the number of employees in Erbil governorate increased from 1,298 employees in 2018 to 1,600 in 2020, Sulaymaniyah governorate decreased from 2,976 employees in 2018 to 2,661 in 2020, and Duhok shows increase from 1,127 employees in 2018 to 1,180 in 2020.

Figure 4: NO. of Employees in Medium-sized industrial Establishments at the Level of KRI and Governorates in 2018 and 2020



Wages, salaries, in-kinds, Supllies and production in medium-sized industrial establishments

The value of wages, salaries and in-kinds in medium-sized industrial establishments decreased from 37.779 billion ID in 2018 to 34.515 billion ID in 2020. As for supplies (needs), the value decreased from 456.039 ID in 2018 to 360.162 billion ID in 2020 as it happened to the production value, where it decreased from 560.424 billion ID in 2018 to 551.259 billion ID in 2020.

Table 2: Indicators (wages, salaries, in-kinds, value of supplies (needs) and total value of products in Medium- sized Industrial Establishments in 2018 and 2020

2020	2018	Indicators
34.515	37.779	Wage,salary and in-kinds (billion IDs)
360.162	456.039	Supply (billion IDs)
551.259	560.424	Production (billion IDs)

Kurdistan Region 2018-2022 Indicators

Electricity power

Electricity Production

Table (3) shows the electricity power produced (MW) in Kurdistan region in 2018 - 2021. We can see that, the electricity produced in Kurdistan in 2021 rose to 39,596 MW compared to 36,816MW in 2020. The electricity generated in Kurdistan region in 2021 increased to 3,300 MW per month in average compared to the averaged power generated per month for the previous years, for example compared to the averaged 2,409 MW per month in 2018.

Table 3: the Electricity Power Generated (MW) in KRI by years

2021	2020	2019	2018	Month
3465	3514	3193	2405	January
3434	3340	3150	2439	February
3313	3139	3221	2382	March
2993	2920	3199	2233	April
3284	2638	3051	2345	May
3200	2727	3252	2361	June
3259	3019	3234	2316	July
3400	3442	3260	2299	August
3392	3252	3217	2287	September
3124	2639	2772	2357	October
3271	2865	2970	2667	November
3461	3321	3464	2813	December
3300	3068	3165	2409	In average
39596	36816	37983	28904	Total

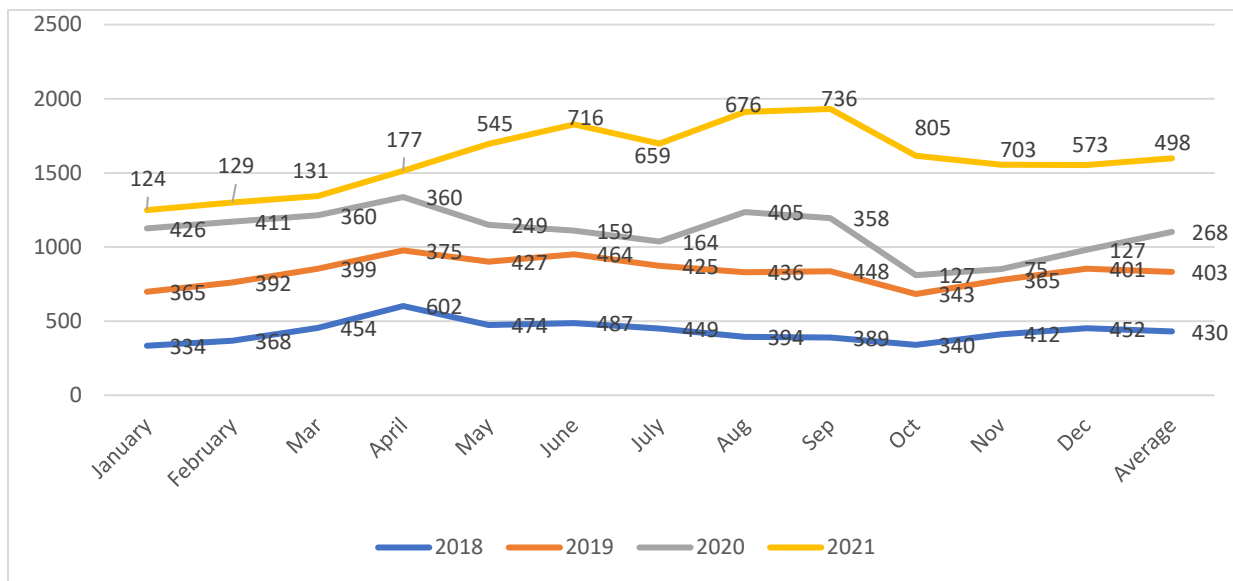
Source: ministry of electricity /General directorate of control and Transmission

Kurdistan Region 2018-2022 Indicators

Electricity exportation

The monthly averaged electricity exported from KRI to Iraq in 2021 rose to 498 MW compared to 268 MW for 2020 with the highest power exported in September (736 MW) and the lowest power in January (124MW). The amount of electricity power exported to Iraq from KRI depends on the temperature difference between Iraq and KRI (Figure 5).

Figure 5: Total Electricity Power Exported to Iraq fro KRI by Month in 2018-2021



Source: ministry of electricity /General directorate of control and Transmission

Electricity distribution

Table (4) shows the total distributed electricity (MW) in Kurdistan region in 2018 - 2021. The total distributed electricity in Kurdistan region in 2021 rose to 34,500 MW compared to 33,594 MW in 2020. The electricity distributed in Kurdistan region constantly increased in the years following 2018. The monthly averaged electricity distributed in Kurdistan region in 2021 increased to 2,875 MW compared to the previous year, for example compared to 2337 MW in 2018.

Kurdistan Region 2018-2022 Indicators

Table 4: total distributed electricity power (MW) in KRI by months in 2018-2021

2021	2020	2019	2018	Month
3369	3088	2828	2352	January
3414	2929	2758	2430	February
3197	2779	2822	2382	March
2824	2560	2824	2150	April
2864	2388	2624	2246	May
2609	2568	2788	2255	June
2725	2855	2809	2210	July
2853	3037	2824	2196	August
2782	2894	2769	2180	September
2407	2512	2428	2283	October
2568	2790	2605	2654	November
2888	3194	3063	2711	December
2875	2800	2762	2337	In average
34500	33594	33142	28049	Total

Source: ministry of electricity /General directorate of control and Transmission

Kurdistan Region 2018-2022 Indicators

Sources

- Industry statistics department 2022, KRSO and CSO, Big-sized industrial establishments survey 2020 in Kurdistan region, Kurdistan region: KRSO,
- Industry statistics department 2022, KRSO and CSO, Medium-sized industrial establishments survey 2020 in Kurdistan region, Kurdistan region: KRSO,
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- Industry statistics department 2022, ministry of electricity, general directorate of controlling and providing, monthly electricity report of Kurdistan region 2018-2021, Kurdistan region: KRSO.

Construction statistics

Construction

Construction and reconstruction are an important and active sector of the country's economic growth by creating job opportunities and contributing to the GDP. Therefore, providing data in this field helps policy makers and decision makers to plan for developing the construction sector in particular and the country's economy in general.

Kurdistan Region Statistics Office (KRSO) presents data on construction licenses and projects in the public and private sectors for the years 2019-2021 at the governorates and regional level. In the recent years, despite many financial and economic problems including budget cuts by the federal government, the spread of Covid-19, the war against ISIS, and the influx of refugees to Kurdistan, construction never stopped in Kurdistan region.

KRSO in cooperation with the relevant government institutions, collects new statistical information on construction sector and makes it accessible to public. This data includes all types of licenses (residential units, commercial building, villas, markets, shops, factories, etc.) to show the activities in the construction field and providing important indicators including the number of building licenses, construction projects, licensed area, built-up area, cost per m², total cost estimation according to the materials used at the level of Kurdistan region.

Allocated area: it refers to the areas allocated by the relevant parties (official organizations / municipality) which bounded and licensed according to the proposed map and design. The land area is between 75-100, 101-150, 150-200,501-550 m².

Built-up area: it refers to that land area which has licensed by the relevant authorities (official agency / municipality) for the purpose of building according to the map that has already been prepared by the land owner.

Building: it refers to that land area that is licensed by relevant authorities (official agency / municipality) to be built according to the official document (land ownership document) for various purposes (residential units, commercial buildings, servicing, etc.) and the land area is between 75-100, 101-150, 150-200,501-550 m².

Cost per square meter: It is the total cost (materials, transportation, water and electricity, engineering, labor, fees, etc.) for the built-up area from the beginning of the construction work to the end of the work.

Total cost: it is the total estimated cost (materials, transportation, engineering, labor, etc.) for the total built-up area in each municipality borders.

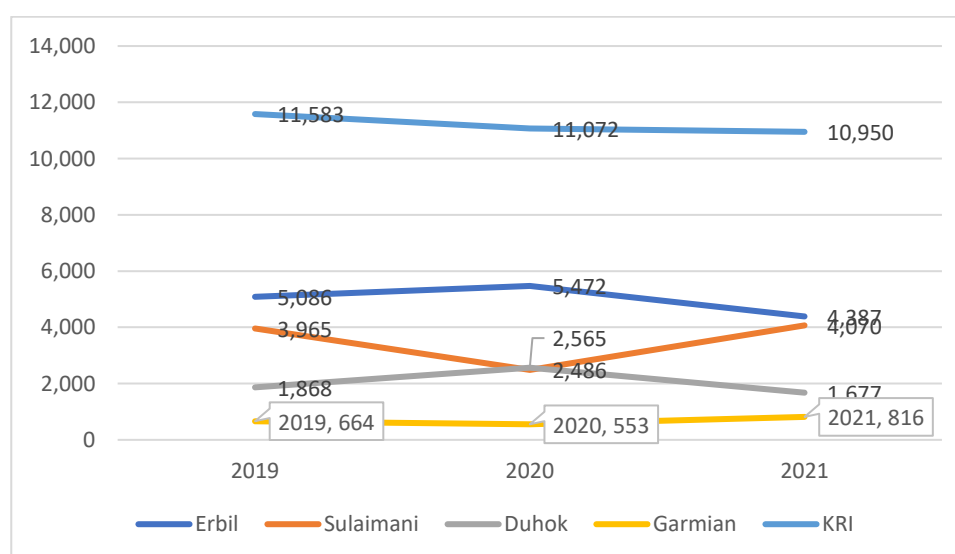
Table 1: number of building licenses at the governorates and Garmyan administration level in Kurdistan Region in 2019-2021

KRI	Garmyan	Duhok	Sulaymaniyah	Erbil	Year
11,583	664	1,868	3,965	5,086	2019
11,072	553	2,565	2,486	5,472	2020
10,950	816	1,677	4,070	4,387	2021

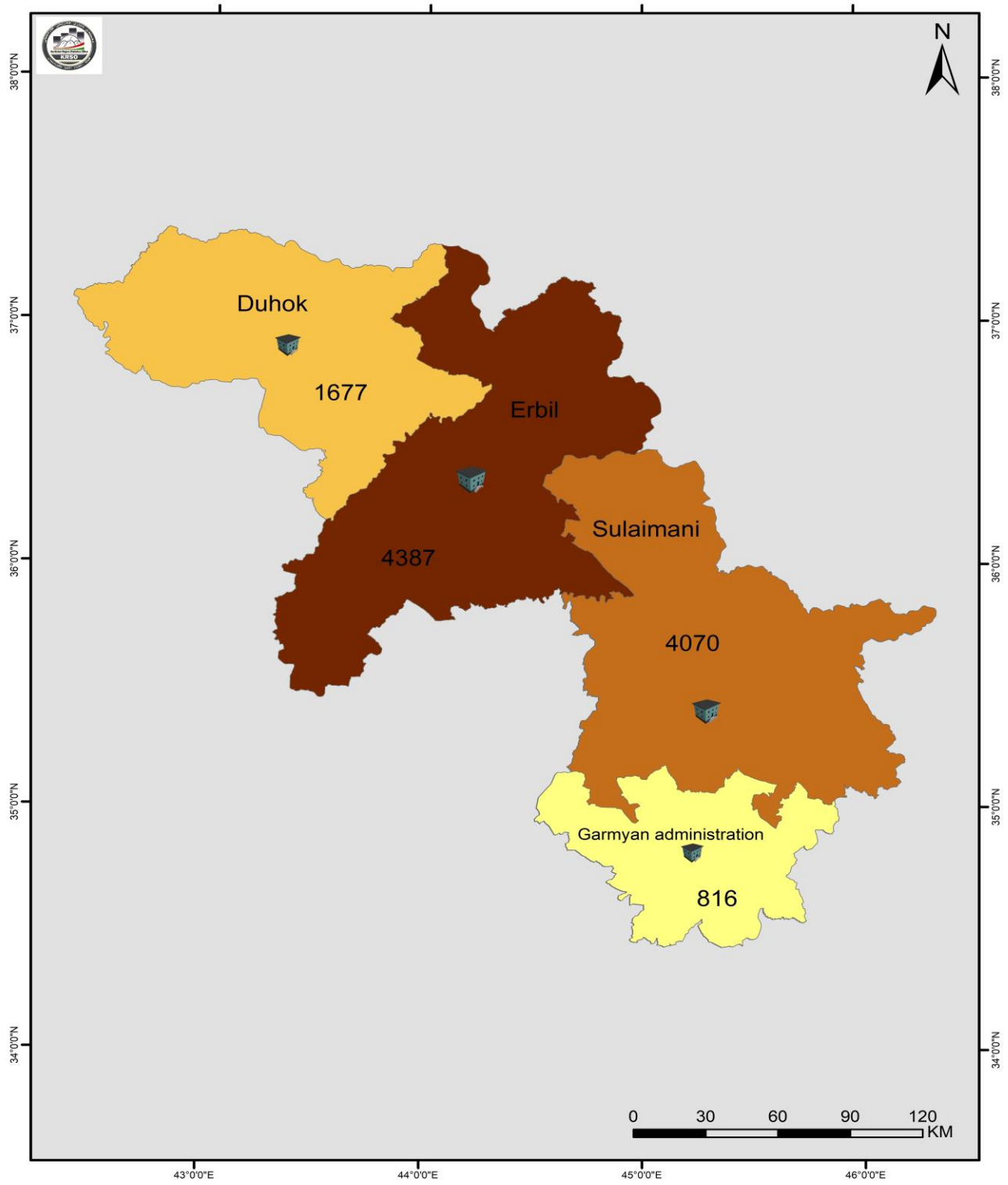
Financial, economic and health crises (dropping of oil prices, preventive measures against COVID-19) had a direct impact on the construction sector in Kurdistan region in 2020. As shown (above Table), the number of building licenses decreased from 11,583 in 2019 to 11,072 in 2020 and 10,950 in 2021. It shows a decrease rate by 5.46% in 2021 compared to 2020.

At the level of governorates, in Erbil governorate, with 5,086 building licenses in 2019 decreased to 4,387 in 2021 accounting for 14%. Unlike other governorates, in Sulaymaniyah, in 2021, the number of building licenses increase by 39% compared to 2020 and 2.5% compared to 2019. Also, in Duhok governorate, with a decrease by 10%, the number of construction licenses decreased to 1,677 in 2021 compared to 1,868 in 2019. In Garmyan administration, the number of building licenses was 664 in 2019 and compared to 816 licenses in 2021 it shows an increase by 22.9%.

Figure 1: number of construction licenses at the level of governorates and Garmyan administration in Kurdistan region in 2019-2021



Map 14: number of construction licenses at the level of governorates and Garmyan administration in Kurdistan region in 2019-2021



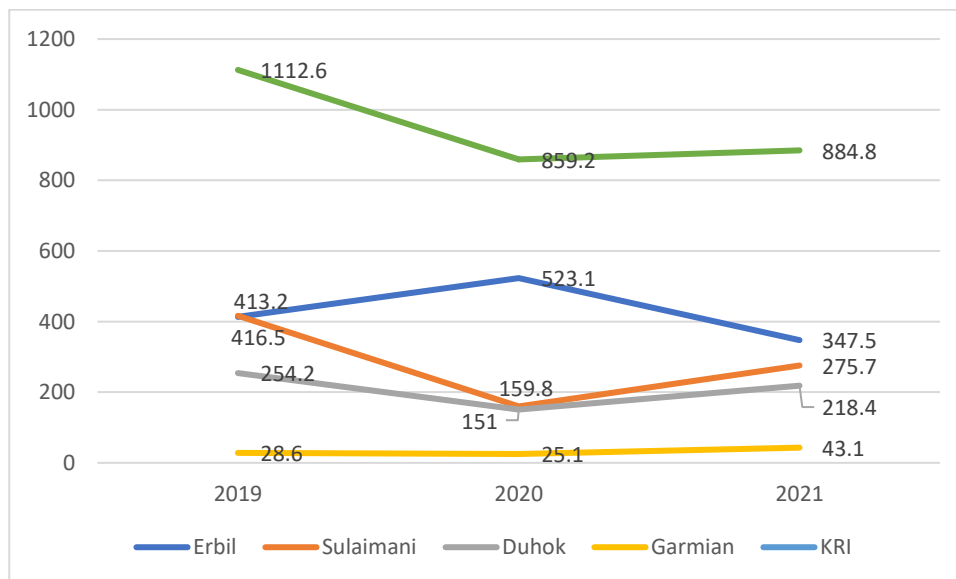
Kurdistan Region 2018-2022 Indicators

Table 2: total estimated cost for construction works at the level of governorate and Garmyan administration in Kurdistan region in 2019-2021, billion ID

KRI	Garmyan	Duhok	Sulaymaniyah	Erbil	Year
1112.6	28.6	254.2	416.5	413.2	2019
859.2	25.1	151	159.8	523.1	2020
884.8	43.1	218.4	275.7	347.5	2021

As shown (aboveTable), in 2019, the total estimated cost for construction work in Kurdistan region was 1 trillion and 112.6 billion IDs and decreased to 859.2 billion IDs in 2020 and 884.8 billion IDs in 2021 accounting for 22.7% and 20.5% respectively. At the level of governorates except Garmyan administration, the estimated costs declined in 2021 compared to 2019, for example, in Erbil governorate, the estimated cost of 413.2 billion dinars in 2019 decreased to 347.5 billion dinars in 2021 accounted for 15.9%. More detail has been shown in the following figure.

Figure 2: total estimated cost for construction works at the level of governorate and Garmyan administration in Kurdistan Region in 2019-2021, billion ID



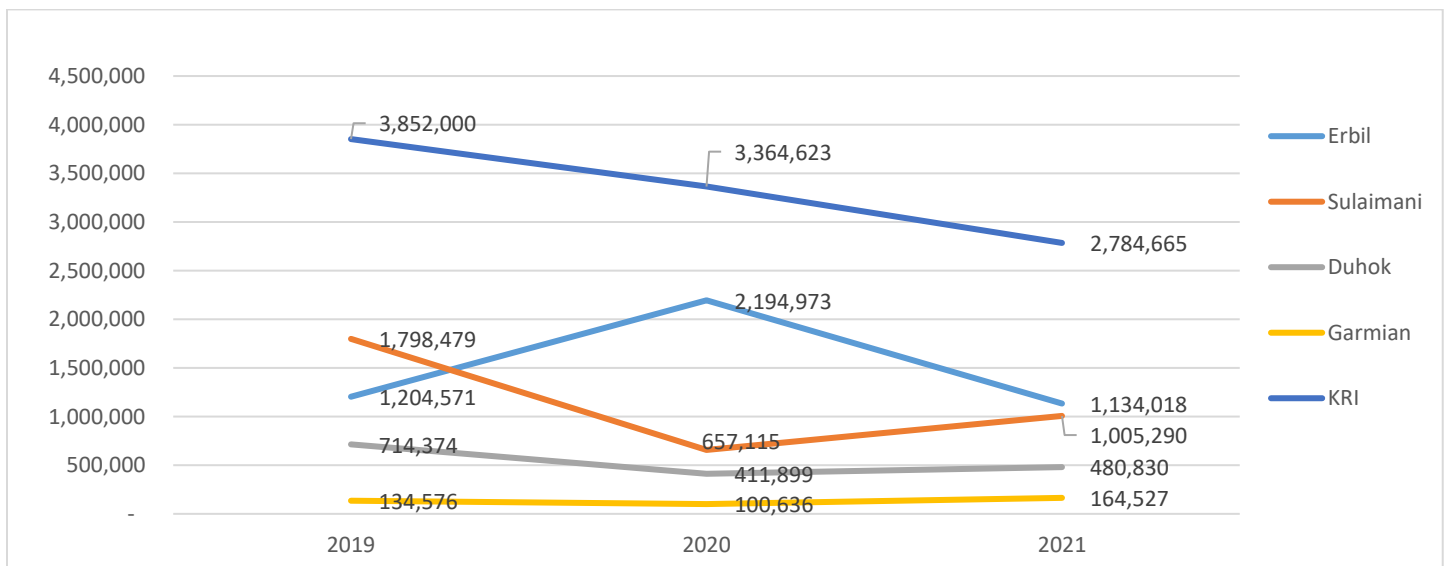
Kurdistan Region 2018-2022 Indicators

Table 3: total allocated land area (m²) for construction work in private sector at the governorates level and Garmyan administration in Kurdistan Region in the years 2021-20219.

KRI	Garmyan	Duhok	Sulaymaniyah	Erbil	Year
3,852,000	134,576	714,374	1,798,479	1,204,571	2019
3,364,623	100,636	411,899	657,115	2,194,973	2020
2,784,665	164,527	480,830	1,005,290	1,134,018	2021

In Kurdistan region, between 2019-2021, the allocated land area for building purpose decreased from 3,852,000m² in 2019 to 3,364,623m² in 2020 and 2,784,665m² in 2021 with a decrease of 27.7% in 2021 compared to 2019. At the level of governorates, in Erbil governorate, in 2019 with 1,204,571m² of allocated land area it significantly increased to 2,194,973m² in 2020 accounting for 82.2%, while in 2021 it decreased to 1,134,018m² compared to 2020 accounting for about 48.3%. In other governorates, the allocated land area shows fluctuation in these years.

Figure 3: Allocated land area (m²) for building in private sector at the level of governorates and Garmyan administratin in 2019-2021



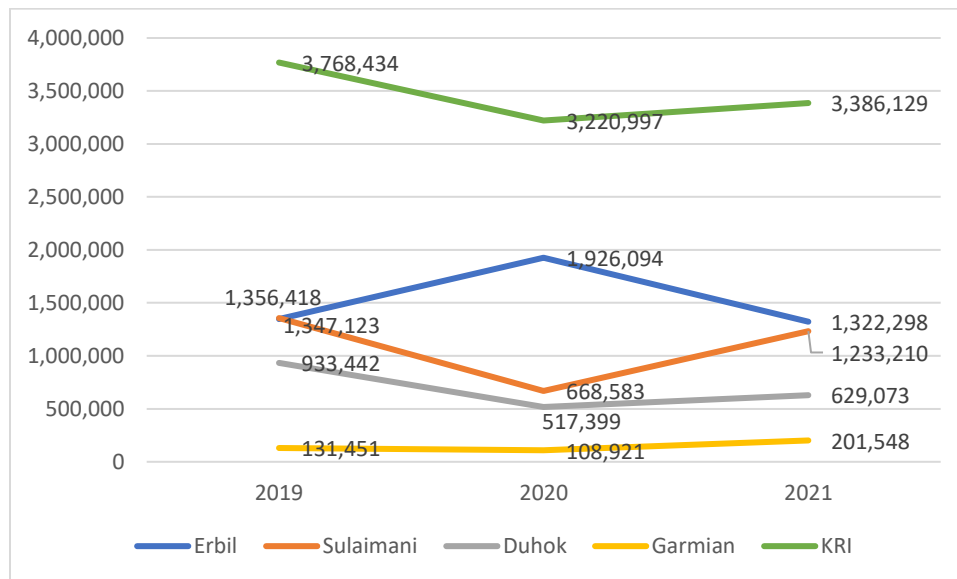
Kurdistan Region 2018-2022 Indicators

Table 4: total built- up area (m²) in the private sector at the governorates and Garmyan administration level in Kurdistan region in 2019 – 2021

KRI	Garmyan	Duhok	Sulaymaniyah	Erbil	year
3,768,434	131,451	933,442	1,356,418	1,347,123	2019
3,220,997	108,921	517,399	668,583	1,926,094	2020
3,386,129	201,548	629,073	1,233,210	1,322,298	2021

In 2019, in Kurdistan region, the built-up area was 3,768,434 m² and comparing to 3,386,129 m² in 2021 it shows a decrease by 10.1%. In 2020, built-up area decreases by 5% compare 2021. At the level of governorates, there is no significant difference in Duhok and Garmyan administration between 2019, 2020 and 2021, but in Erbil and Sulaymaniyah governorates the difference is very obviouse in 2020 Comparing to 2019 and 2021.

Figure 4: total built-up area (m2) in private setor at the level of governorates and Garmyan administration in KRI in 2019-2021



Kurdistan Region 2018-2022 Indicators

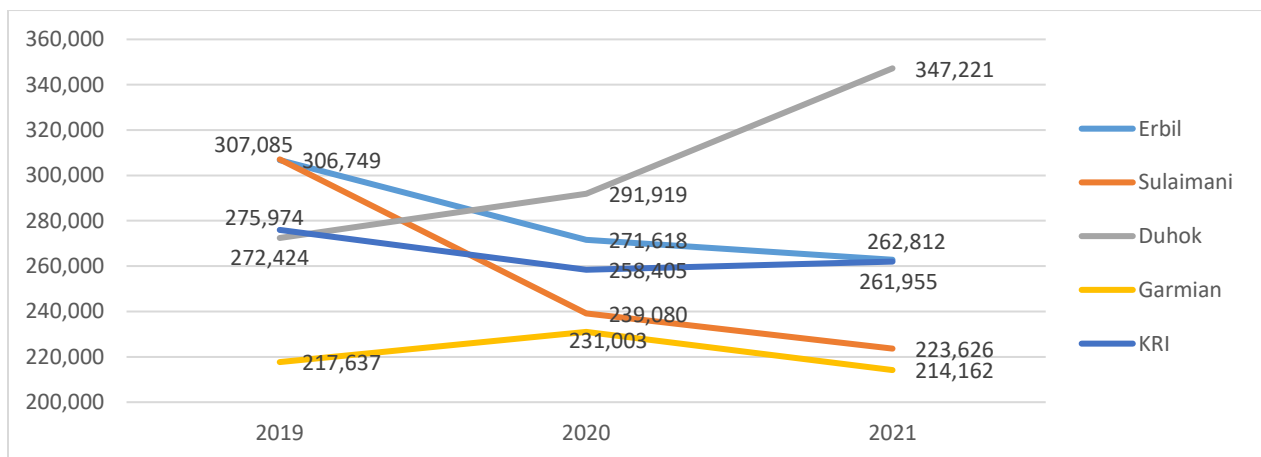
Table 5: estimated average cost for building one square meter (m²) in the private sector at the governments level and Garmyan administration in Kurdistan region for the years 2019-2021 (Iraqi Dinar)

KRI	Garmyan	Duhok	Sulaymaniyah	Erbil	Year
275,974	217,637	272,424	307,085	306,749	2019
258,405	231,003	291,919	239,080	271,618	2020
261,955	214,162	347,221	223,626	262,812	2021

The average estimated cost for constructing one m² in Kurdistan region in 2019 was 275,974 IDs, where it shows a decrease of 5.1% comparing to 261,974 IDs in 2021 and a decrease by 6.4% comparing to 258,405 IDs in 2020, (Table 5).

At the governorats level, in 2019, in Sulaymaniyah governorate the cost of construction per m² was 307,085 IDs and in 2020, it decreased to 239,080 IDs (22.1%) and to 223,626 IDs in 2021 (27.2%). Also, In Erbil governorate, the average cost per m² was 306,749 IDs in 2019 and decreased to 271,618 IDs in 2020 (11.5%) and 262,812 IDs in 2021 (14.3). In Garmyan administration, in 2019, the total cost for construction per m² was 217,637 IDs and increased to 231,003 in 2020 with little change it reached 214,162 IDs in 2021. The main reasons for the rise and fall of prices are mainly due to 1) the distance of materials to the project area and 2) the quality of materials.

Figure 5: average estimated cost for building per m² in privet sector at the level of governorates and Garmyan administration in Kurdistan region in 2019 – 2020, IDs



Kurdistan Region 2018-2022 Indicators

The completed construction projects by board of investment

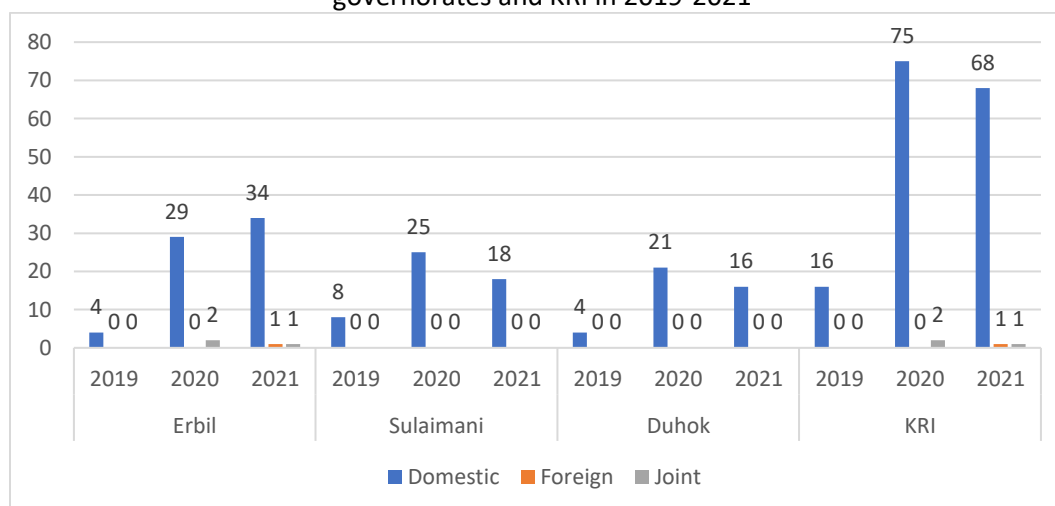
Table 6: the number of construction projects in board of investment by type of projects at the level of governorates and KRI in 2019-2020

KRI			Duhok			Sulaymaniyah			Erbil			Year
joint	Foreign	Domestic	joint	Foreign	Domestic	joint	Foreign	Domestic	joint	Foreign	Domestic	
0	0	16	0	0	4	0	0	8	0	0	4	2019
2	0	75	0	0	21	0	0	25	2	0	29	2020
1	1	68	0	0	16	0	0	18	1	1	34	2021

Despite the crises that hit Kurdistan region government, Kurdistan region continuously attracts domestic and foreign capital to invest in reconstruction projects depending on the available budget. According to the Investment board in 2019, at the governorates and regional levels, the number of projects has been increased. In 2020, in Kurdistan region, the total number of domestic, foreign and joint projects that have been operated was 77 projects only 16 domestic projects in private sector have completed the official procedures for implementation, but in 2020 and 2021, at the governorates and regional levels, the number of projects has been increased. In 2020, in Kurdistan region, the total number of domestic, foreign and joint projects that have been operated was 77 projects against 70 projects in 2021 and 2019 projects in 2019.

in 2019, only domestic companies invested in the construction field with the most projects in Sulaymaniyah governorate (8), while in 2020 and 2021, Erbil had the most projects amounted to 31 and 36 in 2020 and 2021 respectively.

Figure 6: the number of constructions completed projects by board of investment at the level of governorates and KRI in 2019-2021



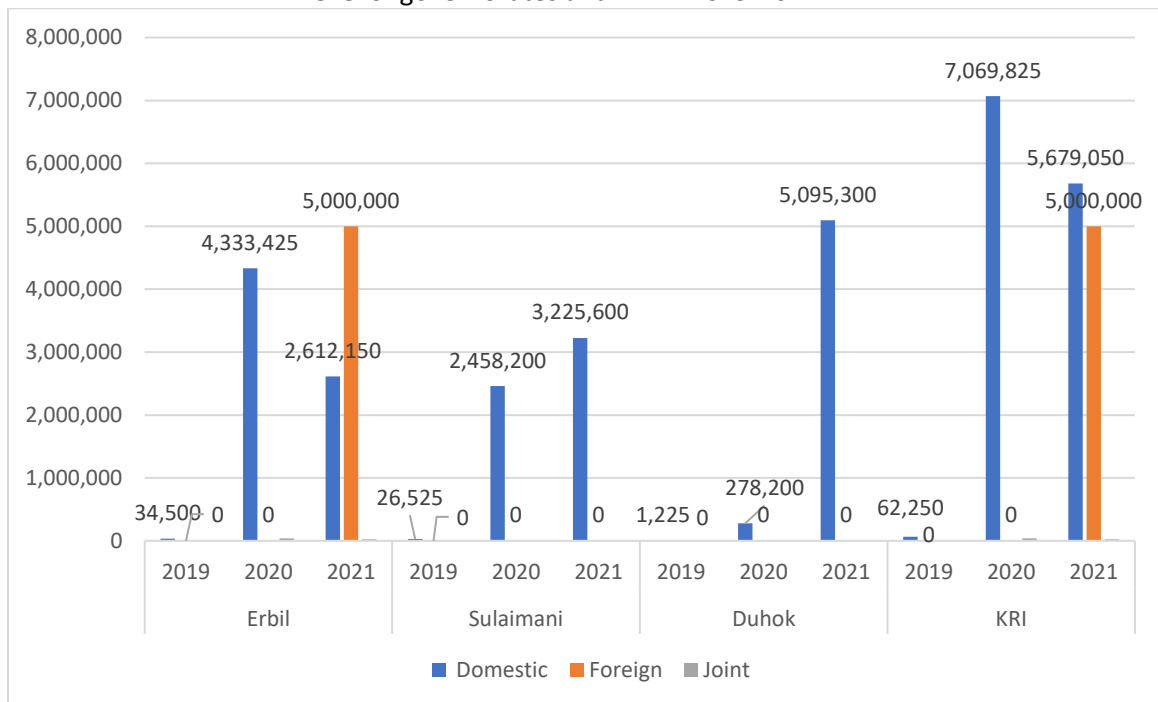
Kurdistan Region 2018-2022 Indicators

Table 7: allocated land area by board of investment (m²) to construction completed projects at the level of governorates and KRI in 2019-2021

KRI			Duhok			Sulaymaniyah			Erbil			Year
Joint	Foreign	Domestic	Joint	Foreign	Domestic	Joint	Foreign	Domestic	Joint	Foreign	Domestic	
0	0	62,250	0	0	1,225	0	0	26,525	0	0	34,500	2019
38,025	0	7,069,825	0	0	278,200	0	0	2,458,200	38,025	0	4,333,425	2020
22,500	5,000,000	5,679,050	0	0	5,095,300	0	0	3,225,600	22,500	5,000,000	2,612,150	2021

In 2019, in Kurdistan region, the total land area allocated by board of investment for construction completed projects was 62,250m², which dramatically rised to 7,107,850m² and 10,701,550m² due to the increase in the number of projects in 2020 and 2021 respectively.

Figure 7: allocated land area by board of investment (m²) for construction completed projects at the level of governorates and KRI in 2019-2021



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Table 8: total estimated cost for investment board projects in the construction field at the level of governorates and KRI in 2019-2021, (\$)

KRI			Duhok			Sulaymaniyah			Erbil			Year
Joint	Foreign	Domestic	Joint	Foreign	Domestic	Joint	Foreign	Domestic	Joint	Foreign	Domestic	
0	0	688274256	0	0	23,707,000	0	0	438,951,256	0	0	225,616,000	2019
17566000	0	1988143500	0	0	382,716,000	0	0	613,861,500	17,566,000	0	991,566,000	2020
19818000	4906110000	3592472824	0	0	139,115,304	0	0	671,461,025	19,818,000	4,906,110,000	2,781,896,495	2021

In 2019, in Kurdistan region, the total cost for investment construction projects estimated at 688,274,256 dollars with the majority with domestic projects, then it considerably rised to 2,005,709,500 dollars in 2020 and 8,518,400,824 dollars in 2021 due to the increase in the number of projects (following figure).

Figure 8: the toal cost for construction completed projects by types (domestic, foreign, joint) in boarf of investment at the level of governorate and KRI in 2019-2020

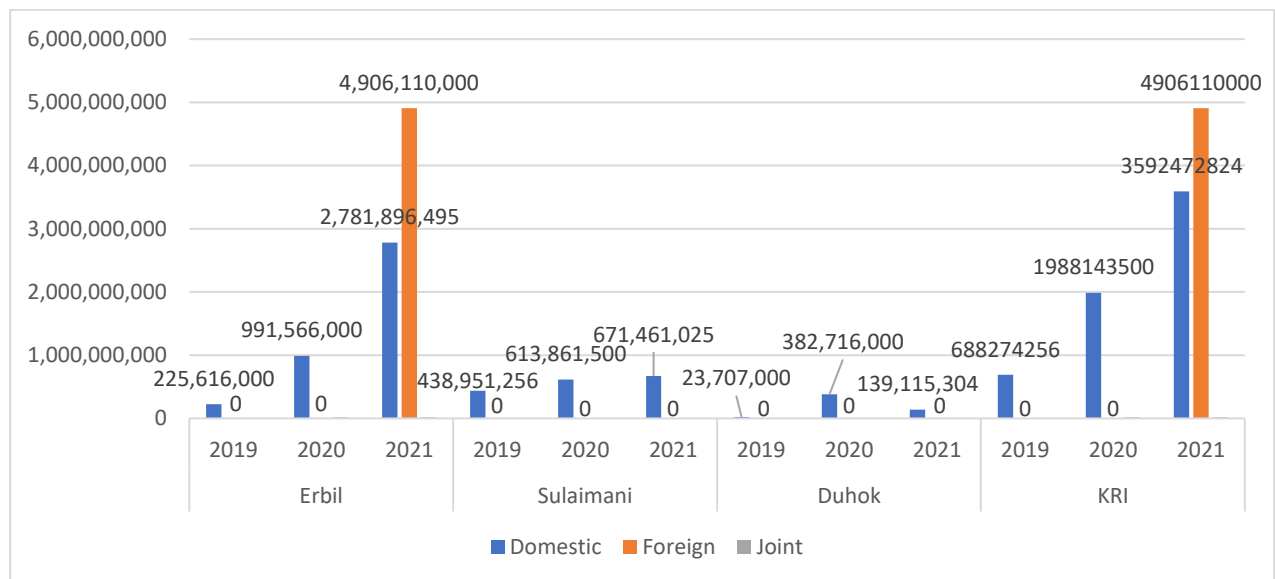
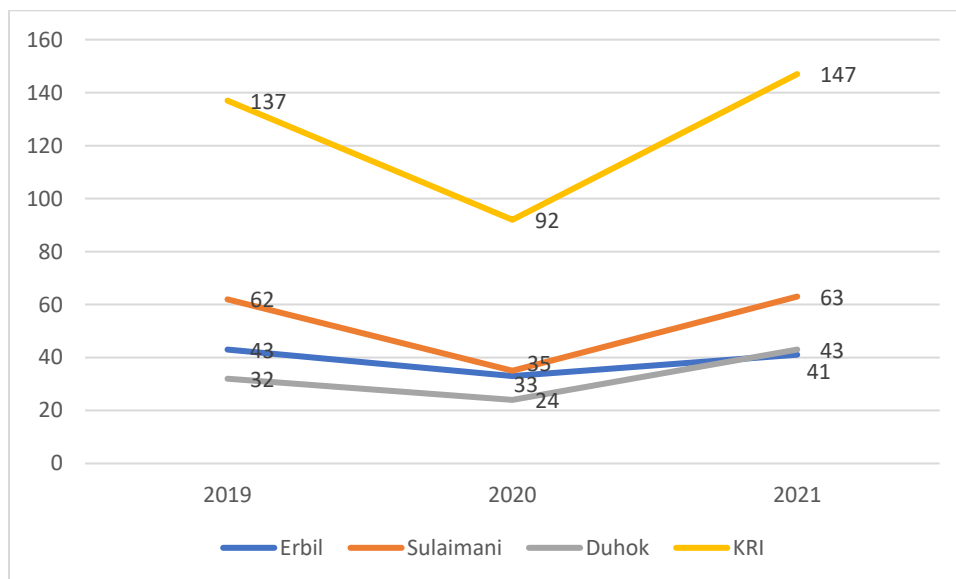


Table 9: the Number of construction completed projects for public sector at the level of governorate and Kurdistan region for the years 2019-2021

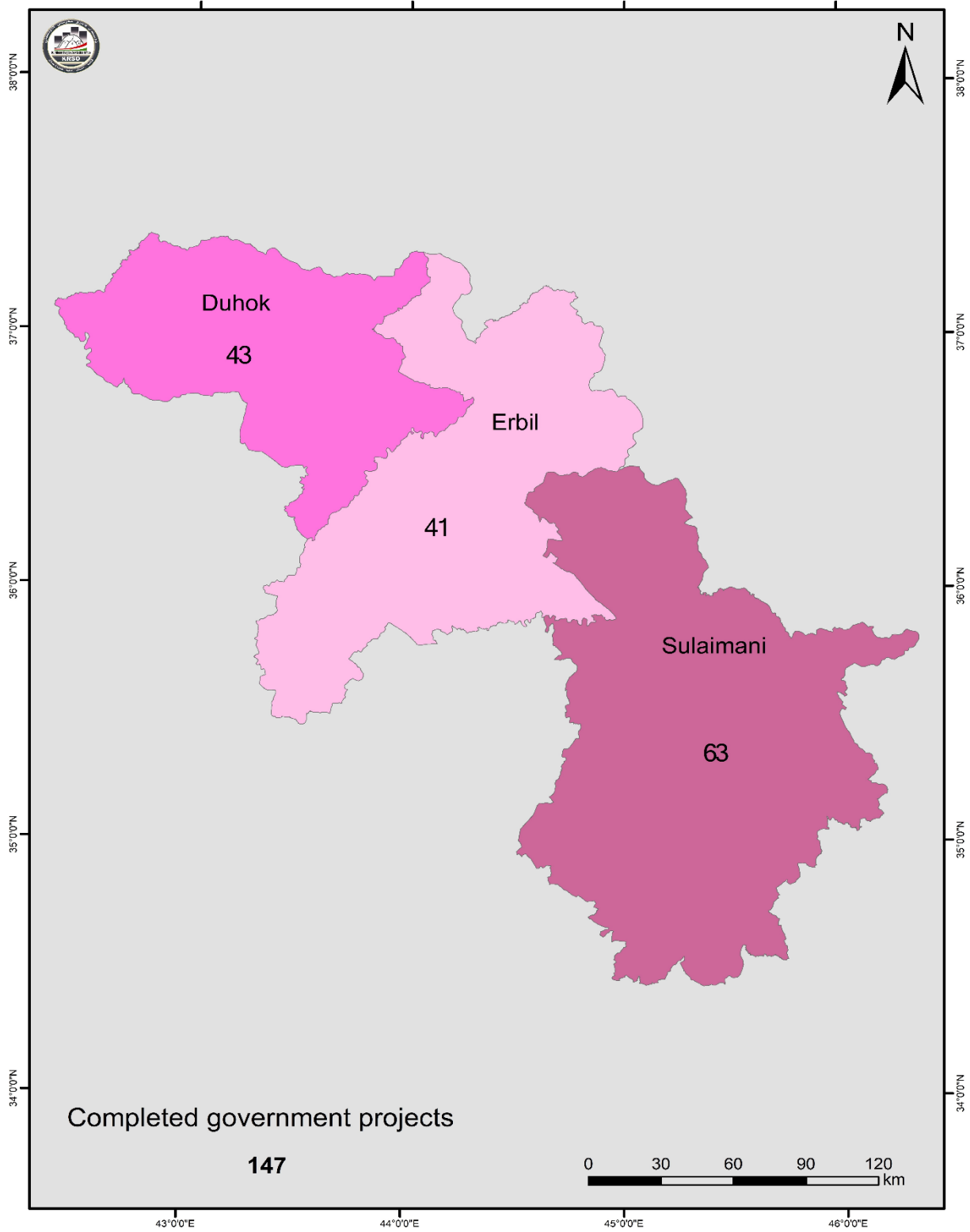
KRI	Duhok	Sulaymaniyah	Erbil	Year
137	32	62	43	2019
92	24	35	33	2020
147	43	63	41	2021

In 2019, in Kurdistan region, 137 various construction projects have been implemented in public sector. It decreased to 92 projects in 2020 and rose to 147 projects in 2021. At the level of governorates, the majority of projects have been implemented in Sulaymaniyah governorate (62 projects in 2019, 35 projects in 2020 and 63 projects in 2021) and the minority of projects goes for Duhok governorate in 2019 and 2020 (32 projects in 2019, 24 projects in 2020), but in 2021 it rose to 43 projects against 41 projects in Erbil.

Figure 9: the number of completed projects in Public sector at the level of governorate and KRI in 2019-2021



Map 15: the number of completed projects in Public sector at the level of governorate and KRI in 2019-2021



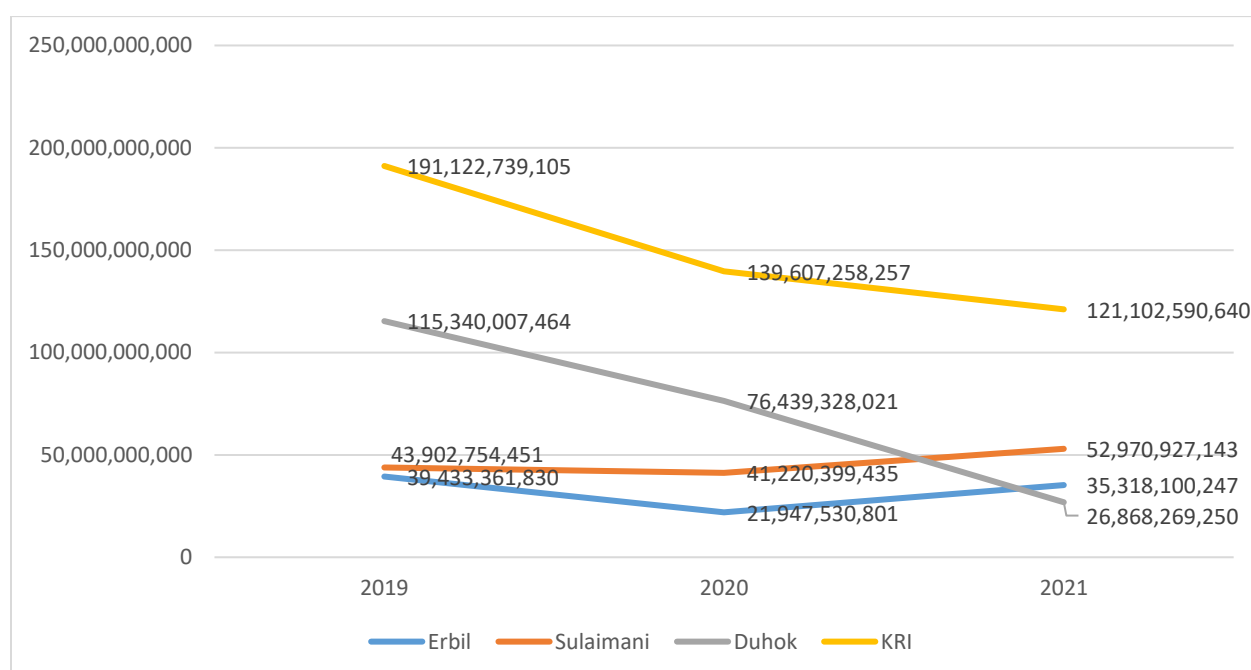
Kurdistan Region 2018-2022 Indicators

Table 10: the total cost (ID) for completed projects in public sector at the level of governorate and KRI in 2019-2021

KRI	Duhok	Sulaymaniyah	Erbil	Year
191,122,739,105	115,340,007,464	43,902,754,451	39,433,361,830	2019
139,607,258,257	76,439,328,021	41,220,399,435	21,947,530,801	2020
121,102,590,640	26,868,269,250	52,970,927,143	35,318,100,247	2021

In 2019, the total cost of construction work in Kurdistan region was 191.1 billion IDs and decreased to 139.6 billion IDs (27%) in 2020 and 121.1 billion IDs (36.6%) in 2021 despite the increase in the number of projects.

Figure 10: total cost of construction completed projects in public sector at the level of KRI and governorates in 2019-2021



Kurdistan Region 2018-2022 Indicators
Building licenses by the types of building

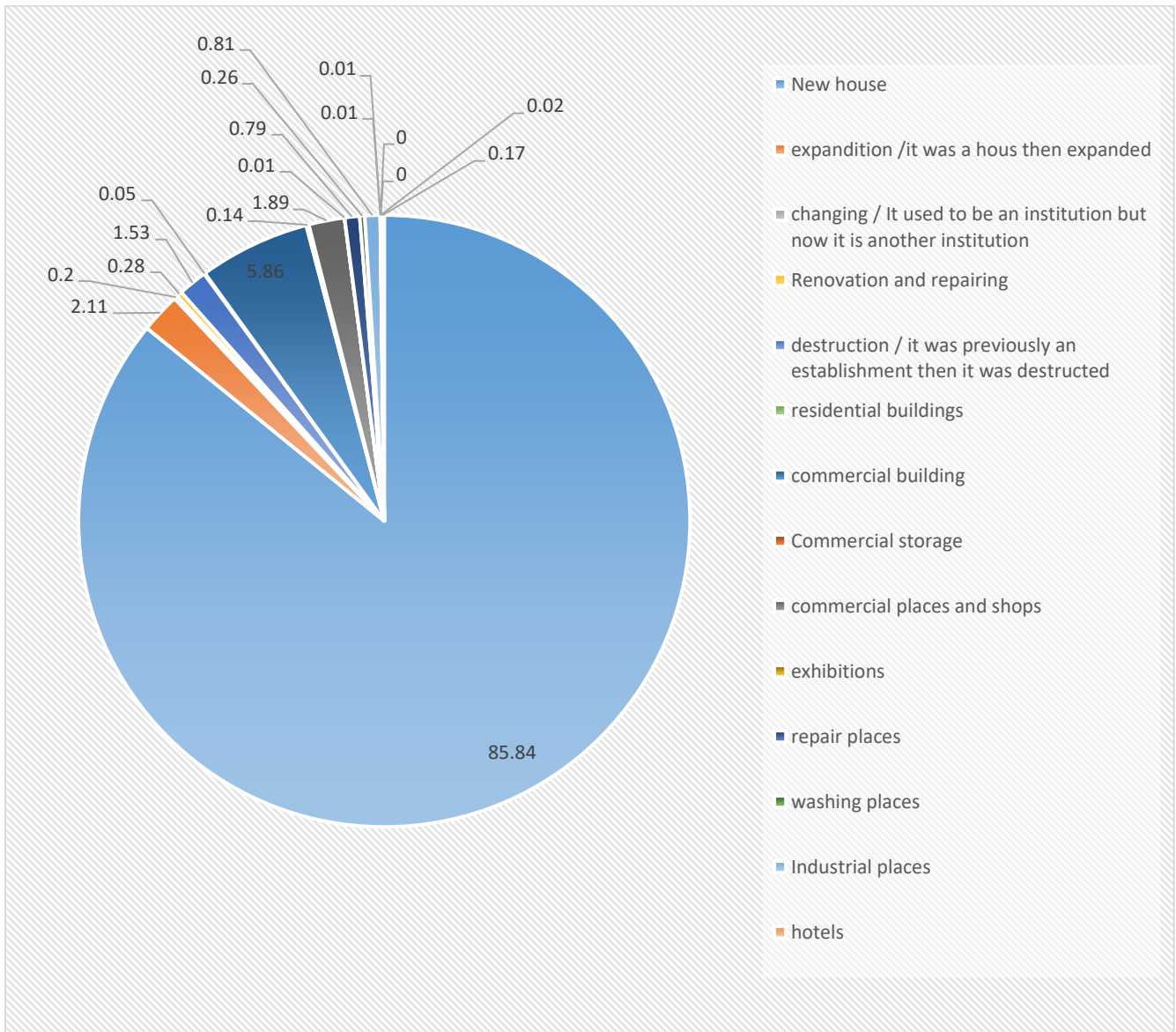
Table 11: percentage rate and the number of building licenses in KRI by types in 2018-2021

Licenses								Type of building
2021		2020		2019		2018		
%	Number	%	Number	%	Number	%	Number	
85.84	9400	90.29	9997	89.47	10363	89.55	8728	New house
2.11	231	1.23	136	1.80	209	2.30	224	expansion /it was a hous then expanded
0.20	22	0.00	0	1.57	182	0.13	13	changing / It used to be an institution but now it is another institution
0.28	31	0.23	26	0.09	11	0.01	1	Renovation and repairing
1.53	168	1.04	115	1.57	182	1.69	165	destruction / it was previously an establishment then it was destructed
0.05	6	2.15	238	3.16	366	1.27	124	residential buildings
5.86	642	3.38	374	1.42	165	3.45	336	commercial building
0.14	15	0.09	10	0.08	9	0.09	9	Commercial storage
1.89	207	0.59	65	0.26	30	0.48	47	commercial places and shops
0.01	1	0.24	27	0.08	9	0.00	0	exhibitions
0.79	87	0.37	41	0.00	0	0.00	0	repair places
0.26	28	0.00	0	0.00	0	0.00	0	washing places
0.81	89	0.01	1	0.19	22	0.14	14	Industrial places
0.01	1	0.01	1	0.00	0	0.00	0	hotels
0.01	1	0.02	2	0.03	4	0.02	2	Governmental building
0.00	0	0.09	10	0.00	0	0.01	1	slaughterhouses
0.00	0	0.00	0	0.00	0	0.01	1	non-governmental schools
0.02	2	0.00	0	0.00	0	0.03	3	medical complexes
0.17	19	0.26	29	0.27	31	0.80	78	other
100	10950	100	11072	100	11583	100	9746	total

The above table shows the number and percentage rate of building licenses in the private sector in 2018 -2021. In 2021, new houses recorded the highest rate at 85.8% with 9,400 licenses, followed by commercial buildings with 5.9% (642 licenses), house expansion by 1.2% (231licenses) and commercial places and shops by 1.9% (207 licenses).

Kurdistan Region 2018-2022 Indicators

Figure 11: The number and the rate of building licenses on the level of KRI governorates in 2021



Kurdistan Region 2018-2022 Indicators

Source

- Department of Construction Statistics 2022, Ministry of Municipalities and Tourism / Municipalities of Erbil, Sulaymaniyah and Duhok Govenarates, Receiving information by official letter 2022, Kurdistan Region: Kurdistan Regional Statistics office.

