

## DECREASE IN UNEMPLOYMENT AND LABOR FORCE

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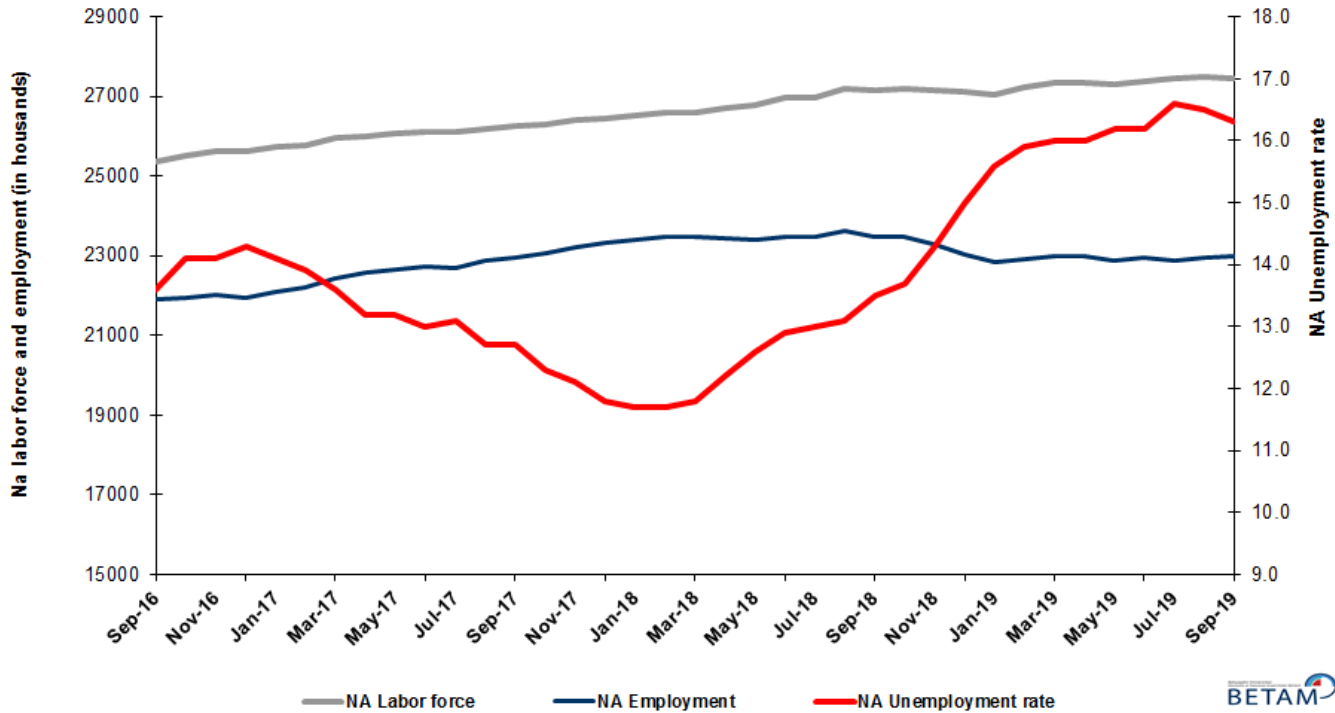
### Executive Summary

Seasonally adjusted labor market data shows that, in the period of September 2019, non-agricultural unemployment rate turned out to be 16.3 percent, with 0.2 percentage point decrease compared to August 2019. In this period, non-agricultural employment increased by 29 thousand and non-agricultural labor force decreased by 31 thousand. According to sectorial data, the only sector showing decrease in employment is manufacturing, and the sector showing the most significant (31 thousand) increase in employment is services. In this period, agricultural employment increased by 7 thousand and construction employment by 2 thousand. The amount of employment loss in manufacturing sector turned out to be 5 thousand. Based on the seasonally adjusted data, male non-agricultural employment reversed its continuous decline since August 2018, by an increase of 28 thousand, and female non-agricultural employment decreased slightly by 7 thousand.

### Decrease in non-agricultural unemployment

Seasonally adjusted data shows that non-agricultural labor force reached 27 million 458 thousand by the decrease of 31 thousand in September 2019, while non-agricultural employment reached 22 million 982 thousand following the increase of 29 thousand (Figure 1, Table 1). As a result, non-agricultural unemployment decreased by 60 thousand and reached 4 million 476 thousand, and non-agricultural unemployment rate dropped to 16.3 percent.

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



Source: Turkstat, Betam

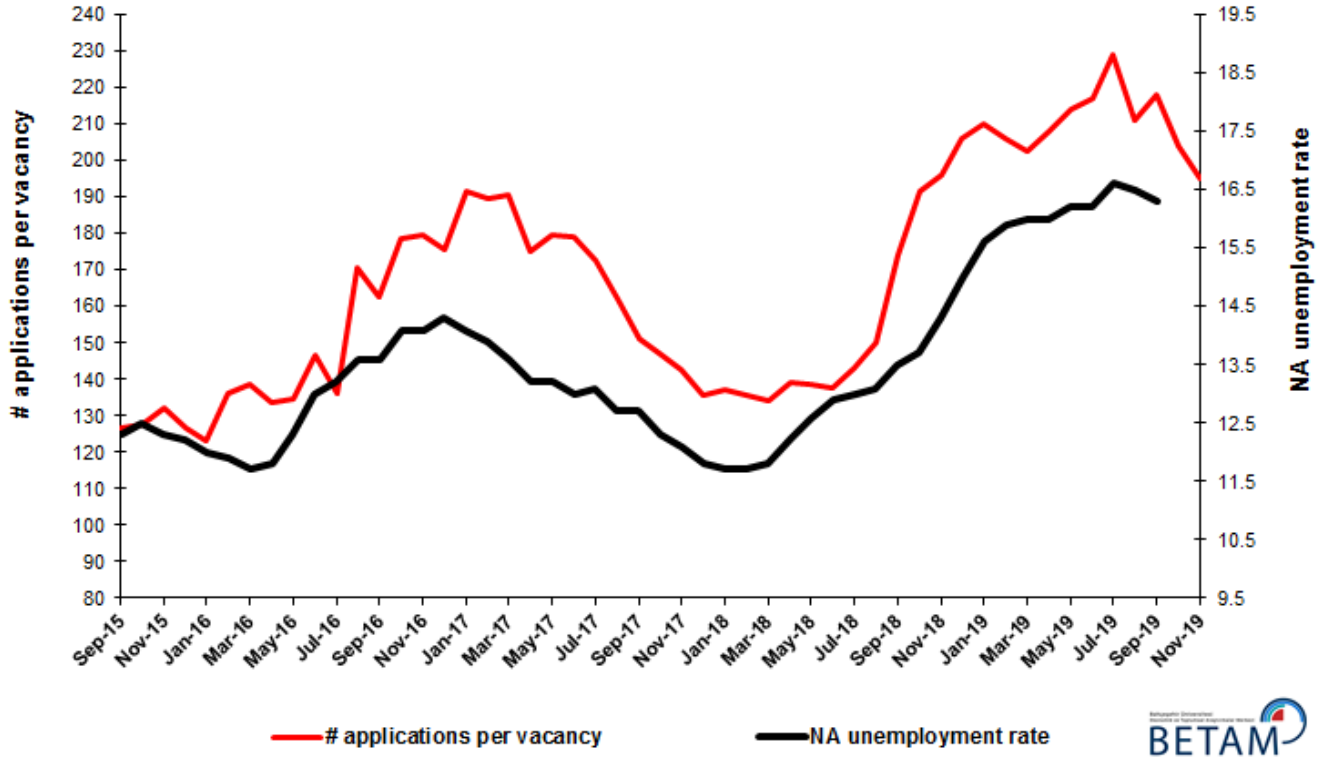
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## Unemployment rate is expected to decrease in October 2019

Betam's forecasting model had predicted an increase of 0.1 percentage point in non-agricultural unemployment rate for September 2019 but it decreased by 0.2 percentage point, after the 0.1 percentage point revision of the nonagricultural unemployment rate for August 2019. Our forecasting model predicts a decrease of 0.3 percentage point in non-agricultural unemployment rate, from 16.3 to 16.0 percent, in October 2019. 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 gains in all sectors except manufacturing

According to seasonally adjusted sectorial labor market data, employment increased in the period of September 2019 compared to August 2019 in all sectors except manufacturing (Figure 3, Table 2).<sup>3</sup> After the decrease of 49 thousand in August 2019, employment in manufacturing sector decreased by 5 thousand in September 2019. After the increase of 141 thousand in August 2019, the number of employed in services sector increased by 31 thousand. Employment losses in July and August 2019 are followed by the 2 thousand increase in construction sector.

<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/>

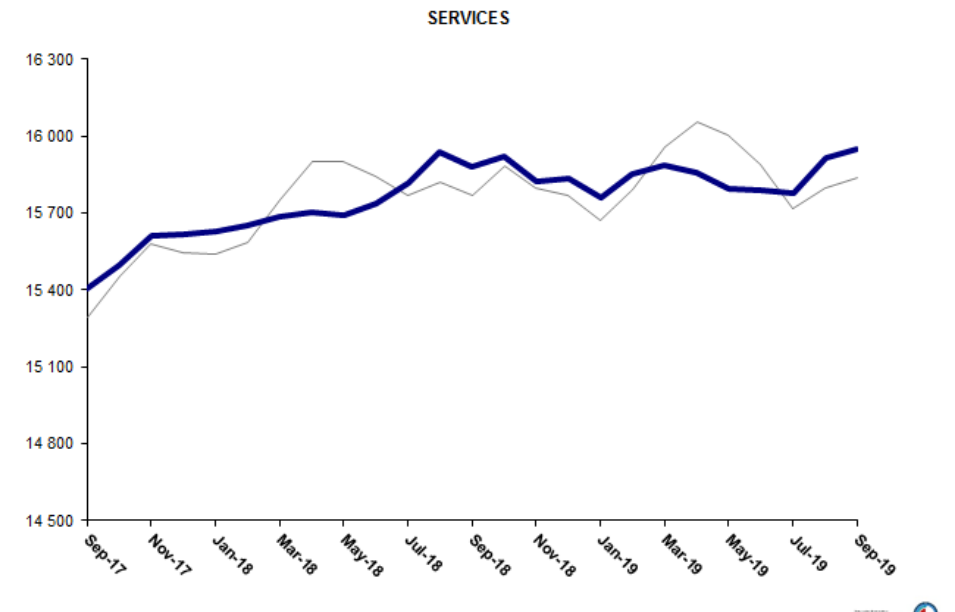
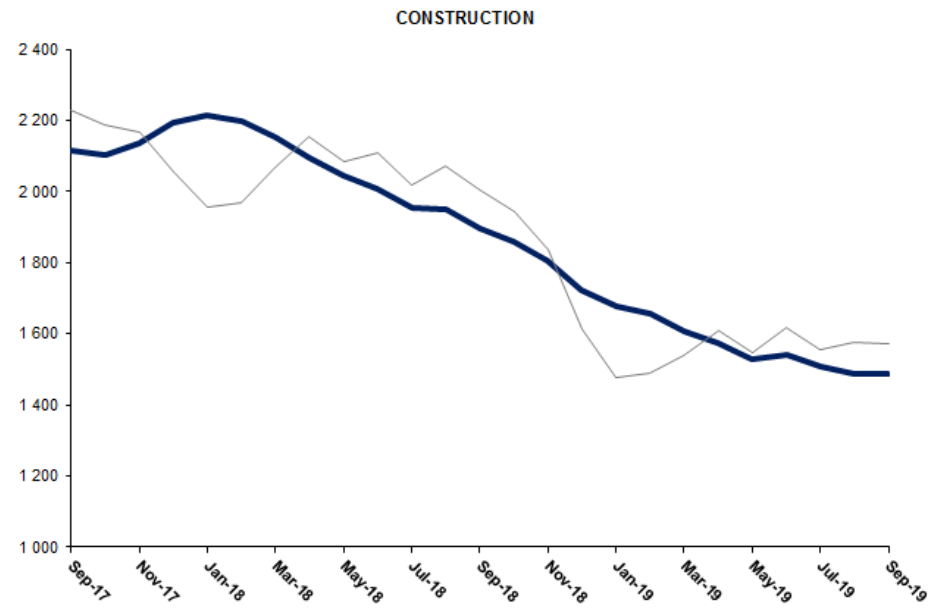
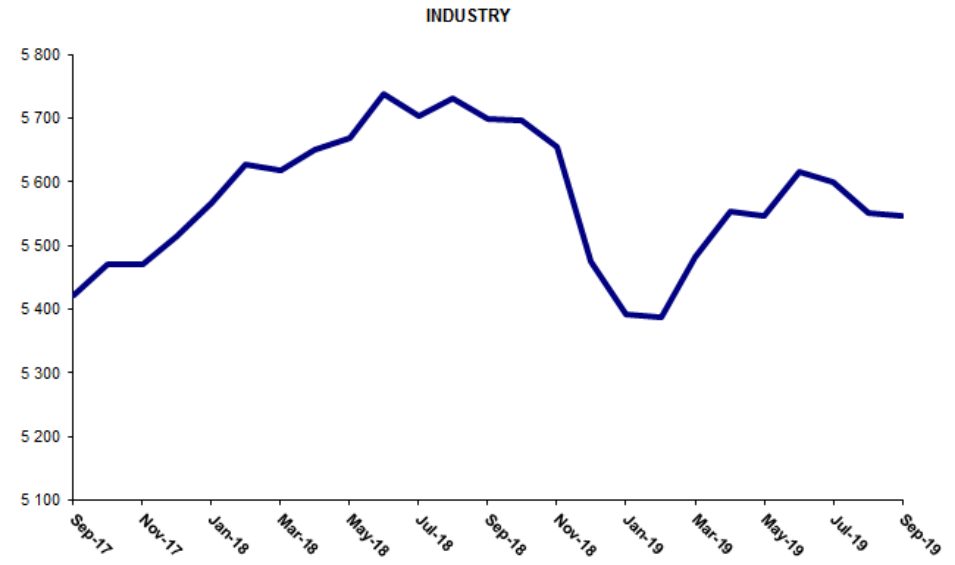
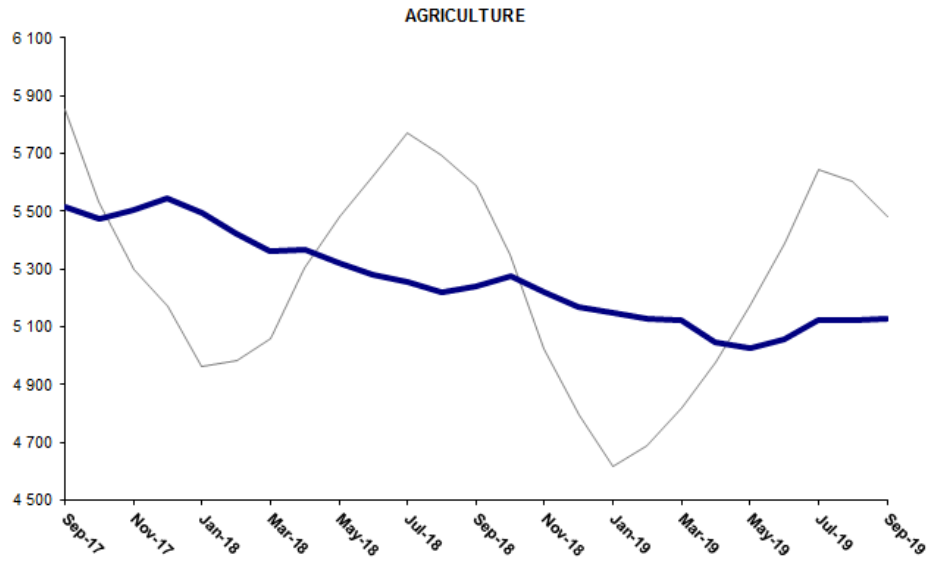
Soybilgen, B., "Mevsim Etkilerinden Arındırılmış İşsizlik Tahmini", Betam Research Brief 14

<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 thousand)**



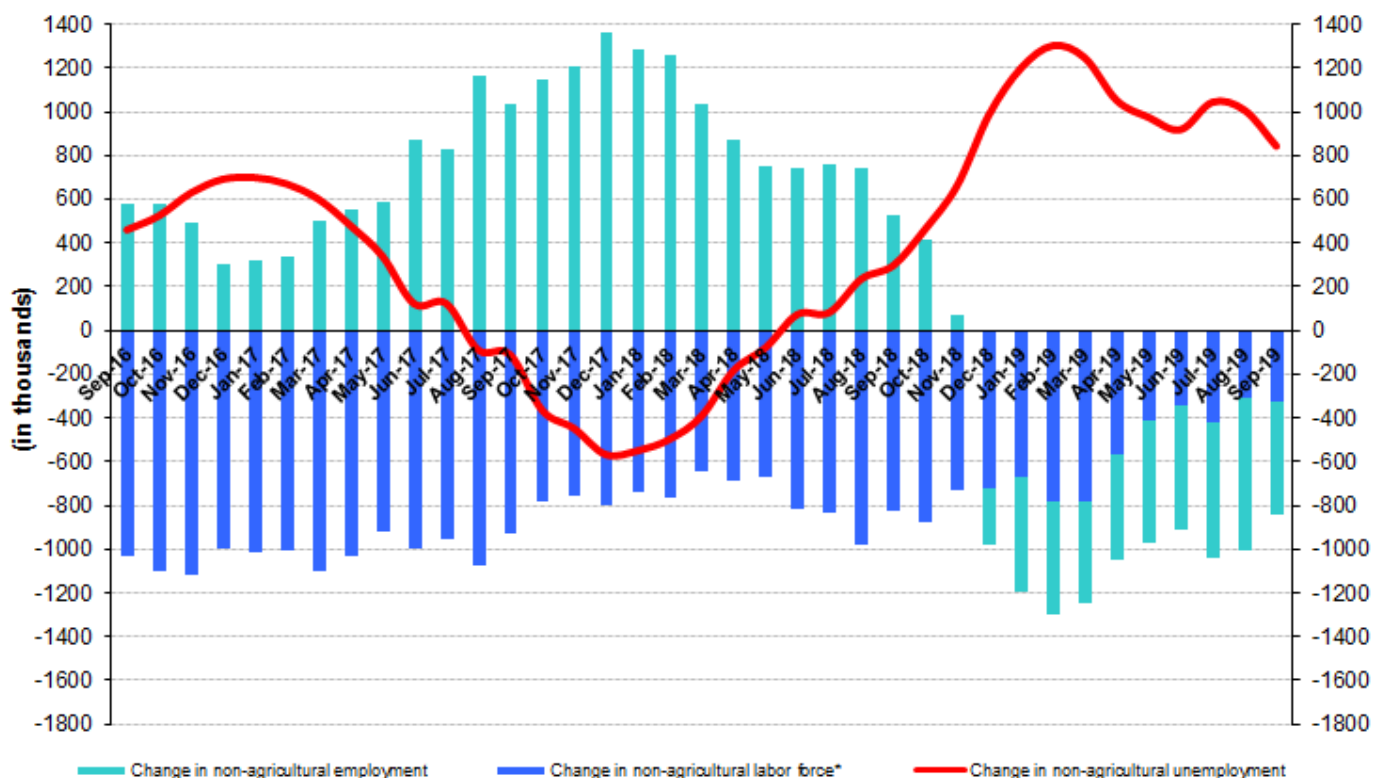
Source: TURKSTAT, Betam



## Non-agricultural employment continues to decline year-on-year

Compared to September 2018, non-agricultural labor force increased only by 324 thousand (1.2 percent) and non-agricultural employment decreased by 516 thousand (-2.2 percent) (Figure 4). Annual labor force growth slowed down along with employment losses and deviated from its structural trend. However, year-on-year decrease in employment continued for the 10<sup>th</sup> consecutive month. Thus, compared to September 2018, the number of non-agricultural unemployed increased by 840 thousand.

**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

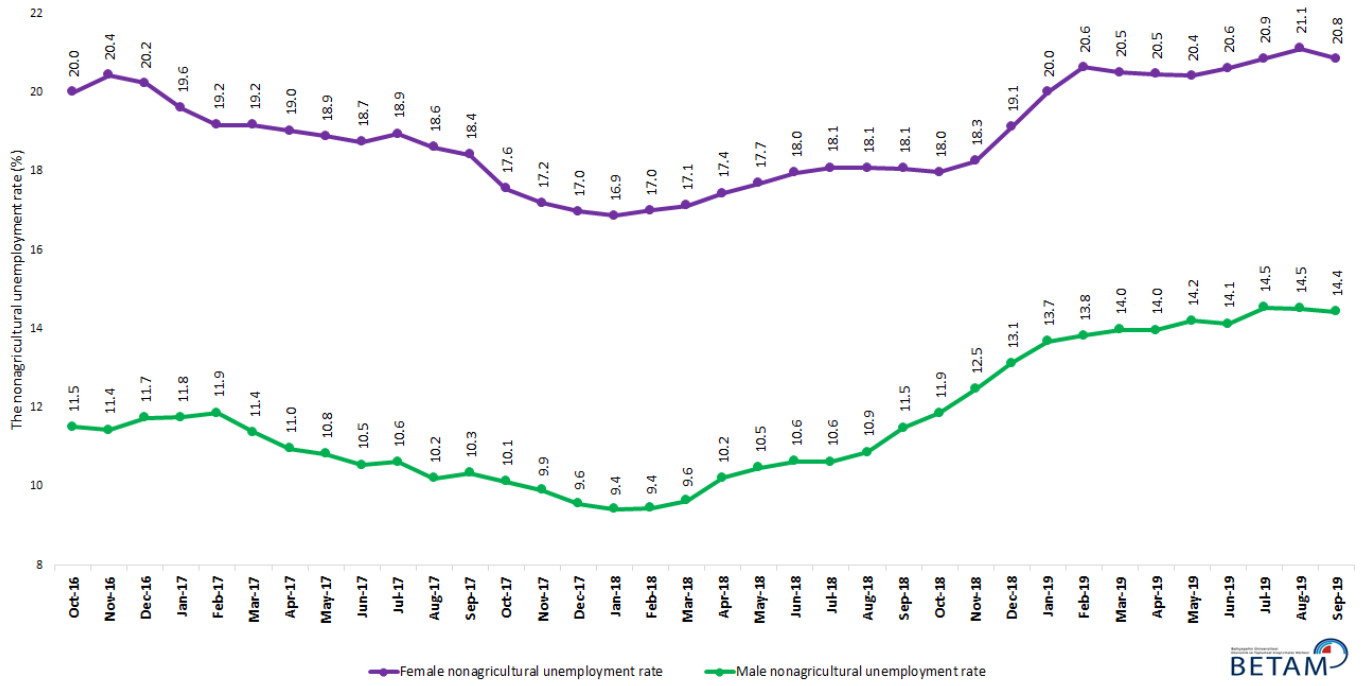
## Male employment reversed its decreasing trend, lasting 12 months

Figure 5 shows seasonally adjusted non-agricultural unemployment rate for males (green) and for females (purple)<sup>4</sup>. In the period of September 2019, compared to the previous month, female non-agricultural unemployment rate decreased by 0.3 points and reached 20.8 percent, with the 37 thousand decrease in the female non-agricultural labor force. Male non-agricultural unemployment rate decreased by 0.1 percent to 14.4 percent. As a result, the gender gap in non-agricultural unemployment rates narrowed to 6.4 percent.

Along with the decrease of 37 thousand in female non-agricultural labor force, female non-agricultural employment decreased by 7 thousand, while male employment increased by 28 thousand and consecutive decreases in male employment came to a halt (Table 3). The cumulative loss in male non-agricultural employment since August 2018 became 659 thousand.

<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 generated 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
September-16	25360	21911	3449	13.6%			
October-16	25532	21932	3600	14.1%	172	21	151
November-16	25638	22023	3615	14.1%	106	91	15
December-16	25608	21946	3662	14.3%	-30	-77	47
January-17	25723	22096	3627	14.1%	115	150	-35
February-17	25791	22206	3585	13.9%	68	110	-42
March-17	25962	22431	3531	13.6%	171	225	-54
April-17	26017	22583	3434	13.2%	55	152	-97
May-17	26090	22646	3444	13.2%	73	63	10
June-17	26126	22730	3396	13.0%	37	84	-47
July-17	26117	22696	3421	13.1%	-9	-34	25
August-17	26188	22862	3326	12.7%	70	166	-96
September-17	26278	22941	3337	12.7%	90	79	11
October-17	26308	23072	3236	12.3%	30	131	-101
November-17	26413	23217	3196	12.1%	105	145	-40
December-17	26442	23322	3120	11.8%	29	105	-76
January-18	26512	23410	3102	11.7%	70	88	-18
February-18	26583	23473	3110	11.7%	71	63	8
March-18	26599	23460	3139	11.8%	15	-13	28
April-18	26704	23446	3258	12.2%	105	-14	119
May-18	26785	23410	3375	12.6%	81	-36	117
June-18	26963	23485	3478	12.9%	178	75	103
July-18	26984	23476	3508	13.0%	21	-9	30
August-18	27177	23617	3560	13.1%	193	141	52
September-18	27141	23477	3664	13.5%	-36	-140	104
October-18	27206	23479	3727	13.7%	65	2	63
November-18	27174	23288	3886	14.3%	-32	-191	159
December-18	27102	23037	4065	15.0%	-72	-251	179
January-19	27049	22829	4220	15.6%	-54	-208	154
February-19	27232	22902	4330	15.9%	183	73	110
March-19	27351	22975	4376	16.0%	119	73	46
April-19	27361	22983	4378	16.0%	10	8	2
May-19	27292	22871	4421	16.2%	-68	-112	44
June-19	27382	22946	4436	16.2%	89	75	14
July-19	27440	22885	4555	16.6%	58	-61	119
August-19	27489	22953	4536	16.5%	49	68	-19
September-19	27458	22982	4476	16.3%	-31	29	-60

Source: Turkstat, Betam

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

	Agriculture	Manufacturing	Construction	Service	Monthly changes			
					Agriculture	Manufacturing	Construction	Service
September-16	5327	5260	2026	14625				
October-16	5263	5282	1991	14659	-64	22	-35	34
November-16	5276	5316	1991	14717	13	34	0	58
December-16	5307	5265	1962	14719	31	-51	-29	2
January-17	5434	5274	1968	14854	127	9	6	135
February-17	5476	5251	2017	14937	42	-23	49	83
March-17	5386	5346	2091	14994	-90	95	74	57
April-17	5367	5372	2124	15086	-19	26	33	92
May-17	5401	5386	2090	15169	34	14	-34	83
June-17	5398	5383	2065	15283	-3	-3	-25	114
July-17	5502	5363	2103	15230	104	-20	38	-53
August-17	5470	5437	2146	15280	-32	74	43	50
September-17	5512	5421	2116	15404	42	-16	-30	124
October-17	5476	5470	2103	15499	-36	49	-13	95
November-17	5505	5470	2137	15611	29	0	34	112
December-17	5547	5514	2194	15615	42	44	57	4
January-18	5493	5567	2216	15627	-54	53	22	12
February-18	5422	5627	2196	15651	-71	60	-20	24
March-18	5364	5618	2153	15689	-58	-9	-43	38
April-18	5367	5650	2095	15701	3	32	-58	12
May-18	5322	5669	2047	15694	-45	19	-48	-7
June-18	5281	5737	2009	15739	-41	68	-38	45
July-18	5256	5703	1954	15819	-25	-34	-55	80
August-18	5218	5730	1949	15939	-38	27	-5	120
September-18	5241	5698	1898	15881	23	-32	-51	-58
October-18	5276	5696	1861	15923	35	-2	-37	42
November-18	5221	5656	1806	15826	-55	-40	-55	-97
December-18	5167	5474	1724	15838	-54	-182	-82	12
January-19	5146	5392	1676	15761	-21	-82	-48	-77
February-19	5126	5388	1658	15855	-20	-4	-18	94
March-19	5124	5482	1605	15887	-2	94	-53	32
April-19	5048	5553	1572	15858	-76	71	-33	-29
May-19	5028	5546	1529	15796	-20	-7	-43	-62
June-19	5057	5616	1541	15790	29	70	12	-6
July-19	5123	5600	1508	15777	66	-16	-33	-13
August-19	5122	5551	1485	15918	-1	-49	-23	141
September-19	5129	5546	1487	15949	7	-5	2	31

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>October-16</b>	7438	5950	1488	18079	15998	2081
<b>November-16</b>	7467	5941	1526	18153	16078	2076
<b>December-16</b>	7452	5944	1508	18182	16048	2134
<b>January-17</b>	7447	5987	1460	18278	16131	2148
<b>February-17</b>	7495	6058	1437	18287	16117	2170
<b>March-17</b>	7596	6140	1456	18335	16250	2085
<b>April-17</b>	7602	6156	1446	18372	16359	2013
<b>May-17</b>	7667	6219	1448	18384	16394	1989
<b>June-17</b>	7679	6240	1439	18432	16488	1944
<b>July-17</b>	7696	6238	1458	18440	16481	1959
<b>August-17</b>	7719	6283	1436	18489	16601	1888
<b>September-17</b>	7782	6348	1434	18508	16593	1915
<b>October-17</b>	7787	6420	1367	18519	16644	1875
<b>November-17</b>	7837	6490	1347	18564	16724	1841
<b>December-17</b>	7880	6542	1337	18606	16828	1779
<b>January-18</b>	7918	6582	1335	18617	16863	1754
<b>February-18</b>	7935	6586	1349	18636	16875	1761
<b>March-18</b>	7927	6570	1358	18670	16871	1800
<b>April-18</b>	7987	6594	1393	18725	16813	1913
<b>May-18</b>	8040	6618	1422	18750	16785	1965
<b>June-18</b>	8085	6633	1452	18822	16820	2002
<b>July-18</b>	8105	6640	1466	18813	16813	2000
<b>August-18</b>	8195	6714	1482	18894	16841	2053
<b>September-18</b>	8184	6706	1478	18874	16706	2168
<b>October-18</b>	8267	6782	1486	18888	16647	2240
<b>November-18</b>	8254	6747	1507	18883	16529	2355
<b>December-18</b>	8332	6739	1593	18879	16402	2477
<b>January-19</b>	8359	6687	1672	18879	16296	2583
<b>February-19</b>	8426	6688	1738	18916	16301	2615
<b>March-19</b>	8471	6734	1737	18915	16272	2643
<b>April-19</b>	8418	6695	1723	18895	16256	2639
<b>May-19</b>	8374	6665	1710	18892	16209	2683
<b>June-19</b>	8404	6672	1733	18884	16217	2667
<b>July-19</b>	8427	6670	1757	18925	16174	2751
<b>August-19</b>	8487	6696	1791	18896	16154	2742
<b>September-19</b>	8450	6688	1762	18913	16182	2731

Source: Turkstat, Betam