

## THE DECREASE IN UNEMPLOYMENT SLOWS DOWN

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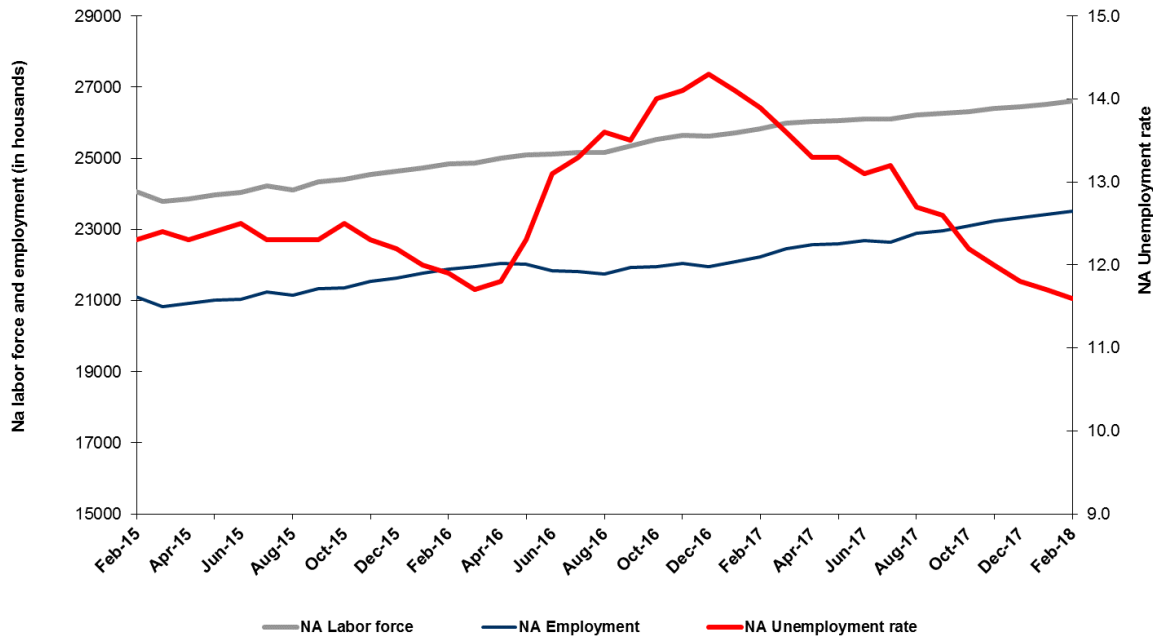
### Executive Summary

Seasonally adjusted labor market data show that non-agricultural unemployment rate decreased by 0.1 percentage points in the period of February reaching 11.6 percent. The non-agricultural unemployment rate decreased from 13.9 to 11.6 in the last year as a consequence of high GDP growth in 2017. As result, the non-agricultural unemployment rate has decreased by 2.3 percentage points in the recent year. The reason behind this decrease has been the strong increase in non-agricultural employment. This increase continues along with GDP growth; from January 2018 to February 2018, employment increased by 60 thousand in manufacture, 49 thousand in the services and 3 thousand in construction. Betam's forecasting model predicts that the non-agricultural unemployment will decrease by 0.1 percentage point to 11.5 percent in the period of March 2018.

### Decrease in non-agricultural unemployment continues

According to seasonally adjusted labor market data, in the period of February 2018 compared to January 2018, the non-agricultural labor force increased by 96 thousand and reached 26 million 610 thousand while the number of employed in non-agricultural sectors increased by 111 thousand and reached 23 million 523 thousand (Figure 1, Table 1). As result, the number of unemployed in non-agricultural sectors decreased by 15 thousand and recorded as 3 million 87 thousand and the non-agricultural unemployment rate decreased from 11.7 percent to 11.6 percent. In the last year, the non-agricultural unemployment rate decreased from 13.9 to 11.6 as a consequence of high GDP growth in 2017.

**Figure 1 Seasonally adjusted non-agricultural labor force, employment, and unemployment**



Source: Turkstat, Betam

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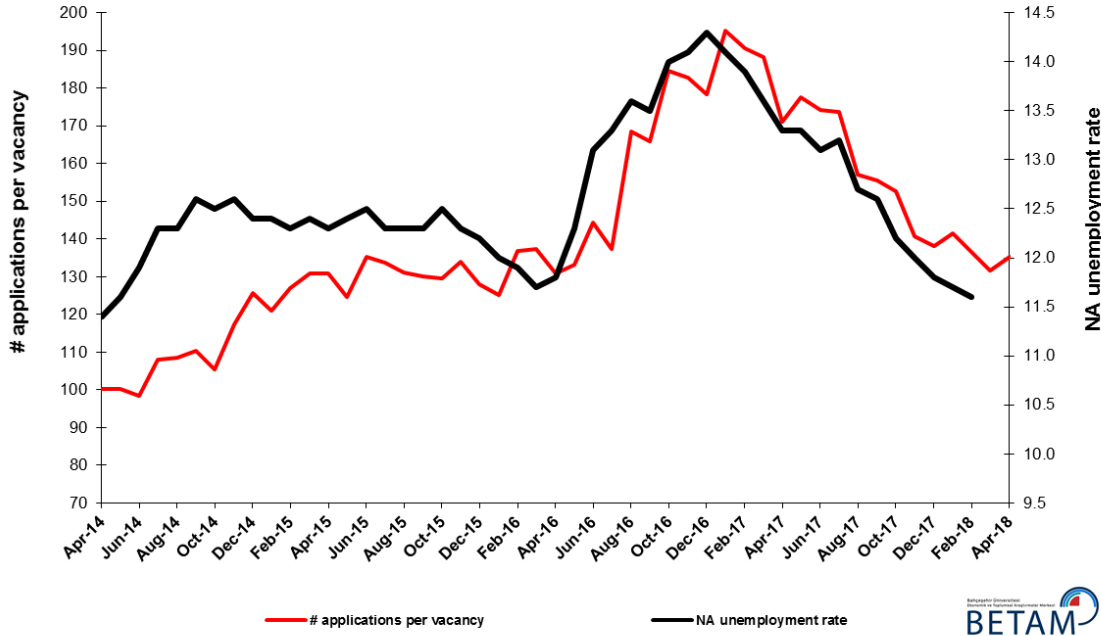
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## Unemployment rate is expected to decrease in the period of March 2018

Betam's forecasting model had predicted that the seasonally adjusted non-agricultural unemployment rate would remain constant at 11.7 in the February 2018. However, the non-agricultural unemployment rate decreased by 0.1 percentage points in the period of February reaching 11.6 percent. Betam's forecasting model predicts that the non-agricultural unemployment rate will decrease to 11.5 percent in March 2018. Forecasting model details are available on Betam's website.<sup>1</sup> Kariyer.net<sup>2</sup> application per vacancy series used in the Betam forecasting model is depicted in Figure 3. Kariyer.net series is only one of the inputs of Betam forecast model. Indeed, several variables such as employment agency (İŞKUR) data, reel sector confidence index, capacity utilization rate are used in forecasting.

**Figure 2 Seasonally adjusted non-agricultural unemployment rate and application per vacancy**



Source: Kariyer.net, Turkstat, Betam

## Employment increases in all sectors except agriculture

According to seasonally adjusted sectorial labor market data in February 2018 compared to January 2017, employment increased in manufacturing, construction and services sectors while employment decreased in agriculture (Figure 3, Table 2).<sup>3</sup> Employment increased by 60, 49 and 3 thousand in manufacture, services and construction, respectively. On the other hand, employment in agriculture sector decreased by 71 thousand. It has to be noted that while employment decrease in agriculture accelerates, increase in construction decelerates. On the other hand, exceptional decrease of employment in services sector in the previous period has been replaced by an usual increase.

Non-agricultural unemployment rates which have fallen sharply in the past year have been realized thanks to the employment increases in all sectors. These yearly increases attained 376 thousand in industry, 195 thousand in construction, 717 thousand in services and 1 million 288 thousand in total. Given that the GDP growth rate reached 7.4 percent in 2017, this increase in employment is reasonable.

<sup>1</sup> For detailed information on Betam's forecasting model, please see Betam Research Brief 168 titled as "Kariyer.net Verisiyle Kısa Vadeli Tarım Dışı İşsizlik Tahmini". For the innovations in the model please see Betam Research Brief 14 titled as "Mevsim Etkilerinden Arındırılmış İşsizlik Tahmini"

Soybilgen, B., "Kariyer.net Verisiyle Kısa Vadeli Tarım Dışı İşsizlik Tahmini", Betam Research Brief 168.

<http://betam.bahcesehir.edu.tr/tr/2014/06/kariyer-net-verisiyle-kisa-vadeli-tarim-disi-issizlik-tahmini/>

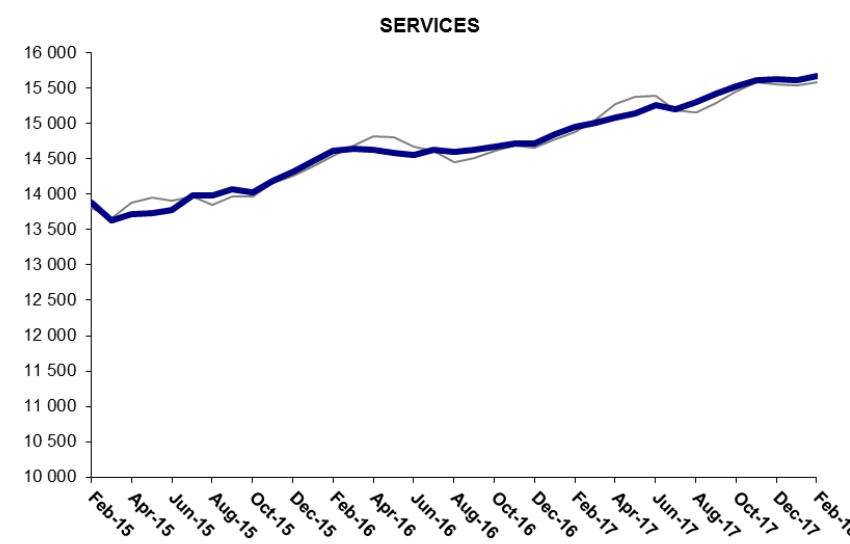
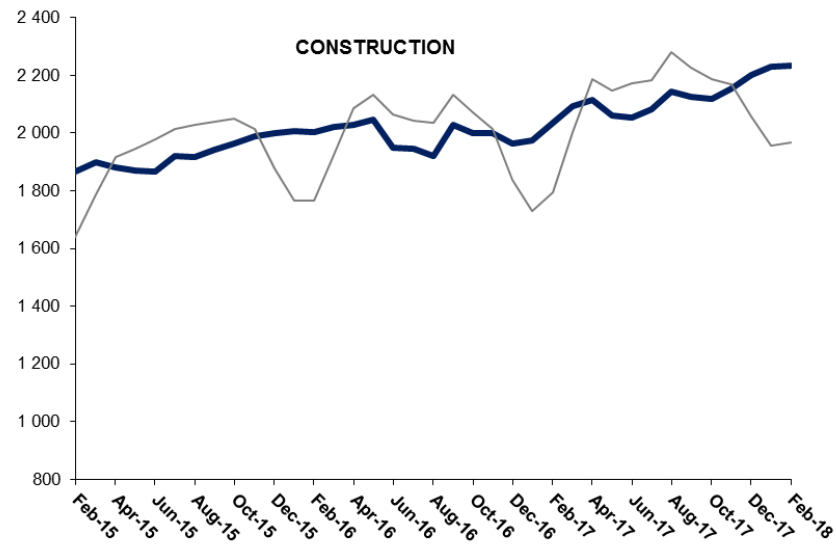
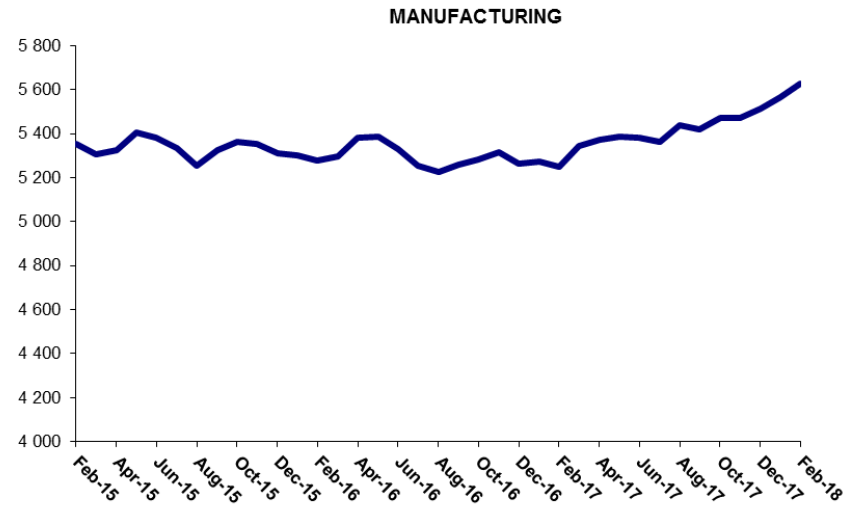
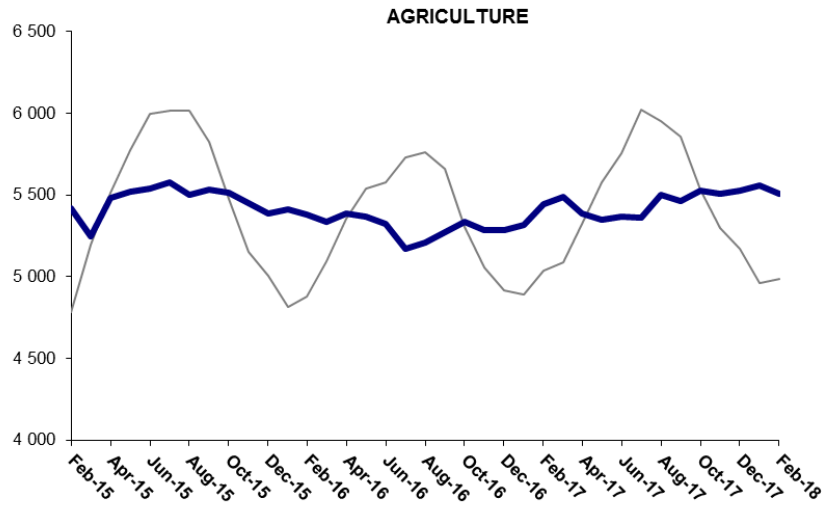
Soybilgen, B., "Mevsim Etkilerinden Arındırılmış İşsizlik Tahmini", Betam Research Brief 14

<http://betam.bahcesehir.edu.tr/2015/08/mevsim-etkilerinden-arindirilmis-tarim-disi-issizlik-tahmini/>

<sup>2</sup> Betam has been calculating application per vacancy using series released by Kariyer.net for a while. Seasonal and calendar adjustment procedure is applied to application per vacancy series. A decrease in applications per vacancy may be caused by an increase in vacancies or by a decrease in the number of applications. An increase in vacancies signals economic growth while decreasing number of applications indicates a decrease in number of people looking for a job. Monthly labor market series released by TurkStat is the average of three months. Therefore, application per vacancy statistics calculated using Kariyer.net series is the average of three months as well.

<sup>3</sup> Employment in each sector is seasonally adjusted separately. Hence the sum of these series may differ from the seasonally adjusted series of total employment. The difference stems from the non-linearity of the seasonal adjustment process.

**Figure 3: Employment by sectors (in thousands)**

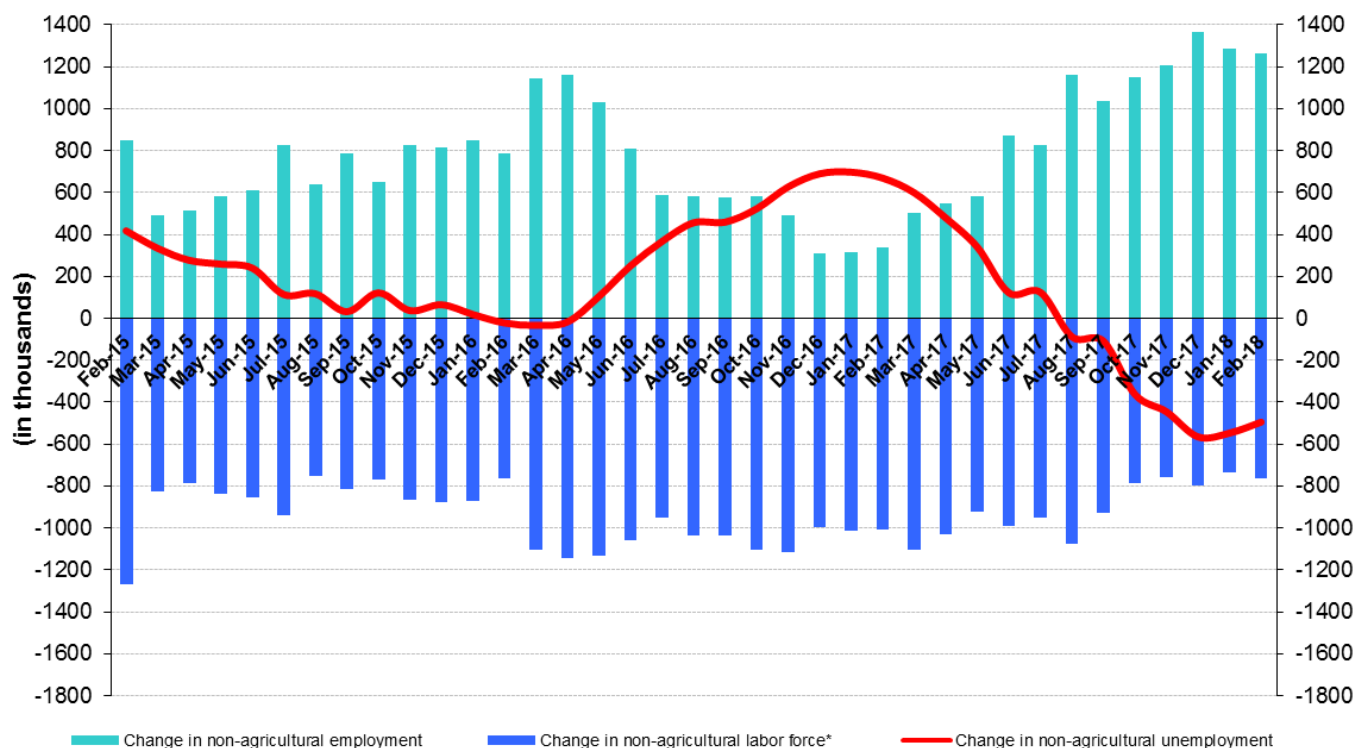


Source: TURKSTAT, Betam

## The number of non-agricultural unemployed decreased by 496 thousand within a year

From February 2017 to February 2018 non-agricultural labor force increased by 766 thousand (3 percent) and non-agricultural employment by 1 million 262 thousand (5.8 percent) (Figure 4). Thus, non-agricultural unemployed decreased by 496 thousand and attained 3 million 312 thousand (Figure 4). Annual increases in non-agricultural employment exceed one million people since the period of August 2017. Since September 2017, the number of non-agricultural unemployed has decreased sharply as the non-agricultural labor force increases have been relatively weak.

**Figure 4 Year-on-year changes in non-agricultural labor force, employment, and unemployment**



\* The change in labor force represented with a negative sign.

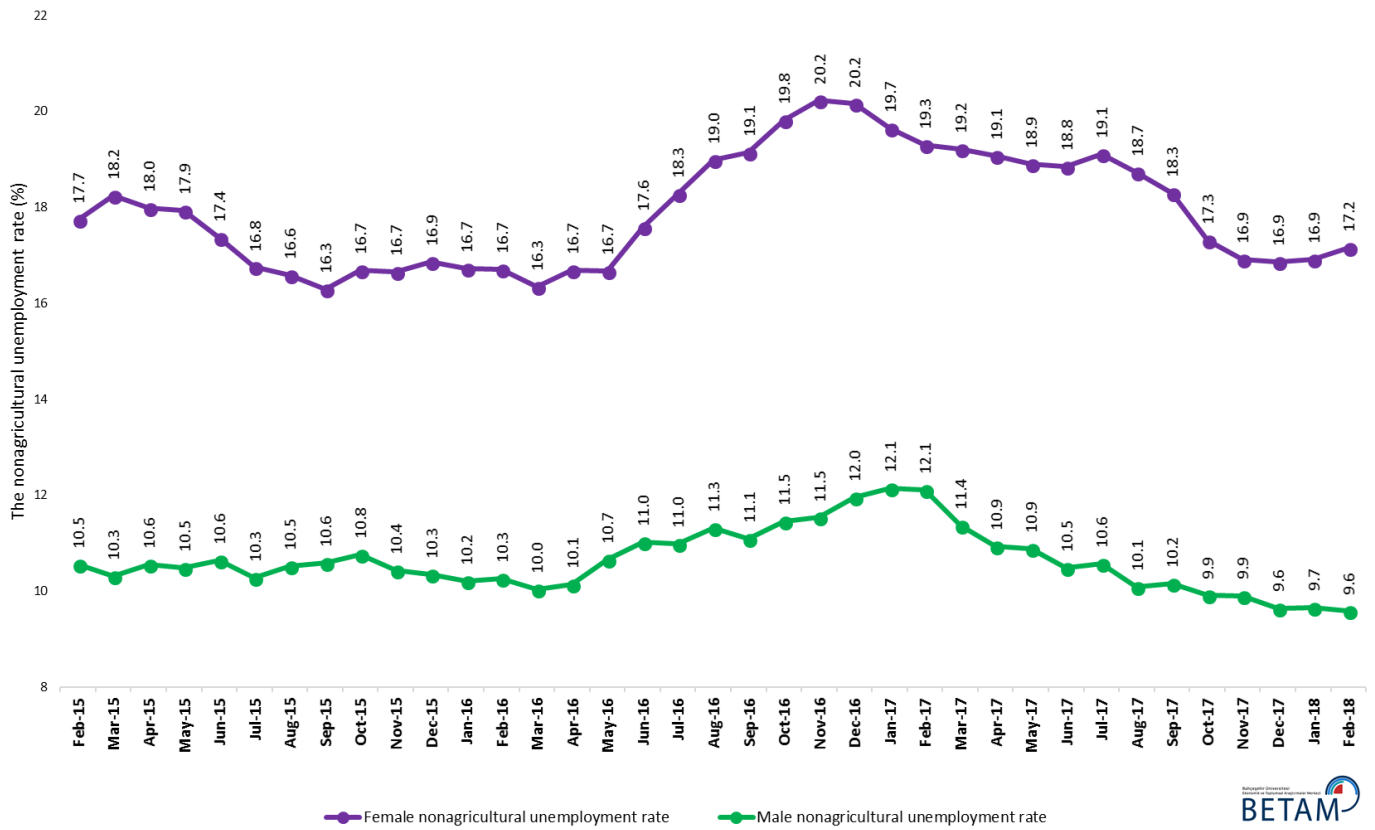
Source: Turkstat, Betam

## Unemployment ratio difference between female and male increased

Figure 5 shows seasonally adjusted non-agricultural unemployment rate for males (green) and for females (purple)<sup>4</sup>. In the period of February 2018, the non-agricultural female unemployment rate increased from 16.9 to 17.2 percent, while the non-agricultural male unemployment rate decreased by 0.1 percent to 9.6 percent. The gender gap in non-agricultural unemployment rate increased sharply by 0.4 percentage points and reached 7.6 percentage points. The gender gap in non-agricultural unemployment rate which was 7.5 percentage points in the period of January 2017 (19.6 percent against 12.1 percent) had reached its peak of 8.6 percentage points in the period of August 2017 (18.7 percent against 10.1 percent), but then decreased to 7 percentage points. It can be said that the gender gap has entered an upward trend again in the last 3 periods. The fact that the gender gap in non-agricultural unemployment rate evolved at high level during a year where unemployment had a strong decrease indicates the insufficiency of policies which aims to gender equality in the labor market.

<sup>4</sup> Turkstat revised the labor market statistics drastically in February 2014. Within this framework, they back casted various labor market indicators and they also continued to announce seasonally adjusted series. However, Turkstat is not providing back-casted series by gender. Therefore, female and male labor market statistics are not sufficiently long for the seasonal adjustment procedures (There should be minimum 36 observations). With the announcement of the period of February 2017 data, the number of observations required for the seasonal decontamination process was provided. From this period Betam get seasonal adjustment series in terms of gender. Nevertheless, it should not be forgotten that seasonal adjustment may cause extra volatility in the series for at least a while.

**Figure 5: Seasonally adjusted non-agricultural unemployment rate by gender**



Source: Turkstat, Betam



**Table 1 Seasonally adjusted non-agricultural labor market indicators (in thousands) \***

	Labor force	Employment	Unemployment	Unemployment rate	Monthly changes		
					Labor force	Employment	Unemployment
January-15	23862	20903	2959	12.4%			
February-15	24058	21099	2959	12.3%	196	196	0
March-15	23789	20839	2950	12.4%	-269	-260	-9
April-15	23862	20927	2935	12.3%	73	88	-15
May-15	23982	21008	2974	12.4%	120	81	39
June-15	24033	21029	3004	12.5%	51	21	30
July-15	24217	21238	2979	12.3%	184	209	-25
August-15	24115	21149	2966	12.3%	-101	-89	-12
September-15	24336	21343	2993	12.3%	221	194	27
October-15	24411	21360	3051	12.5%	75	17	58
November-15	24554	21534	3020	12.3%	143	174	-31
December-15	24636	21630	3006	12.2%	81	96	-15
January-16	24736	21768	2968	12.0%	101	138	-37
February-16	24850	21893	2957	11.9%	114	125	-11
March-16	24865	21956	2909	11.7%	15	63	-48
April-16	24994	22045	2949	11.8%	129	89	40
May-16	25098	22011	3087	12.3%	104	-34	138
June-16	25121	21830	3291	13.1%	23	-181	204
July-16	25174	21826	3348	13.3%	53	-4	57
August-16	25157	21736	3421	13.6%	-17	-90	73
September-16	25346	21924	3422	13.5%	188	188	0
October-16	25531	21957	3574	14.0%	186	33	153
November-16	25651	22034	3617	14.1%	119	77	42
December-16	25616	21953	3663	14.3%	-35	-81	46
January-17	25721	22094	3627	14.1%	105	141	-36
February-17	25825	22235	3590	13.9%	104	141	-37
March-17	25983	22449	3534	13.6%	158	214	-56
April-17	26033	22571	3462	13.3%	51	122	-71
May-17	26053	22588	3465	13.3%	20	17	3
June-17	26114	22693	3421	13.1%	61	105	-44
July-17	26097	22652	3445	13.2%	-17	-41	24
August-17	26216	22887	3329	12.7%	120	235	-115
September-17	26270	22960	3310	12.6%	54	73	-19
October-17	26321	23110	3211	12.2%	51	150	-99
November-17	26406	23237	3169	12.0%	84	127	-43
December-17	26456	23334	3122	11.8%	50	97	-47
January-18	26514	23412	3102	11.7%	58	78	-20
February-18	26610	23523	3087	11.6%	96	111	-15

Source: Turkstat, Betam

**Table 2 Seasonally adjusted employment by sectors (in thousands) \***

	Agriculture	Manufacturing	Construction	Service	Monthly changes			
					Agriculture	Manufacturing	Construction	Service
January-15	5421	5349	1924	13630				
February-15	5249	5351	1866	13882	-172	2	-58	252
March-15	5485	5308	1900	13631	236	-43	34	-251
April-15	5517	5326	1882	13720	32	18	-18	89
May-15	5540	5404	1870	13734	23	78	-12	14
June-15	5575	5380	1866	13782	35	-24	-4	48
July-15	5500	5336	1919	13983	-75	-44	53	201
August-15	5533	5252	1918	13979	33	-84	-1	-4
September-15	5516	5327	1942	14074	-17	75	24	95
October-15	5449	5363	1964	14032	-67	36	22	-42
November-15	5387	5353	1990	14190	-62	-10	26	158
December-15	5411	5311	1998	14320	24	-42	8	130
January-16	5379	5300	2006	14462	-32	-11	8	142
February-16	5337	5276	2005	14612	-42	-24	-1	150
March-16	5389	5295	2023	14638	52	19	18	26
April-16	5369	5381	2028	14635	-20	86	5	-3
May-16	5320	5386	2045	14580	-49	5	17	-55
June-16	5172	5330	1950	14550	-148	-56	-95	-30
July-16	5207	5254	1946	14626	35	-76	-4	76
August-16	5270	5224	1919	14592	63	-30	-27	-34
September-16	5338	5260	2030	14633	68	36	111	41
October-16	5283	5282	1999	14676	-55	22	-31	43
November-16	5288	5316	2001	14717	5	34	2	41
December-16	5315	5265	1965	14722	27	-51	-36	5
January-17	5445	5274	1974	14846	130	9	9	124
February-17	5490	5251	2037	14947	45	-23	63	101
March-17	5386	5346	2094	15009	-104	95	57	62
April-17	5348	5372	2113	15085	-38	26	19	76
May-17	5368	5386	2060	15142	20	14	-53	57
June-17	5364	5383	2055	15254	-4	-3	-5	112
July-17	5498	5363	2082	15207	134	-20	27	-47
August-17	5463	5437	2143	15307	-35	74	61	100
September-17	5529	5421	2124	15415	66	-16	-19	108
October-17	5509	5470	2119	15521	-20	49	-5	106
November-17	5526	5470	2156	15611	17	0	37	90
December-17	5561	5514	2200	15620	35	44	44	9
January-18	5509	5567	2229	15615	-52	53	29	-5
February-18	5438	5627	2232	15664	-71	60	3	49

Source: Turkstat, Betam

**Table 3: Seasonally adjusted non-agricultural labor force by gender (thousands)**

	<b>Female Labor Force</b>	<b>Female Employment</b>	<b>Female Unemployed</b>	<b>Male Labor Force</b>	<b>Male Employment</b>	<b>Male Unemployed</b>
<b>February-15</b>	6559	5395	1164	17456	15615	1841
<b>March-15</b>	6518	5329	1189	17211	15435	1776
<b>April-15</b>	6539	5363	1176	17273	15449	1824
<b>May-15</b>	6624	5436	1187	17330	15514	1816
<b>June-15</b>	6656	5500	1156	17414	15561	1852
<b>July-15</b>	6750	5619	1131	17483	15684	1798
<b>August-15</b>	6715	5601	1114	17482	15642	1839
<b>September-15</b>	6760	5659	1101	17587	15724	1863
<b>October-15</b>	6782	5650	1132	17634	15738	1897
<b>November-15</b>	6877	5732	1145	17640	15800	1840
<b>December-15</b>	6970	5795	1175	17686	15856	1830
<b>January-16</b>	7013	5840	1173	17717	15907	1810
<b>February-16</b>	7047	5870	1177	17748	15927	1822
<b>March-16</b>	7054	5901	1153	17790	16004	1786
<b>April-16</b>	7141	5948	1192	17830	16021	1809
<b>May-16</b>	7174	5977	1196	17910	16002	1908
<b>June-16</b>	7260	5983	1277	17857	15888	1969
<b>July-16</b>	7270	5941	1329	17916	15948	1967
<b>August-16</b>	7328	5936	1392	17914	15887	2027
<b>September-16</b>	7377	5965	1412	17987	15993	1994
<b>October-16</b>	7443	5968	1475	18067	15999	2069
<b>November-16</b>	7461	5952	1509	18166	16071	2095
<b>December-16</b>	7459	5955	1504	18177	16004	2173
<b>January-17</b>	7452	5988	1464	18298	16076	2222
<b>February-17</b>	7513	6063	1449	18289	16075	2214
<b>March-17</b>	7609	6148	1462	18347	16260	2087
<b>April-17</b>	7598	6148	1449	18384	16373	2011
<b>May-17</b>	7650	6204	1446	18355	16358	1997
<b>June-17</b>	7668	6223	1445	18453	16520	1934
<b>July-17</b>	7681	6213	1468	18455	16504	1950
<b>August-17</b>	7733	6285	1448	18573	16698	1875
<b>September-17</b>	7767	6346	1421	18530	16648	1882
<b>October-17</b>	7793	6444	1349	18503	16670	1834
<b>November-17</b>	7829	6505	1325	18562	16724	1838
<b>December-17</b>	7888	6558	1331	18555	16766	1789
<b>January-18</b>	7925	6585	1340	18559	16766	1793
<b>February-18</b>	7956	6591	1365	18590	16809	1781

Source: Turkstat, Betam