

## SHARP INCREASE IN NON-AGRICULTURAL UNEMPLOYMENT CONTINUES

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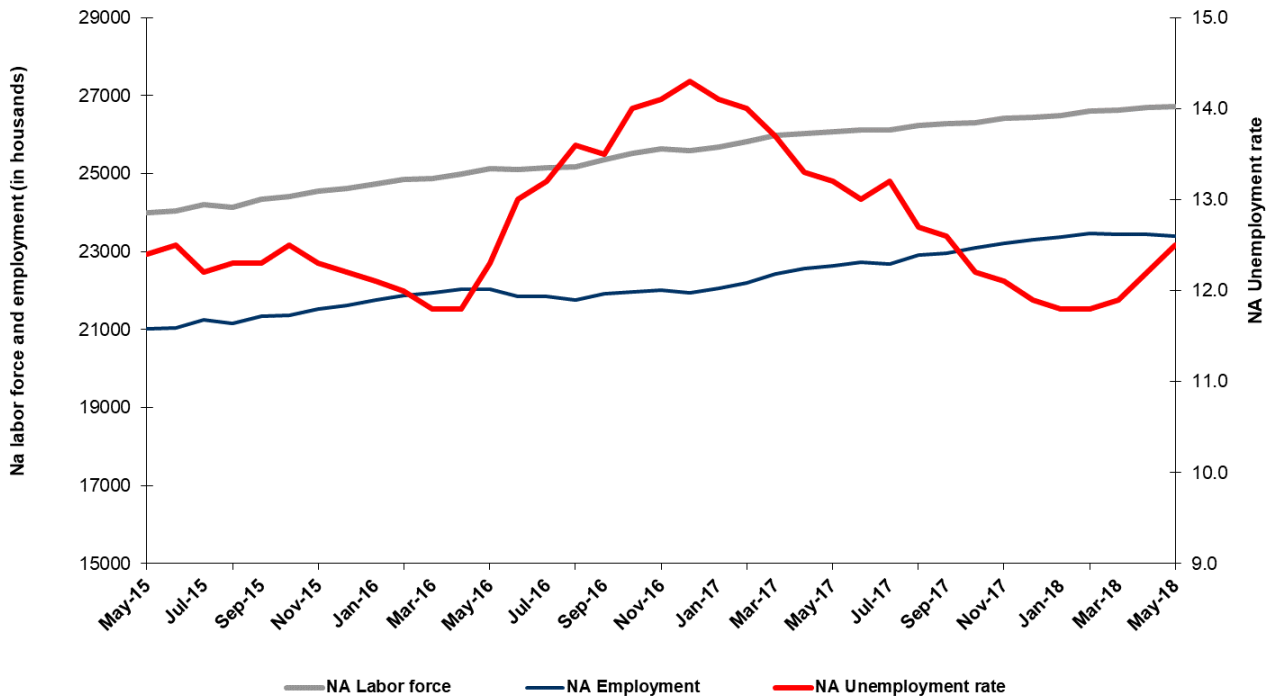
### Executive Summary

Seasonally adjusted labor market data shows that, in the period of May 2018 compared to April 2018, non-agricultural unemployment rate increased by 0.3 percentage points and reached 12.5 percent. Thus, non-agricultural unemployment rate increased from 11.9 to 12.5 percent in the last two months. Consecutive decreases in employment are the reasons behind the increase in non-agricultural unemployment. Sectoral data indicates that employment decreased in all sectors except manufacturing. There have been strong employment losses in construction in the last three periods. Since employment losses occurred mostly in construction where men are more likely to be employed, the gender gap in non-agricultural unemployment rates have decreased in favor of women. Betam's forecasting model predicts that the non-agricultural unemployment will increase to 12.7 percent in the period of June 2018.

### The non-agricultural labor force increased while employment decreased

According to seasonally adjusted labor market data, in the period of May 2018 compared to April 2018, the non-agricultural labor force increased by 34 thousand and reached 26 million 729 thousand while the number of employed in non-agricultural sectors decreased by 50 thousand and reached 23 million 388 thousand (Figure 1, Table 1). As result, the number of unemployed in non-agricultural sectors increased by 84 thousand and recorded as 3 million 241 thousand and the non-agricultural unemployment rate rose to 12.5 percent.

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



Source: Turkstat, Betam

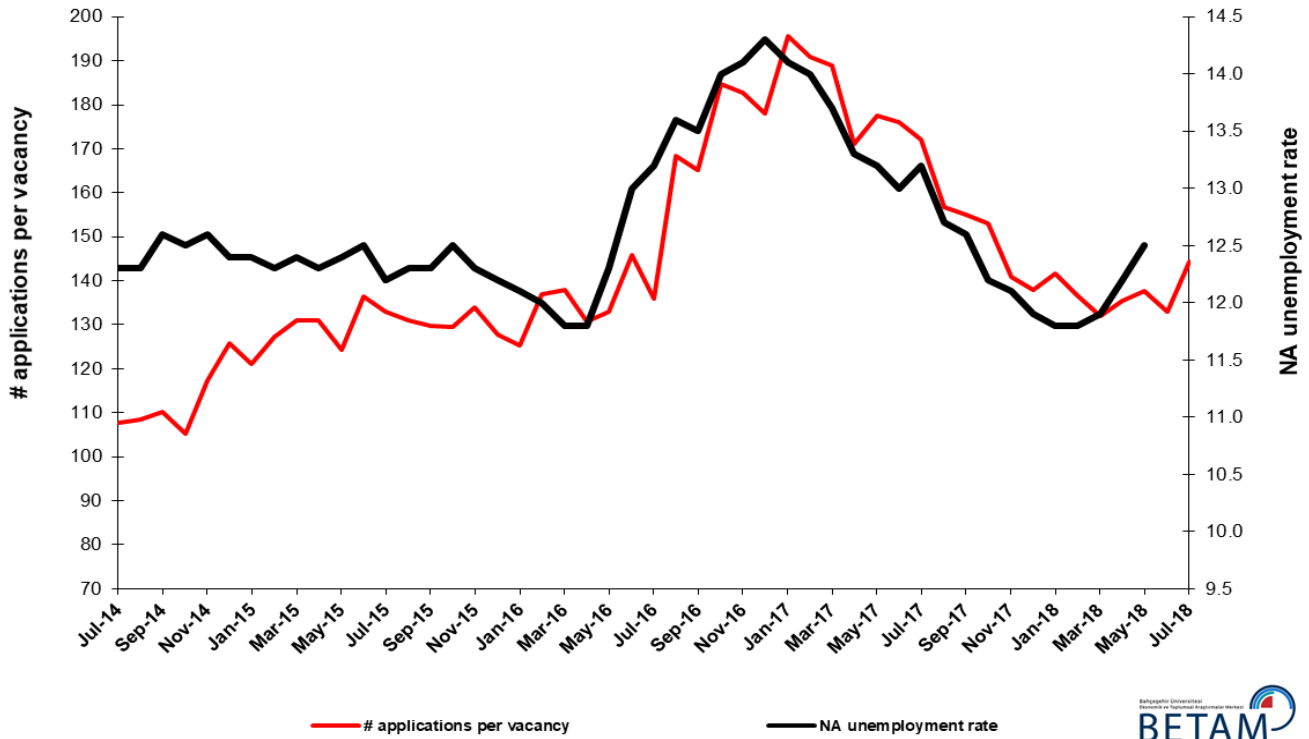
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## Unemployment rate is expected to increase by 0.2 percentage point in the period of May 2018

Betam's forecasting model had predicted that the seasonally adjusted non-agricultural unemployment rate would increase to 12.3 percent in the May 2018. The non-agricultural unemployment rate rose to 12.5 percent in the period of May 2018. Betam's forecasting model predicts that the non-agricultural unemployment rate will reach to 12.7 percent in the period of June 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 decreases in construction continues

According to seasonally adjusted sectoral labor market data, employment decreased in all sectors except manufacturing in May 2018 compared to April 2018 (Figure 3, Table 2).<sup>3</sup> Employment increased by 19 thousand in manufacturing while employment in agriculture, construction and services decreased by 48, 49 and 19 thousand respectively. Employment losses in construction in the last three periods have exceeded 150 thousand. It has to be noted that the total increase in employment in the service sector, which shoulders about half of the total employment, from December to May period was limited to 62 thousand.

<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/>

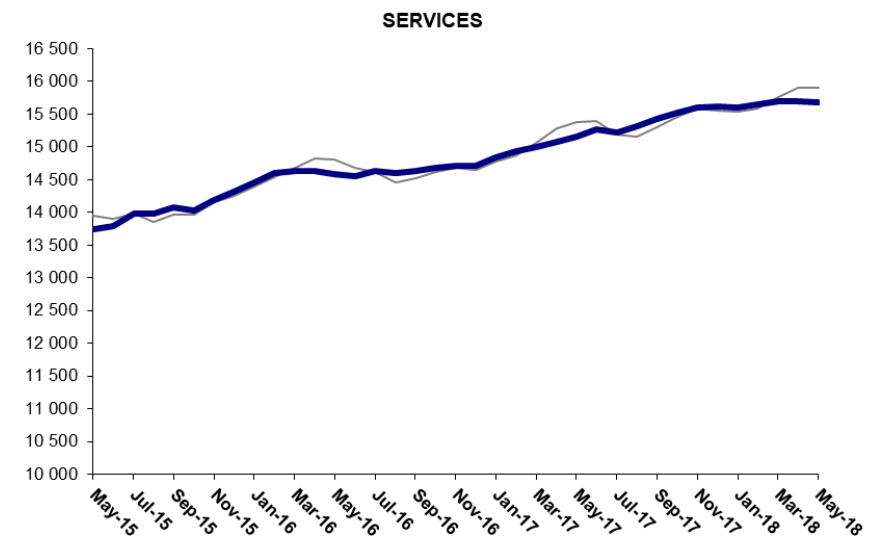
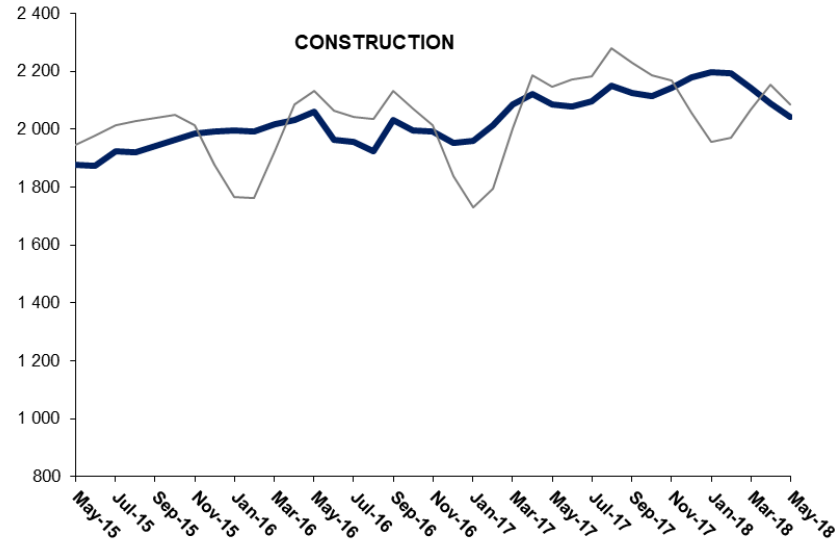
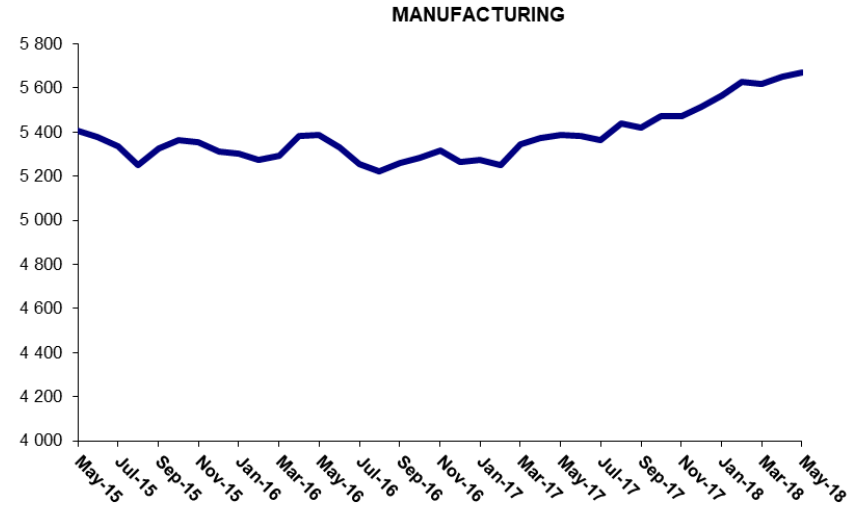
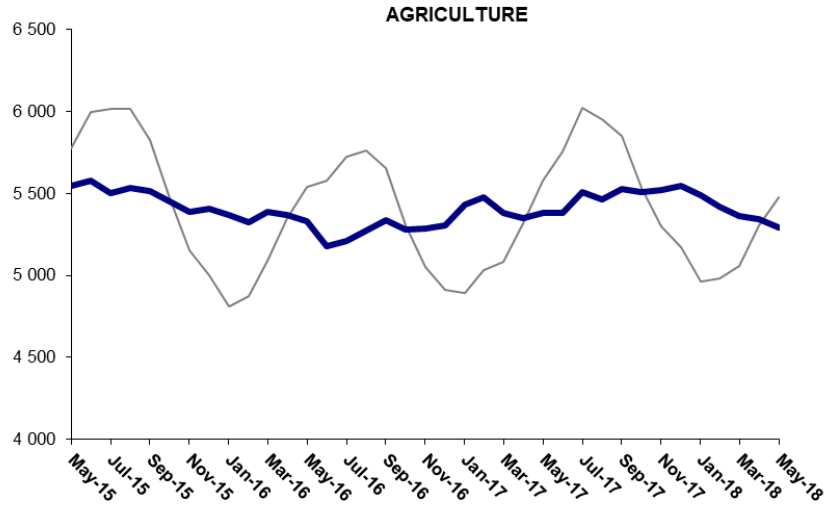
Soybilgen, B., "Mevsim Etkilerinden Arındırılmış İşsizlik Tahmini", Betam Research Brief 14

<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)**

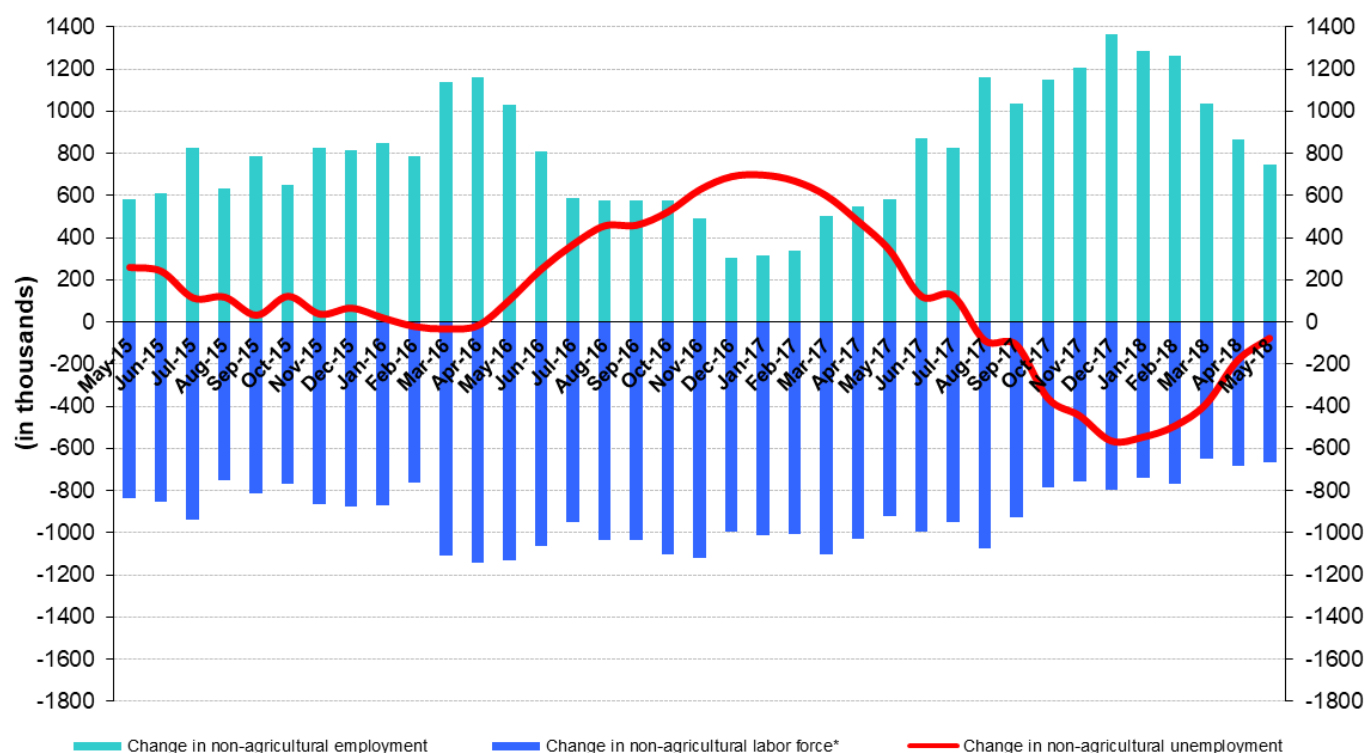


Source: TURKSTAT, Betam

## Decline in the number of non-agricultural unemployed within a year continues due to base effect

From May 2017 to May 2018 non-agricultural labor force increased by 668 thousand (2.6 percent) and non-agricultural employment increased by 747 thousand (3.3 percent) (Figure 4). Thus, non-agricultural unemployed decreased by 79 thousand and attained 3 million 104 thousand. Looking at annual changes, a slowdown in labor force increase and a sharp slowdown in employment increase became obvious. (Figure 4).

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



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

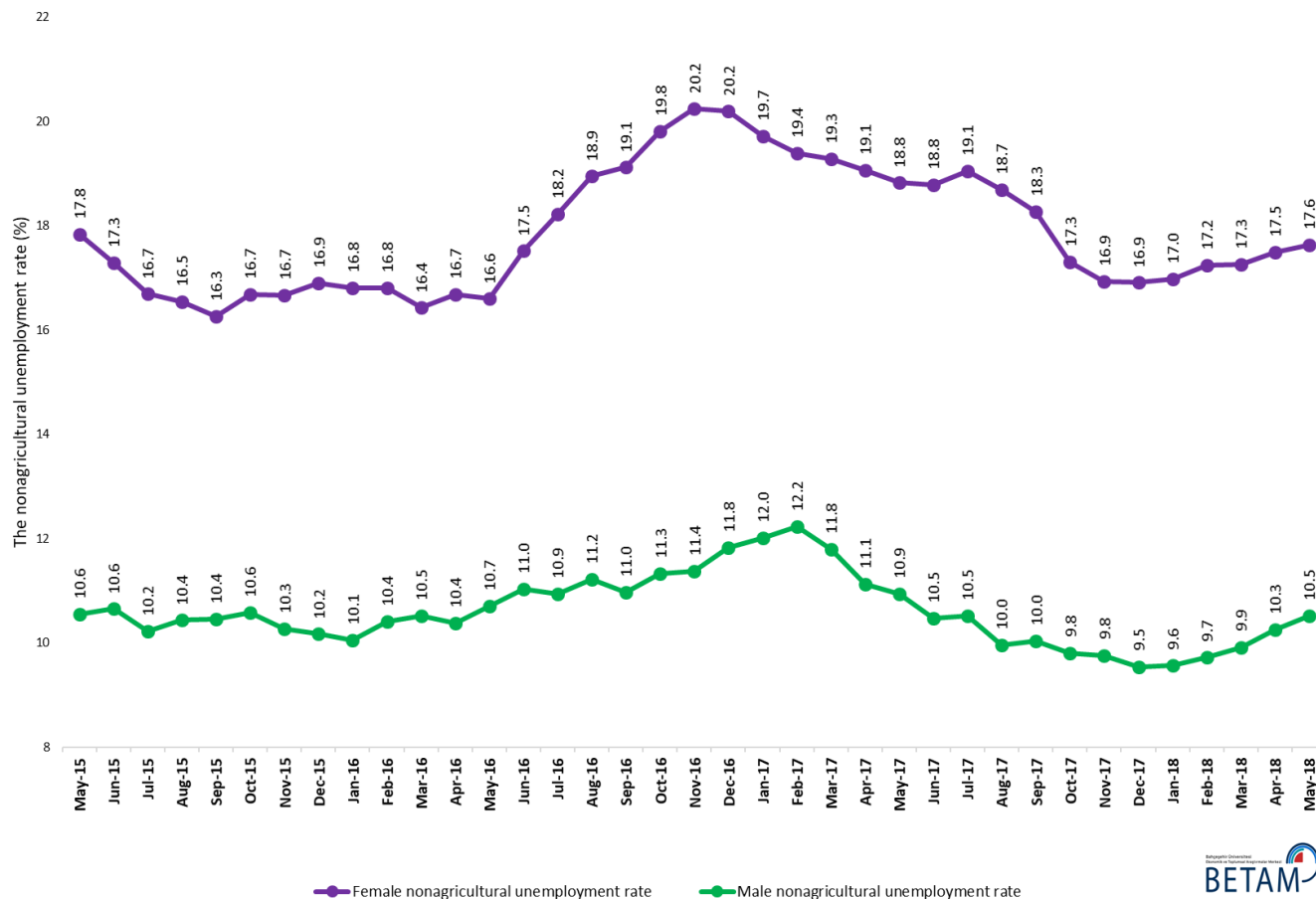
Source: Turkstat, Betam

## Unemployment ratio difference between female and male decreased

Figure 5 shows seasonally adjusted non-agricultural unemployment rate for males (green) and for females (purple)<sup>4</sup>. In the period of May 2018, the non-agricultural female unemployment rate increased by 0.1 percentage points to 17.6 percent while non-agricultural male unemployment rate increased by 0.2 percentage points to 10.5 percent. In other words non-agricultural unemployment increases were larger for males. Thus, the gender gap in non-agricultural unemployment rates dropped from 7.2 percent in April 2018 to 7.1 percent in May 2018. This may be due to the fact that men are more likely to be employed more in construction where employment losses were stronger.

<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
<b>April-15</b>	23863	20928	2935	12.3%			
<b>May-15</b>	24001	21025	2976	12.4%	138	97	41
<b>June-15</b>	24049	21043	3006	12.5%	48	18	30
<b>July-15</b>	24203	21250	2953	12.2%	154	207	-53
<b>August-15</b>	24125	21158	2967	12.3%	-77	-92	15
<b>September-15</b>	24342	21348	2994	12.3%	217	190	27
<b>October-15</b>	24411	21360	3051	12.5%	69	12	57
<b>November-15</b>	24546	21527	3019	12.3%	135	167	-32
<b>December-15</b>	24622	21618	3004	12.2%	76	91	-15
<b>January-16</b>	24745	21751	2994	12.1%	123	133	-10
<b>February-16</b>	24851	21869	2982	12.0%	106	118	-12
<b>March-16</b>	24875	21940	2935	11.8%	24	71	-47
<b>April-16</b>	24995	22046	2949	11.8%	120	106	14
<b>May-16</b>	25129	22038	3091	12.3%	133	-8	141
<b>June-16</b>	25116	21851	3265	13.0%	-13	-187	174
<b>July-16</b>	25164	21842	3322	13.2%	48	-9	57
<b>August-16</b>	25171	21748	3423	13.6%	8	-94	102
<b>September-16</b>	25351	21929	3422	13.5%	180	181	-1
<b>October-16</b>	25530	21956	3574	14.0%	179	27	152
<b>November-16</b>	25639	22024	3615	14.1%	109	68	41
<b>December-16</b>	25596	21936	3660	14.3%	-43	-88	45
<b>January-17</b>	25693	22070	3623	14.1%	96	134	-38
<b>February-17</b>	25814	22200	3614	14.0%	121	130	-9
<b>March-17</b>	25988	22428	3560	13.7%	174	228	-54
<b>April-17</b>	26039	22576	3463	13.3%	51	148	-97
<b>May-17</b>	26071	22630	3441	13.2%	32	54	-22
<b>June-17</b>	26123	22727	3396	13.0%	52	97	-45
<b>July-17</b>	26127	22678	3449	13.2%	4	-49	53
<b>August-17</b>	26237	22905	3332	12.7%	110	227	-117
<b>September-17</b>	26278	22967	3311	12.6%	41	62	-21
<b>October-17</b>	26317	23106	3211	12.2%	39	139	-100
<b>November-17</b>	26415	23219	3196	12.1%	99	113	-14
<b>December-17</b>	26452	23304	3148	11.9%	37	85	-48
<b>January-18</b>	26495	23369	3126	11.8%	44	65	-21
<b>February-18</b>	26604	23465	3139	11.8%	109	96	13
<b>March-18</b>	26621	23453	3168	11.9%	17	-12	29
<b>April-18</b>	26695	23438	3257	12.2%	74	-15	89
<b>May-18</b>	26729	23388	3341	12.5%	34	-50	84

Source: Turkstat, Betam

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

	Agriculture	Manufacturing	Construction	Service	Monthly changes			
					Agriculture	Manufacturing	Construction	Service
April-15	5517	5326	1884	13718				
May-15	5545	5404	1879	13742	28	78	-5	24
June-15	5581	5380	1874	13789	36	-24	-5	47
July-15	5504	5336	1925	13988	-77	-44	51	199
August-15	5535	5252	1921	13985	31	-84	-4	-3
September-15	5516	5327	1943	14077	-19	75	22	92
October-15	5449	5363	1962	14034	-67	36	19	-43
November-15	5386	5353	1986	14188	-63	-10	24	154
December-15	5407	5311	1991	14316	21	-42	5	128
January-16	5372	5300	1996	14455	-35	-11	5	139
February-16	5327	5276	1992	14601	-45	-24	-4	146
March-16	5388	5295	2018	14628	61	19	26	27
April-16	5370	5381	2033	14632	-18	86	15	4
May-16	5329	5386	2061	14591	-41	5	28	-41
June-16	5182	5330	1962	14559	-147	-56	-99	-32
July-16	5213	5254	1955	14633	31	-76	-7	74
August-16	5273	5224	1924	14599	60	-30	-31	-34
September-16	5338	5260	2031	14638	65	36	107	39
October-16	5283	5282	1997	14677	-55	22	-34	39
November-16	5285	5316	1994	14714	2	34	-3	37
December-16	5309	5265	1954	14717	24	-51	-40	3
January-17	5434	5274	1959	14837	125	9	5	120
February-17	5475	5251	2015	14934	41	-23	56	97
March-17	5385	5346	2086	14996	-90	95	71	62
April-17	5351	5372	2122	15082	-34	26	36	86
May-17	5382	5386	2087	15157	31	14	-35	75
June-17	5379	5383	2078	15266	-3	-3	-9	109
July-17	5506	5363	2098	15217	127	-20	20	-49
August-17	5467	5437	2152	15316	-39	74	54	99
September-17	5529	5421	2126	15420	62	-16	-26	104
October-17	5507	5470	2115	15522	-22	49	-11	102
November-17	5520	5470	2143	15606	13	0	28	84
December-17	5550	5514	2179	15612	30	44	36	6
January-18	5493	5567	2198	15603	-57	53	19	-9
February-18	5419	5627	2192	15647	-74	60	-6	44
March-18	5362	5618	2143	15692	-57	-9	-49	45
April-18	5341	5650	2091	15697	-21	32	-52	5
May-18	5293	5669	2042	15678	-48	19	-49	-19

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>May-15</b>	6624	5442	1182	17352	15521	1831
<b>June-15</b>	6657	5506	1151	17427	15571	1856
<b>July-15</b>	6751	5624	1127	17487	15699	1787
<b>August-15</b>	6715	5605	1110	17483	15659	1824
<b>September-15</b>	6760	5661	1099	17577	15741	1837
<b>October-15</b>	6782	5650	1132	17616	15753	1864
<b>November-15</b>	6876	5730	1146	17620	15812	1808
<b>December-15</b>	6968	5790	1178	17658	15863	1795
<b>January-16</b>	7011	5833	1178	17686	15908	1778
<b>February-16</b>	7044	5860	1184	17765	15917	1848
<b>March-16</b>	7058	5899	1159	17815	15942	1873
<b>April-16</b>	7143	5951	1191	17844	15993	1851
<b>May-16</b>	7174	5983	1191	17929	16009	1920
<b>June-16</b>	7261	5989	1272	17869	15898	1971
<b>July-16</b>	7271	5946	1325	17923	15963	1960
<b>August-16</b>	7328	5940	1388	17915	15904	2011
<b>September-16</b>	7377	5967	1410	17982	16010	1973
<b>October-16</b>	7443	5968	1475	18058	16014	2044
<b>November-16</b>	7460	5950	1510	18147	16083	2064
<b>December-16</b>	7457	5950	1507	18158	16011	2147
<b>January-17</b>	7450	5981	1469	18271	16077	2194
<b>February-17</b>	7509	6053	1456	18303	16064	2239
<b>March-17</b>	7613	6146	1468	18364	16198	2166
<b>April-17</b>	7600	6151	1449	18390	16345	2045
<b>May-17</b>	7650	6210	1440	18375	16365	2011
<b>June-17</b>	7669	6229	1440	18463	16530	1933
<b>July-17</b>	7681	6218	1463	18460	16519	1941
<b>August-17</b>	7734	6289	1445	18565	16716	1849
<b>September-17</b>	7768	6348	1420	18524	16666	1859
<b>October-17</b>	7793	6444	1348	18498	16685	1814
<b>November-17</b>	7829	6503	1326	18545	16736	1809
<b>December-17</b>	7887	6553	1334	18542	16773	1769
<b>January-18</b>	7923	6578	1345	18539	16767	1772
<b>February-18</b>	7952	6581	1371	18606	16798	1808
<b>March-18</b>	7948	6577	1372	18654	16805	1849
<b>April-18</b>	7985	6588	1397	18692	16775	1917
<b>May-18</b>	8020	6606	1414	18679	16716	1964

Source: Turkstat, Betam