STRIKING DECLINE IN UNEMPLOYMENT

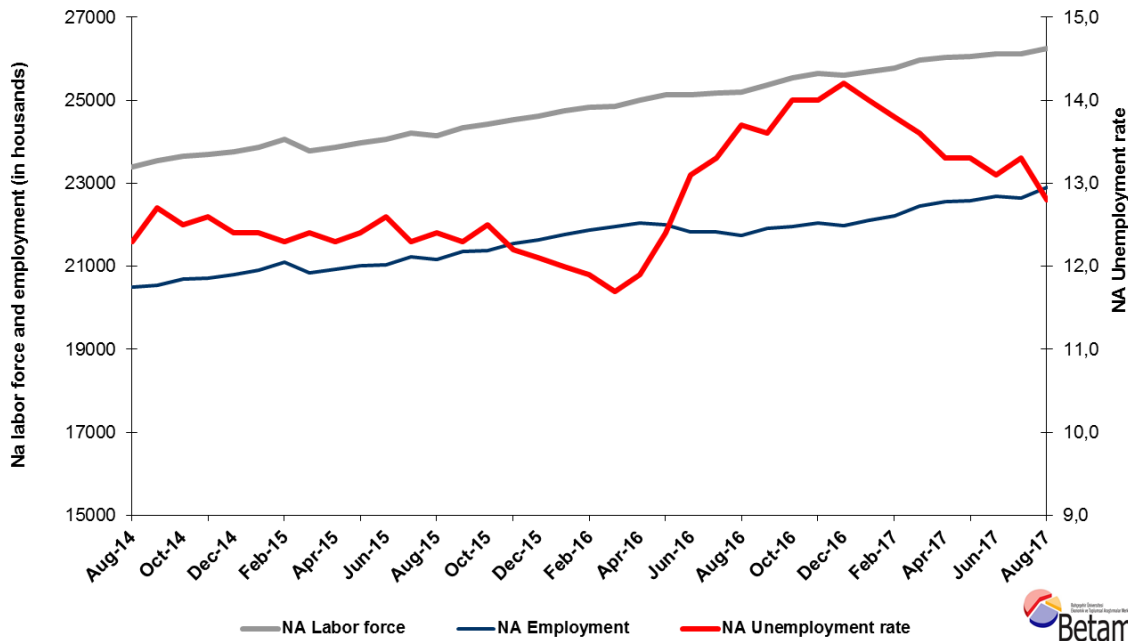**Seyfettin Gürsel[*], Mine Durmaz Aslan[**] and Yazgı Genç[***]**

Executive Summary

Seasonally adjusted labor market data show that non-agricultural unemployment rate decreased by 0.5 points in the period of August from July reaching 12.8 percent. The most important reason behind this striking decrease is a significant increase in the non-agricultural employment in August 2017 compared to July 2017. This employment increase was experienced especially in manufacturing and service sectors. On the other hand, according to seasonally adjusted labor data, non-agricultural unemployment rate of both males and females have been decreased. Betam's forecasting model predicts that the non-agricultural unemployment will remain at 12.8 percent in the period of September 2017.

High increase in non-agricultural employment

According to seasonally adjusted labor market data, in the period of August 2017 compared to July 2017, the non-agricultural labor force increased by 124 thousand and reached 26 million 250 thousand and the number of people employed in non-agricultural sectors increased by 239 thousand and reached 22 million 890 thousand (Figure 1, Table 1). We would like to notice that the non-agricultural employment had decreased by 39 thousand in the previous period (from June to July). So, the striking increase of 239 thousand in August is not easy to explain economically. In this framework, the number of unemployed in non-agricultural sectors decreased by 115 thousand and recorded as 3 million 360 thousand, the non-agricultural unemployment rate decreased from 13.3 percent to 12.8 percent. In the period of July, the rate of non-agricultural unemployment increased from 13.2 percent to 13.3 percent.

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

Source: Turkstat, Betam

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No change in unemployment is expected in the period of September 2017

Betam's forecasting model had predicted that the seasonally adjusted non-agricultural unemployment rate would remain constant at 13.4 percent in the period of August 2017. TURKSTAT revised the seasonally adjusted non-agricultural unemployment rate in the period of July 2017 from 13.4 to 13.3 percent. Seasonally adjusted non-agricultural unemployment rate in August 2017 decreased by 0,5 percentage points and reached 12.8 compared to the previous period. Betam's forecasting model predicts the seasonally adjusted September 2017 non-agricultural unemployment will remain constant at 12.8 percent. Forecasting model details are available on Betam's website.[1] Kariyer.net[2] 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. Taken into account all these factors, Betam's forecasting model predicts that seasonally adjusted non-agricultural unemployment rate will remain unchanged in the period of September 2017.

Figure 2 Seasonally adjusted non-agricultural unemployment rate and application per vacancy
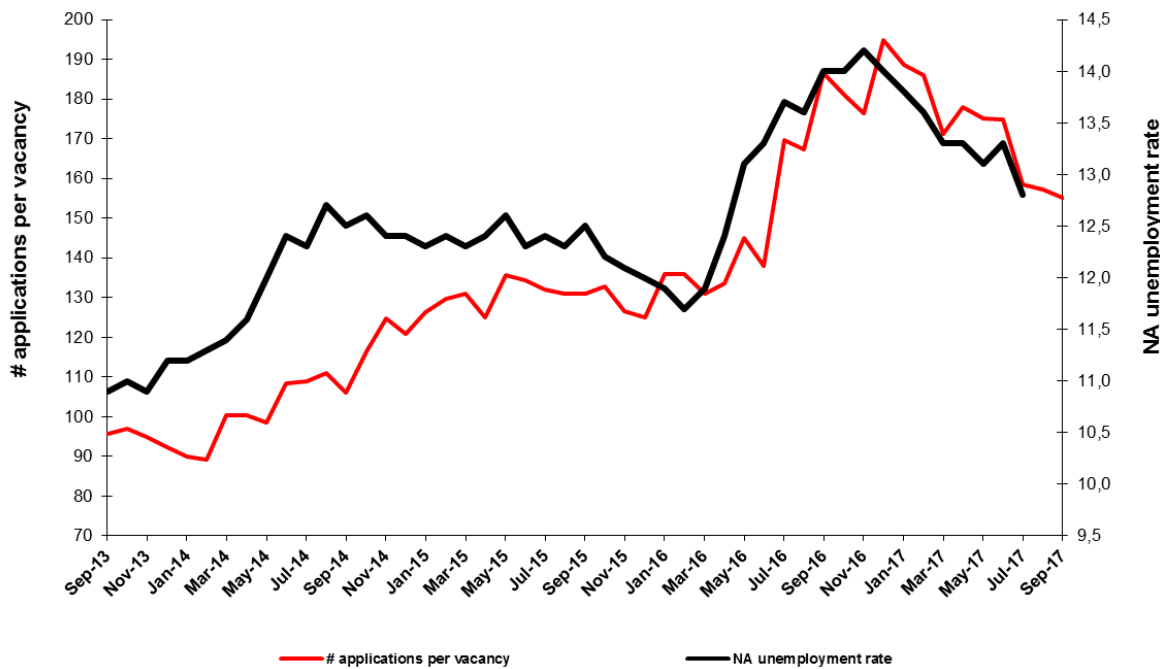
Source: Kariyer.net, Turkstat, Betam

Employment increase in services and manufacturing
According to seasonally adjusted sectoral labor market data, in August 2017 employment increased in all sectors except agriculture sector compared to July 2017. While employment losses have been observed in services and manufacture sector from June to July employment increased in these sectors by 74 thousand and 105 thousand respectively in the period of August 2017. On the other hand, employment in construction sector increased by 59 thousand compared to previous period. We observe that the decline in the non-agricultural unemployment rate is mainly due to employment increases in services and manufacturing sectors (**Error! Reference source not found.**,**Error! Reference source not found.**).[3]

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[1] 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/
[2] 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.
[3] [3] 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)

AGRICULTURE

MANUFACTURING

CONSTRUCTION

SERVICES
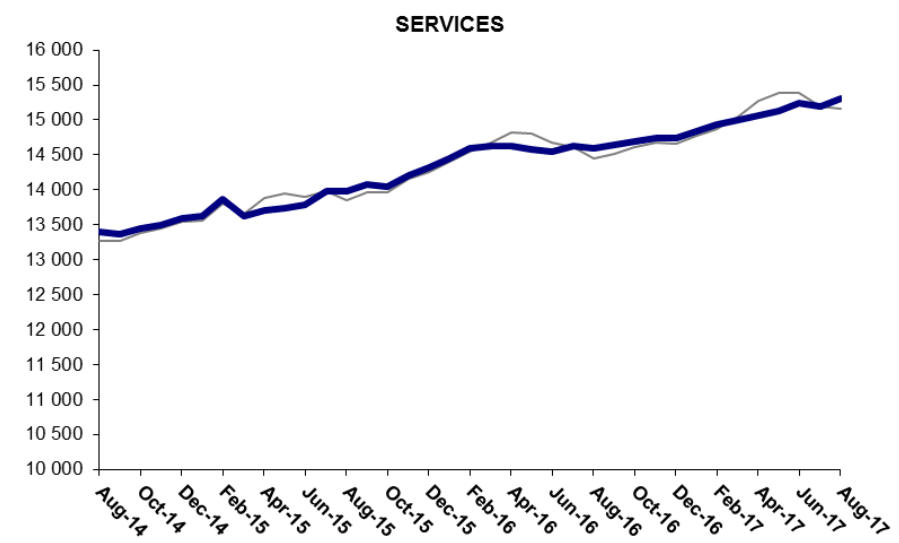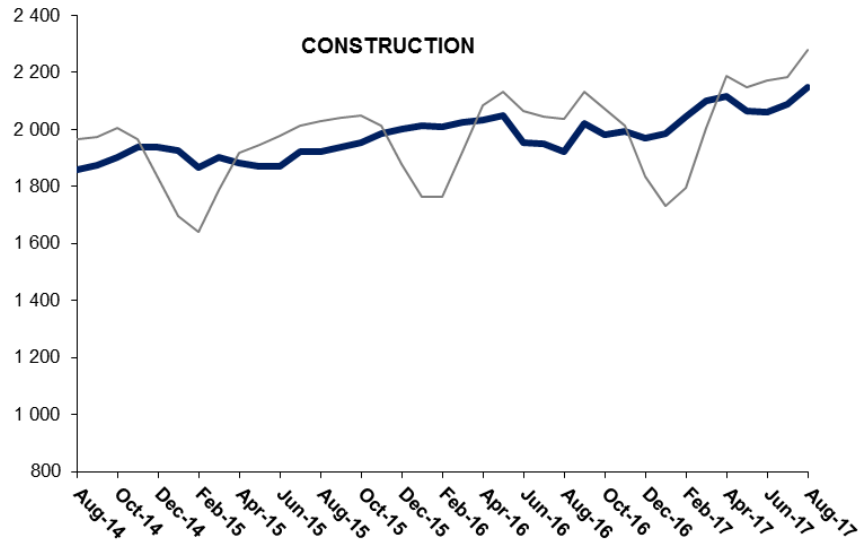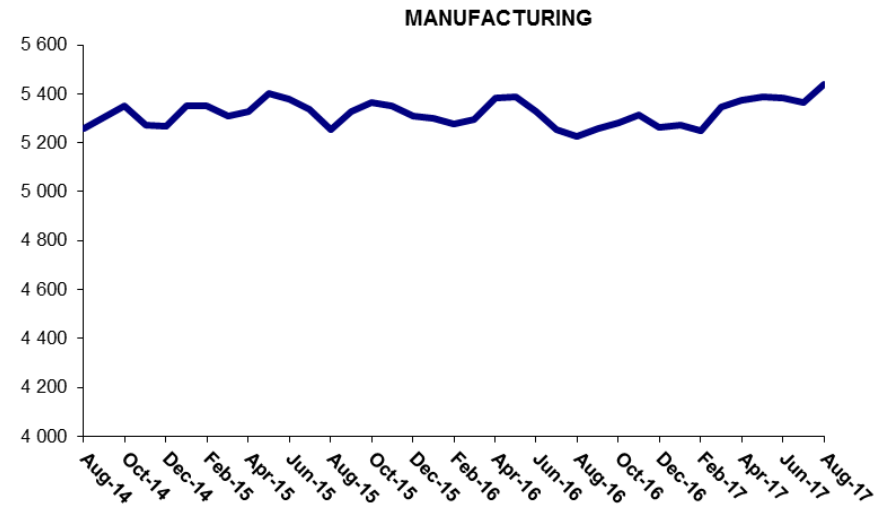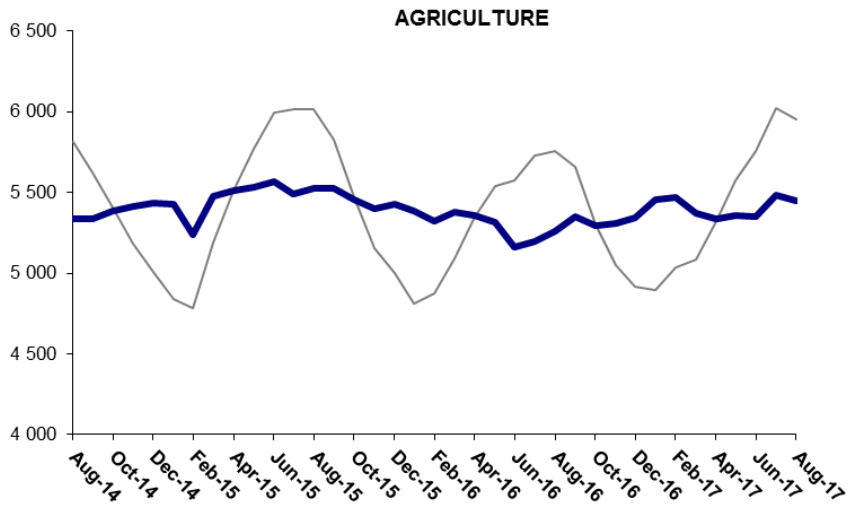
Source: Turkstat, Betam

Year-on-year decrease in non-agricultural unemployment

From August 2016 to August 2017 the non-agricultural labor force increased by 1 million 59 thousand (4.2 percent) and non-agricultural employment by 1 million 150 thousand (5.3 percent) (Figure 4). Thus, the non-agricultural employment continued its decreasing trend, observed since January 2017 (Figure 4).

Figure 4 Year-on-year changes in non-agricultural labor force, employment, and unemployment
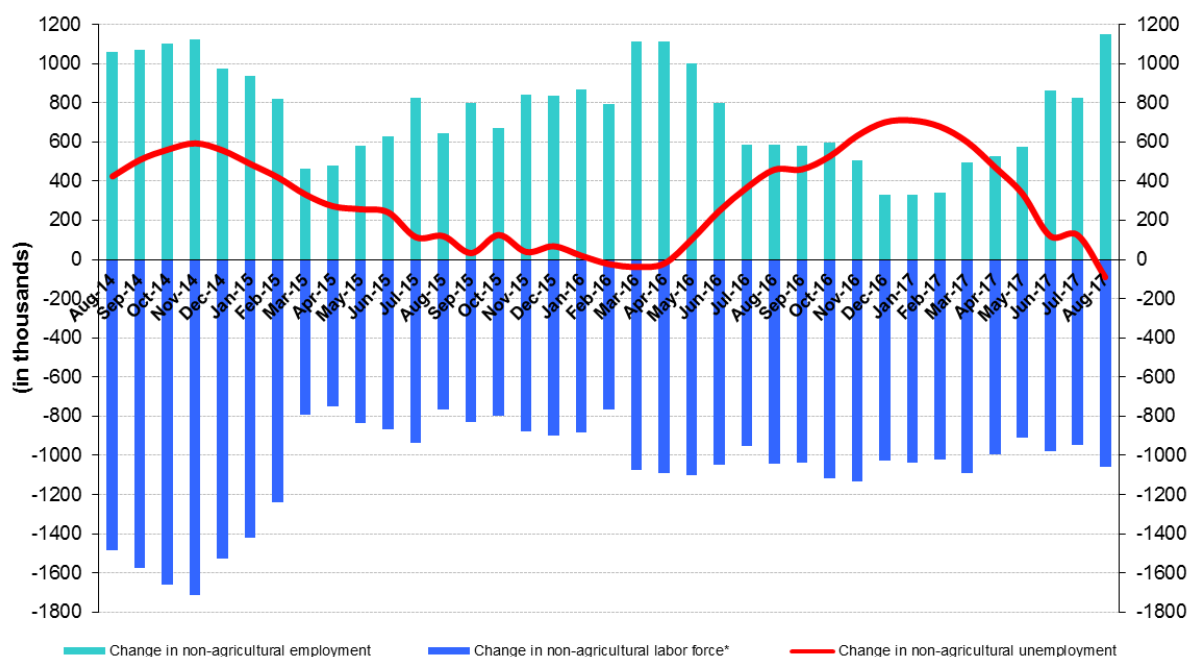
* The change in labor force represented with a negative sign.

Source: Turkstat, Betam

Female and male difference in unemployment

Figure 5 shows seasonal adjusted non-agricultural unemployment rate for males (green) and for females (purple)[4]. From the period of July 2017 to the period of August 2017, the non-agricultural female and male unemployment rate decreased by 0.3 and 0.5 percentage points respectively. Thus, non-agricultural unemployment rate decreased to 10.1 percent for males and 18.9 percent for females.

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4 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
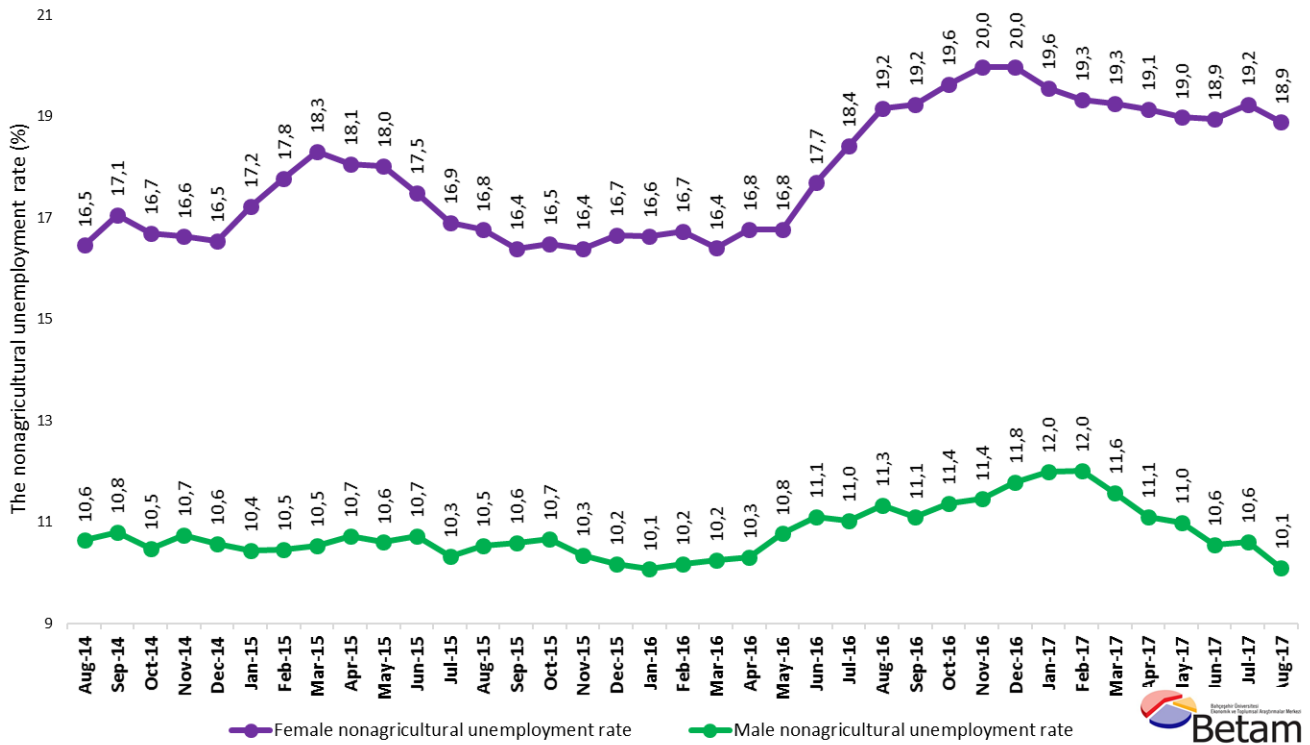
Source: Turkstat, Betam

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

	Labor force	Employment	Unemployment	Unemployment rate	Monthly changes		
					Labor force	Employment	Unemployment
July-14	23300	20411	2889	12,4%			
August-14	23383	20507	2876	12,3%	83	96	-13
September-14	23541	20551	2990	12,7%	158	44	114
October-14	23651	20695	2956	12,5%	111	144	-33
November-14	23691	20706	2985	12,6%	40	11	29
December-14	23749	20804	2945	12,4%	58	98	-40
January-15	23858	20900	2958	12,4%	110	96	14
February-15	24049	21091	2958	12,3%	191	191	0
March-15	23781	20832	2949	12,4%	-268	-259	-9
April-15	23854	20920	2934	12,3%	73	88	-15
May-15	23981	21007	2974	12,4%	127	87	40
June-15	24061	21029	3032	12,6%	80	22	58
July-15	24217	21238	2979	12,3%	156	209	-53
August-15	24147	21153	2994	12,4%	-69	-85	16
September-15	24340	21346	2994	12,3%	193	193	0
October-15	24419	21367	3052	12,5%	80	21	59
November-15	24539	21545	2994	12,2%	119	178	-59
December-15	24617	21638	2979	12,1%	78	93	-15
January-16	24734	21766	2968	12,0%	117	128	-11
February-16	24837	21881	2956	11,9%	102	115	-13
March-16	24854	21946	2908	11,7%	17	65	-48
April-16	25010	22034	2976	11,9%	156	88	68
May-16	25123	22008	3115	12,4%	113	-26	139
June-16	25120	21829	3291	13,1%	-4	-179	175
July-16	25173	21825	3348	13,3%	53	-4	57
August-16	25191	21740	3451	13,7%	18	-85	103
September-16	25374	21923	3451	13,6%	183	183	0
October-16	25537	21962	3575	14,0%	163	39	124
November-16	25638	22049	3589	14,0%	101	87	14
December-16	25604	21968	3636	14,2%	-35	-81	46
January-17	25693	22096	3597	14,0%	89	128	-39
February-17	25782	22224	3558	13,8%	89	128	-39
March-17	25971	22439	3532	13,6%	189	215	-26
April-17	26020	22559	3461	13,3%	49	120	-71
May-17	26047	22583	3464	13,3%	28	24	4
June-17	26110	22690	3420	13,1%	63	107	-44
July-17	26126	22651	3475	13,3%	15	-39	54
August-17	26250	22890	3360	12,8%	124	239	-115

Source: Turkstat, Betam

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

	Agriculture	Manufacturing	Construction	Service	Monthly changes			
					Agriculture	Manufacturing	Construction	Service
July-14	5398	5243	1826	13342				
August-14	5340	5257	1860	13391	-58	14	34	49
September-14	5338	5306	1874	13370	-2	49	14	-21
October-14	5384	5353	1904	13439	46	47	30	69
November-14	5416	5273	1937	13495	32	-80	33	56
December-14	5437	5266	1939	13599	21	-7	2	104
January-15	5428	5349	1927	13624	-9	83	-12	25
February-15	5240	5351	1868	13872	-188	2	-59	248
March-15	5476	5308	1901	13623	236	-43	33	-249
April-15	5509	5326	1883	13711	33	18	-18	88
May-15	5533	5404	1872	13730	24	78	-11	19
June-15	5568	5380	1869	13780	35	-24	-3	50
July-15	5493	5336	1922	13979	-75	-44	53	199
August-15	5525	5252	1920	13981	32	-84	-2	2
September-15	5526	5327	1936	14083	1	75	16	102
October-15	5458	5363	1954	14050	-68	36	18	-33
November-15	5401	5353	1986	14206	-57	-10	32	156
December-15	5431	5311	2001	14327	30	-42	15	121
January-16	5386	5300	2012	14454	-45	-11	11	127
February-16	5326	5276	2008	14596	-60	-24	-4	142
March-16	5378	5295	2026	14625	52	19	18	29
April-16	5360	5381	2031	14622	-18	86	5	-3
May-16	5313	5386	2048	14574	-47	5	17	-48
June-16	5164	5330	1954	14545	-149	-56	-94	-29
July-16	5196	5254	1950	14621	32	-76	-4	76
August-16	5258	5224	1923	14593	62	-30	-27	-28
September-16	5353	5260	2019	14645	95	36	96	52
October-16	5296	5282	1982	14699	-57	22	-37	54
November-16	5307	5316	1993	14740	11	34	11	41
December-16	5343	5265	1969	14734	36	-51	-24	-6
January-17	5454	5274	1984	14837	111	9	15	103
February-17	5473	5251	2043	14930	19	-23	59	93
March-17	5371	5346	2100	14993	-102	95	57	63
April-17	5337	5372	2118	15070	-34	26	18	77
May-17	5358	5386	2064	15133	21	14	-54	63
June-17	5353	5383	2062	15245	-5	-3	-2	112
July-17	5482	5363	2088	15200	129	-20	26	-45
August-17	5447	5437	2147	15305	-35	74	59	105

Source: Turkstat, Betam

Table 1: Seasonally adjusted non-agricultural labor force by gender (thousands)

	Female Labor Force	Female Employment	Female Unemployed	Male Labor Force	Male Employment	Male Unemployed
August-14	6298	5262	1037	17174	15347	1826
September-14	6337	5256	1081	17185	15329	1856
October-14	6386	5319	1066	17226	15422	1804
November-14	6400	5336	1064	17232	15382	1850
December-14	6420	5358	1062	17326	15496	1830
January-15	6506	5385	1121	17317	15510	1807
February-15	6561	5394	1166	17427	15605	1822
March-15	6519	5326	1193	17246	15431	1815
April-15	6540	5359	1181	17303	15449	1854
May-15	6624	5430	1194	17356	15517	1839
June-15	6656	5492	1164	17436	15568	1868
July-15	6748	5608	1140	17503	15695	1808
August-15	6712	5587	1125	17500	15658	1842
September-15	6759	5651	1108	17585	15722	1863
October-15	6778	5660	1118	17609	15730	1878
November-15	6874	5748	1126	17621	15798	1822
December-15	6975	5813	1162	17652	15856	1796
January-16	7019	5851	1167	17673	15895	1779
February-16	7049	5869	1180	17719	15918	1802
March-16	7055	5898	1157	17825	15999	1826
April-16	7141	5944	1197	17860	16019	1840
May-16	7174	5971	1203	17936	16004	1931
June-16	7259	5975	1284	17879	15895	1984
July-16	7268	5930	1338	17936	15960	1976
August-16	7325	5922	1403	17933	15903	2030
September-16	7376	5957	1419	17985	15991	1994
October-16	7439	5978	1461	18042	15992	2050
November-16	7458	5968	1490	18147	16069	2077
December-16	7463	5973	1491	18144	16005	2138
January-17	7458	5999	1459	18254	16065	2190
February-17	7515	6062	1452	18260	16067	2193
March-17	7610	6145	1465	18382	16256	2127
April-17	7598	6144	1454	18414	16371	2043
May-17	7650	6198	1452	18381	16361	2020
June-17	7668	6215	1453	18476	16526	1950
July-17	7679	6202	1477	18475	16516	1959
August-17	7731	6271	1460	18592	16714	1878

Source: Turkstat, Betam