

## EMPLOYMENT LOSS IN MANUFACTURING, DECREASE IN LABOR FORCE

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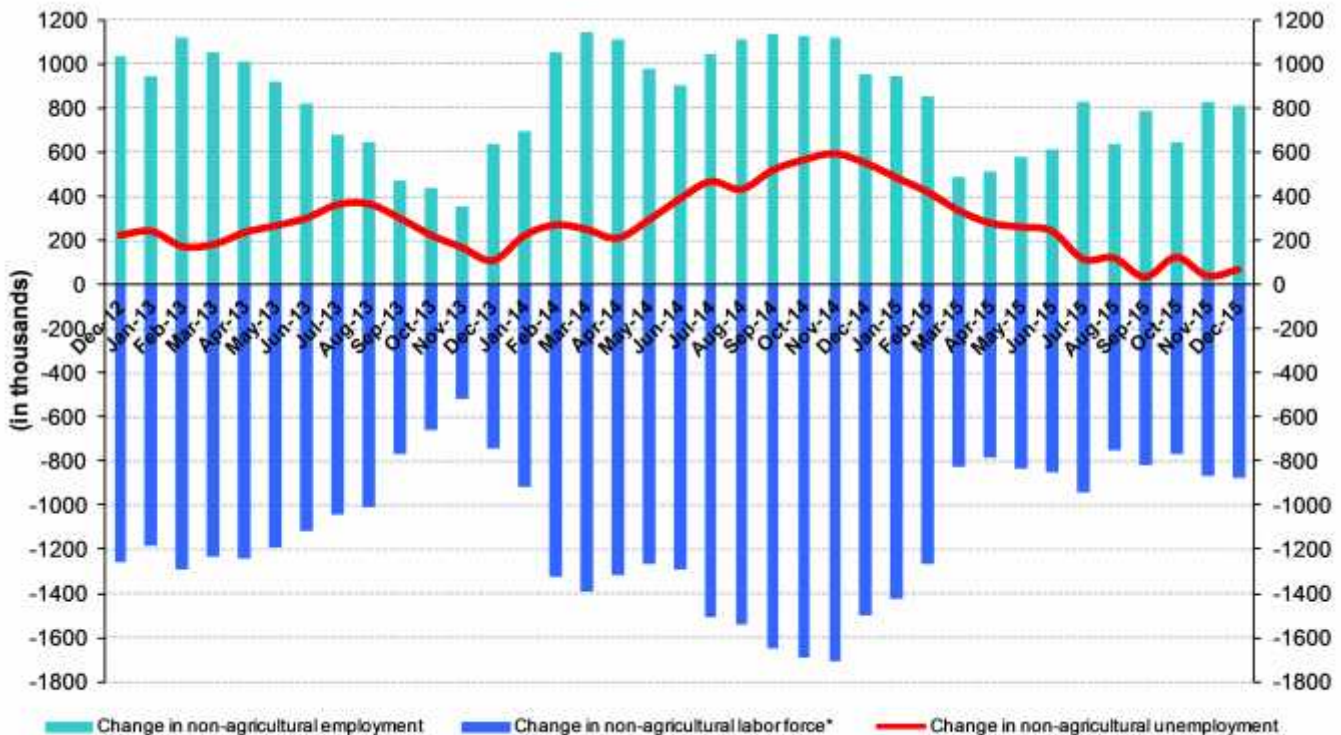
### Executive Summary

Seasonally adjusted labor market data shows that, nonagricultural unemployment rate decreased from 12.4 percent to 12.3 percent (0.1 percentage points) the period of November 2015 compared to the previous period. Reduction in nonagricultural unemployment resulted from the decrease in nonagricultural labor force. In this period, employment in manufacturing decreased by 42 thousand in manufacturing, by only 3 thousand in construction and by 60 thousand in services. Betam's forecasting model predicts that seasonally adjusted nonagricultural unemployment rate will decrease from 12.3 percent to 12.2 percent (0.1 percentage points).

### Similar year-on-year increases in nonagricultural labor force and employment

According to data released by TurkStat, nonagricultural labor force increased by 878 thousand (3.7 percent), nonagricultural employment increased by 814 thousand (3.9 percent) and nonagricultural unemployment increased by 64 thousand in the period of December 2015 compared to the same period in the previous year (Figure1). Note that increases in nonagricultural labor force and employment are of similar sizes.

Figure 1 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

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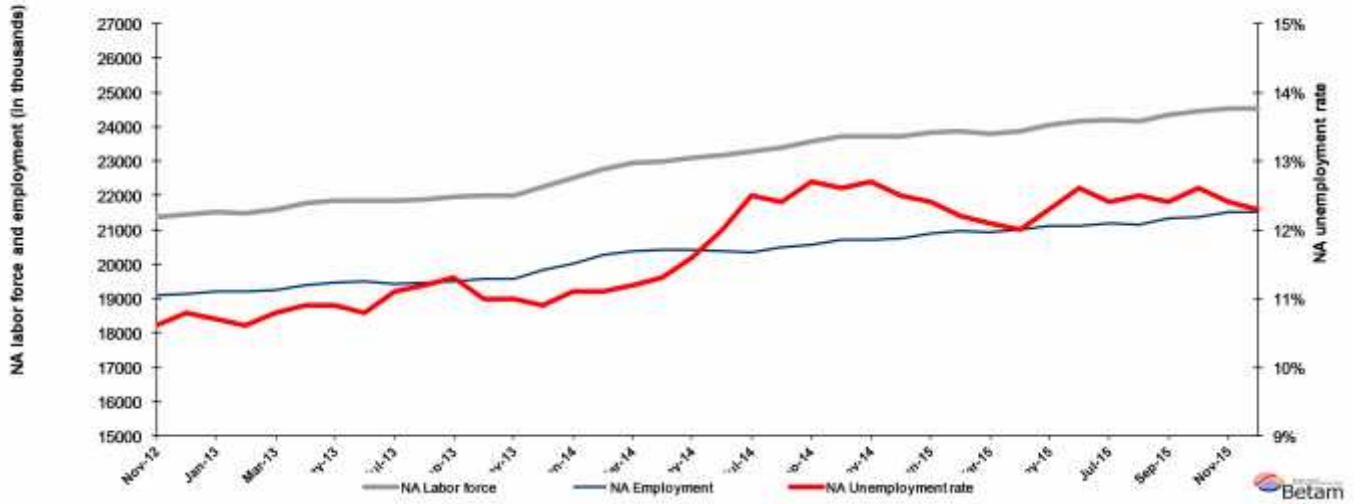
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## Decrease in seasonally adjusted labor force

According to seasonally adjusted data nonagricultural labor force decreased by 3 thousand in the period of December 2015 compared to the period of September 2015, and reached 24 million 543 thousand. Nonagricultural employment increased by 22 thousand, and reached 21 million 524 thousand (Figure 2, Table 1). Although nonagricultural employment increased slightly by 22 thousand, the decrease in nonagricultural labor force led that nonagricultural unemployment rate decreased from 12.4 percent to 12.3 percent.

**Figure 2 Seasonally adjusted non-agricultural labor force, employment, and unemployment**



Source: Turkstat; Betam

## Nonagricultural unemployment will decrease

Betam's forecasting model had predicted that seasonally adjusted nonagricultural unemployment rate would decrease from 12.4 percent to 12.3 percent (0.1 percentage points). See that our forecast was correct for the period of November 2015.

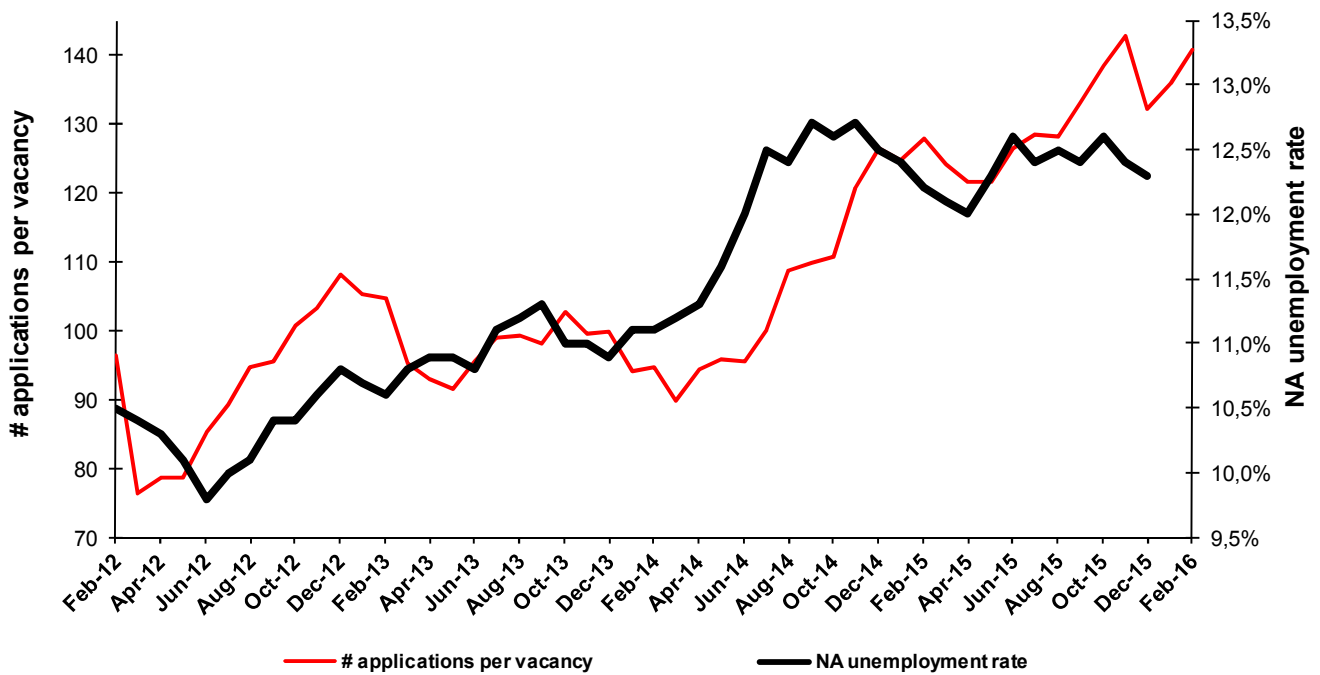
Betam's forecasting model predicts that seasonally adjusted nonagricultural unemployment rate will decrease from 12.3 percent to 12.2 percent (0.1 percentage points) in the period of January 2016. Forecasting model details are available on Betam's website.<sup>1</sup> Kariyer.net<sup>2</sup> application 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. Taken into account all these factors, Betam's forecasting model predicts that seasonally adjusted nonagricultural unemployment rate will decrease in the period of January 2016.

<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"

<http://betam.bahcesehir.edu.tr/tr/2014/06/kariyer-net-verisiyle-kisa-vadeli-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.

**Figure 3 Seasonally adjusted nonagricultural unemployment rate and application per vacancy**



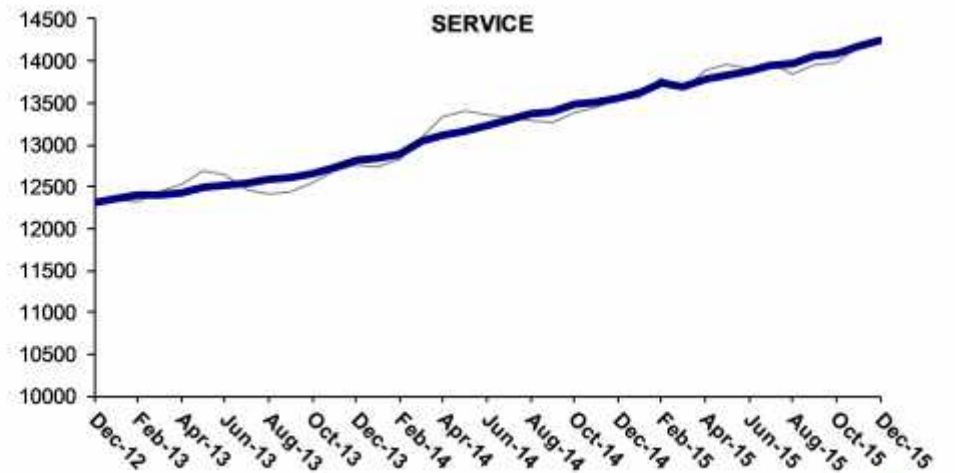
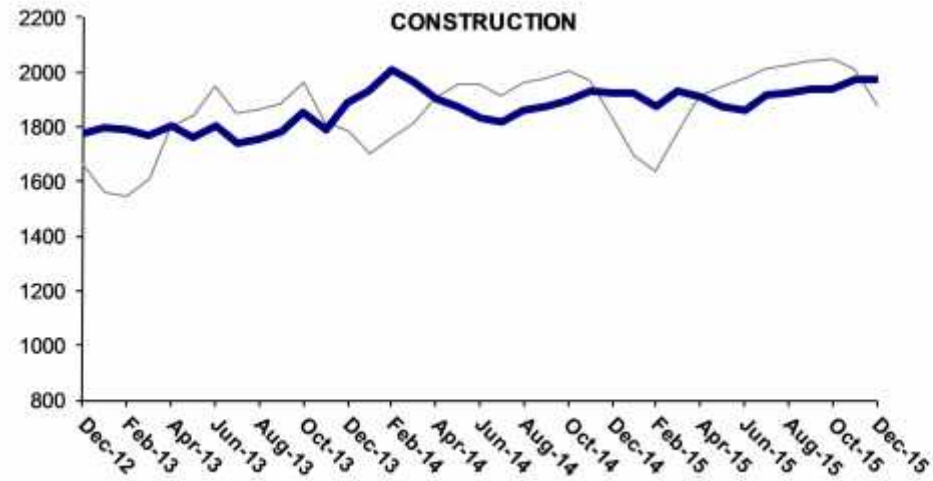
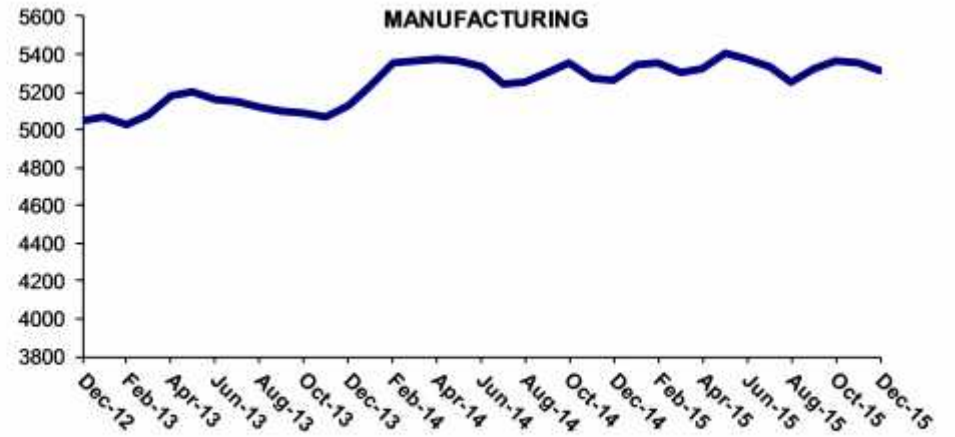
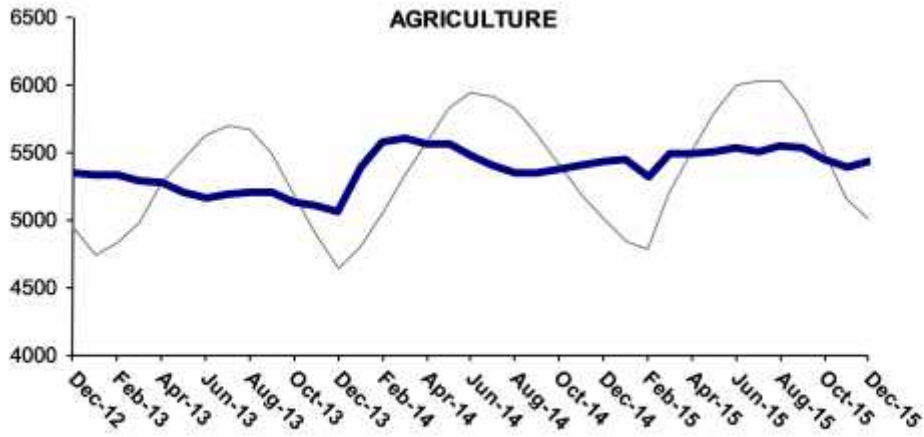
Source: Kariyer.net, Turkstat, Betam

### Employment decreased in manufacturing

According to seasonally adjusted labor market series, employment increases in nonagricultural sectors remained weak in the period of December 2015 (Figure 4, Table 2).<sup>3</sup> However, employment increased by 45 thousand in agriculture. In this period, increase in construction employment was limited to 3 thousand. Employment in manufacturing decreased by 42 thousand. In the period of November 2016, a 60-thousand increase in service employment and a monthly decrease in nonagricultural labor force suppressed the increase in unemployment.

<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 4 Employment by sectors (in thousands)



Source: Turkstat, Betam



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

	Labor force	Employment	Unemployment	Unemployment rate	Monthly changes		
					Labor force	Employment	Unemployment
November-12	21355	19091	2264	10,6%			
December-12	21454	19137	2317	10,8%	99	46	53
January-13	21521	19218	2303	10,7%	67	81	-14
February-13	21478	19201	2277	10,6%	-43	-17	-26
March-13	21591	19259	2332	10,8%	113	58	55
April-13	21779	19405	2374	10,9%	188	146	42
May-13	21842	19461	2381	10,9%	63	56	7
June-13	21848	19488	2360	10,8%	6	27	-21
July-13	21837	19413	2424	11,1%	-11	-75	64
August-13	21902	19449	2453	11,2%	65	36	29
September-13	21965	19483	2482	11,3%	63	34	29
October-13	22009	19588	2421	11,0%	44	105	-61
November-13	22001	19581	2420	11,0%	-8	-7	-1
December-13	22250	19825	2425	10,9%	249	244	5
January-14	22501	20003	2498	11,1%	250	178	72
February-14	22785	20256	2529	11,1%	285	253	32
March-14	22938	20369	2569	11,2%	153	113	40
April-14	23000	20401	2599	11,3%	62	32	30
May-14	23080	20403	2677	11,6%	80	2	78
June-14	23170	20390	2780	12,0%	90	-13	103
July-14	23266	20358	2908	12,5%	96	-32	128
August-14	23377	20478	2899	12,4%	110	120	-10
September-14	23558	20566	2992	12,7%	181	88	93
October-14	23709	20722	2987	12,6%	152	156	-4
November-14	23716	20704	3012	12,7%	7	-18	25
December-14	23721	20756	2965	12,5%	5	52	-47
January-15	23838	20882	2956	12,4%	117	126	-9
February-15	23875	20962	2913	12,2%	37	80	-43
March-15	23802	20922	2880	12,1%	-73	-40	-33
April-15	23877	21012	2865	12,0%	75	90	-15
May-15	24066	21106	2960	12,3%	189	94	95
June-15	24150	21107	3043	12,6%	84	1	83
July-15	24201	21200	3001	12,4%	51	93	-42
August-15	24154	21135	3019	12,5%	-47	-65	18
September-15	24341	21323	3018	12,4%	187	188	-1
October-15	24462	21380	3082	12,6%	121	57	64
November-15	24546	21502	3044	12,4%	83	122	-39
December-15	24543	21524	3019	12,3%	-3	22	-25

Source: Turkstat, Betam

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

	Agriculture	Manufacturing	Construction	Service	Monthly changes			
					Agriculture	Manufacturing	Construction	Service
November-12	5383	5003	1797	12291				
December-12	5349	5051	1776	12310	-34	48	-21	19
January-13	5326	5073	1794	12350	-23	22	18	40
February-13	5332	5023	1788	12389	6	-50	-6	39
March-13	5284	5083	1769	12407	-48	60	-19	18
April-13	5267	5176	1803	12427	-17	93	34	20
May-13	5198	5200	1760	12501	-69	24	-43	74
June-13	5162	5163	1801	12523	-36	-37	41	22
July-13	5182	5146	1738	12529	20	-17	-63	6
August-13	5200	5117	1757	12574	18	-29	19	45
September-13	5200	5096	1780	12607	0	-21	23	33
October-13	5132	5090	1853	12645	-68	-6	73	38
November-13	5096	5064	1789	12728	-36	-26	-64	83
December-13	5058	5131	1888	12805	-38	67	99	77
January-14	5390	5232	1930	12841	332	101	42	36
February-14	5576	5359	2012	12885	186	127	82	44
March-14	5605	5365	1965	13039	29	6	-47	154
April-14	5562	5373	1904	13124	-43	8	-61	85
May-14	5556	5364	1875	13164	-6	-9	-29	40
June-14	5469	5332	1831	13227	-87	-32	-44	63
July-14	5398	5243	1818	13296	-71	-89	-13	69
August-14	5346	5257	1858	13362	-52	14	40	66
September-14	5339	5306	1873	13387	-7	49	15	25
October-14	5369	5353	1895	13474	30	47	22	87
November-14	5402	5273	1929	13502	33	-80	34	28
December-14	5433	5266	1927	13563	31	-7	-2	61
January-15	5449	5349	1921	13613	16	83	-6	50
February-15	5316	5351	1876	13735	-133	2	-45	122
March-15	5480	5308	1932	13682	164	-43	56	-53
April-15	5491	5326	1911	13775	11	18	-21	93
May-15	5504	5404	1873	13829	13	78	-38	54
June-15	5523	5380	1860	13866	19	-24	-13	37
July-15	5498	5336	1915	13949	-25	-44	55	83
August-15	5541	5252	1921	13962	43	-84	6	13
September-15	5533	5327	1935	14060	-8	75	14	98
October-15	5441	5363	1938	14080	-92	36	3	20
November-15	5384	5353	1972	14177	-57	-10	34	97
December-15	5429	5311	1975	14237	45	-42	3	60

Source: Turkstat, Betam