



**czech workforce**

# Manufacturing

## National

### Employment and

### Median Wage

### by occupation

2011-2016

## key findings

**Employment.** In the period 2011-2016, employment in most major occupations in manufacturing snapped back from the global crisis. Increases were significant for industrial and production engineers (70.8%), mechanical engineers (32.4%), mechanical engineering technicians (33.1%), manufacturing supervisors (21.91%), lifting truck operators (53.26%) manufacturing laborers (28.67%) and assemblers (22%).

**Employment.** In 2016, job growth decelerated for industrial and production engineers, mechanical engineers, mechanical engineering technicians, and manufacturing supervisors. In occupations at the lower end of the skill and wage scale, job growth accelerated in 2016.

**Employment.** In the two largest employment occupations— metal, machinery and related trade workers and stationary plant/machine operators— employment has grown slowly or decreased since 2011. This may reflect a lack of supply due to demographics.

**Wages.** In 2016, wage growth rose faster than the 2011-2016 trend in 12 of 27 surveyed occupations. This acceleration was heavily weighted toward the lower wage professions: managers (0 of 6 occupations), professionals (0 of 4), technicians (4 of 7), clerical (2 of 2), craftsmen (2 of 3), and machine operators/assemblers (4 of 5).

**Wages.** In 2016, median wage rose more than 5% in 7 categories (engineering quality control technicians, machinery/equipment technicians, supervisors in mechanical engineering, plant operators, assemblers, lifting truck operators, and manufacturing laborers).

**Wages.** In the 2011-2016, wage growth rose more than 20% in 6 of the 27 occupational categories (research and development managers, engineering designers, engineering technicians, mechanists/repairer of industrial machinery, assemblers and manufacturing laborers).

**Wages.** When comparing wage growth and employment growth in 2016, the areas where lack of workforce supply is driving wage growth are stock clerks, metal/machinery workers, machine operators, and manufacturing laborers. Demand is driving wage growth in industrial/production engineers, precision tool operators, and lifting truck operators.

**Report 6– 2011-2016 data**

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The material has been prepared for AmCham members; our Councils and Best Office Committees may make use of some the data and conclusions for their own activities. Contact Katarina Bendikova at [kbendikova@amcham.cz](mailto:kbendikova@amcham.cz) for more information.



## **czech workforce: six**

Employment and median wage by occupation in manufacturing, nationwide

# **Manufacturing: Employment and Median Wages by Occupation**

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Employment and average wage by occupation in manufacturing, nationwide

### Manufacturing Workforce: Managers, Median Wage and Employment, 2011-2016

In the 2011-2016 period, managers had the lowest employment growth and the second lowest wage growth of the six occupational areas. Both employment and wage growth accelerated in 2016, but wages grew at the lowest level of all occupational areas. Managers earned 20% more than professionals, and nearly double clerical workers, craftsmen and machine operators.

		Wages		
	Management	2016	yoy increase	increase since 2011
ILO code	Overall	<b>46,681</b>	1.66%	9.10%
1321	Manufacturing Managers	<b>51,201</b>	-0.67%	8.37%
13211	Manufacturing plant/production managers	<b>68,930</b>	4.49%	18.38%
13212	Working proprietor (manufacturing)	<b>42,290</b>	-1.98%	4.14%
13213	Energy sector engineers	<b>64,229</b>	0.22%	8.30%
1223	Research and Development Managers	<b>67,163</b>	4.40%	28.67%
12232	Technical development Managers	<b>61,354</b>	1.18%	17.57%

		Employment		
	Management	2016	yoy increase	increase since 2011
ILO code	Overall	<b>64.5</b>	1.09%	2.54%
1321	Manufacturing Managers	<b>20.6</b>	0.46%	5.69%
13211	Manufacturing plant/production managers	<b>6.3</b>	1.00%	0.43%
13212	Working proprietor (manufacturing)	<b>11.2</b>	1.72%	13.32%
13213	Energy sector engineers	<b>1.4</b>	-5.59%	-23.22%
1223	Research and Development Managers	<b>3.8</b>	-2.23%	-2.80%
12232	Technical development Managers	<b>2.1</b>	-4.40%	26.73%

#### Employment Detail

Overall, 2016 was a year of significant addition of management jobs (1.09% yoy vs. 2.54% since 2011). Working proprietors increased significantly both yoy and from 2011. Manufacturing managers still grew in 2016, but the growth slowed from earlier years. The quick expansion of technical development management jobs reversed course in 2016.

#### Wage Detail

Manufacturing plant managers and research & development managers continue to experience high wage growth. Technical manager wage growth slowed significantly in 2016 compared with five year trend. Manufacturing managers had wages shaved down.



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### Workforce in Prague: Professionals, Median Wage and Employment, 2011-2016

In the 2011-2016 period, wages of professionals rose at the slowest rate, while employment rose the fastest. In 2016, professional wages rose at the second lowest rate, and employment rose at comparable rates as other occupations, except management. Professionals make 26% more than technicians, and more than 50% more than clerical workers, craftsmen, and machine operators.

Wages				
Professionals		2016	yoy increase	increase since 2011
ILO code	Overall	<b>38,844</b>	2.51%	7.34%
2141	Industrial and Production Engineers	<b>38,067</b>	0.59%	12.08%
21413	Logistics Professionals	<b>34,516</b>	na	na
21414	Transport Professionals	<b>35,127</b>	-1.54%	na
2144	Mechanical Engineers	<b>43,479</b>	1.16%	11.22%
21442	Design and development engineers	<b>41,086</b>	1.15%	15.89%
2143	Environmental Engineers	<b>0</b>	na	na

Employment				
Professionals		2016	yoy increase	increase since 2011
ILO code	Overall	<b>96.1</b>	2.34%	22.73%
2141	Industrial and Production Engineers	<b>13.8</b>	12.49%	70.82%
21413	Logistics Professionals	<b>3.1</b>	na	na
21414	Transport Professionals	<b>4.7</b>	2.77%	na
2144	Mechanical Engineers	<b>19.7</b>	5.53%	32.40%
21442	Design and development engineers	<b>7.9</b>	1.35%	11.00%
2143	Environmental Engineers	<b>0.0</b>	na	na

#### Employment Detail

Overall, the number of new professional jobs slowed down from the trend since 2011. This was true across professional occupations. Work for industrial and production engineers has grown at more than three times the rate of the average.

#### Wage Detail

Wage growth slowed in 2016 compared to the 2011-2015 period, both overall and in the studied occupations. Mechanical (12%) and design/development engineers (6%) make a premium to the average professional wage, and their wages are among those with the highest upward pressure. Wages for transport professionals dropped.



## Czech Workforce: Six

Employment and median wage by occupation in manufacturing, nationwide

### Workforce in Prague: Technicians, Median Wage and Employment, 2011-2016

In the 2011-2016 period, wages of technicians rose at a higher rate than managers and professionals, but at a lower rate than clerical workers, craftsmen and plant operators. Employment rose at three times the rate of craftsmen, but at half the rate of machine operators. In 2016, wages and employment rose at a faster rate than trend from 2011.

Wages				
Technicians		2016	yoy increase	increase since 2011
ILO code	Overall	<b>30,938</b>	3.15%	12.33%
3115	Mechanical Engineering Technicians	<b>31,583</b>	4.84%	17.24%
31152	Engineering designers, designers	<b>31,749</b>	4.97%	21.74%
31153	Engineering technicians, technologists	<b>32,867</b>	3.87%	21.43%
31155	Engineering quality control technicians, laboratory workers	<b>30,984</b>	5.08%	15.74%
31156	Machinery and equipment technicians	<b>29,795</b>	5.22%	11.22%
3122	Manufacturing Supervisors	<b>33,030</b>	3.26%	15.39%
31221	Supervisors and related workers in electrotechnics and power	<b>30,869</b>	-0.29%	11.10%
31223	Supervisors and related workers in mechanical engineering	<b>35,807</b>	5.90%	18.37%

Employment				
Technicians		2016	yoy increase	increase since 2011
ILO code	Overall	<b>217.0</b>	3.09%	12.61%
3115	Mechanical Engineering Technicians	<b>48.9</b>	4.68%	33.10%
31152	Engineering designers, designers	<b>7.0</b>	5.38%	80.05%
31153	Engineering technicians, technologists	<b>7.7</b>	-1.31%	4.42%
31155	Engineering quality control technicians, laboratory workers	<b>10.7</b>	5.94%	23.34%
31156	Machinery and equipment technicians	<b>9.3</b>	6.72%	36.19%
3122	Manufacturing Supervisors	<b>46.0</b>	3.57%	21.91%
31221	Supervisors and related workers in electrotechnics and power	<b>5.9</b>	-5.13%	3.49%
31223	Supervisors and related workers in mechanical engineering	<b>17.9</b>	5.54%	44.59%

#### Employment Detail

Demand is everywhere. Engineering designing jobs are up by 80% since 2011. Mechanical engineering technician positions have increased by 33%. The growth rates for many occupations were slightly slower in 2016, but that could be evidence of a lack of supply, not demand.



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### Workforce in Prague: Clerical, Median Wage and Employment, 2011-2016

In the 2011-2016 period, wages and employment of clerical workers rose right in the middle of other occupation's growth. Wages increased more than managers, professionals and technicians, but below craftsmen and plant operators. In 2016, the pace in wages accelerated over the 2011-2016 trend, and employment significantly increased. Wages for clerical workers are about the same for clerical workers as they are for craftsmen and machine operators, and 20% less than technicians.

Wages				
Clerical		2016	yoy increase	increase since 2011
ILO code	Overall	24,491	4.86%	14.32%
4321	Stock Clerks	23,004	4.73%	15.31%
4322	Production Clerks	27,408	4.52%	17.74%

Employment				
Clerical		2016	yoy increase	increase since 2011
ILO code	Overall	107.8	2.67%	4.05%
4321	Stock Clerks	29.4	-0.42%	-17.95%
4322	Production Clerks	7.1	1.73%	8.29%

#### Employment Detail

In 2016, the downward trend in jobs for stock clerks slowed, while the demand for production clerks increased slightly.

#### Wage Detail

The pressure created by retracting demographics can start to be seen in wages of clerical workers. While demand is decreasing for stock clerks (either in reality or due to a lack of supply), wages are increasing, and the increase in 2016 outpaced the trend from 2011. While the trend of wage increases since 2011 for both stock clerks and production clerks exceeds the overall trend for clerks, the wage growth in 2017 was slightly below that for clerks overall. Stock clerks now make 94% of the average wage for clerical work, while production clerks make 12% more.



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Employment and median wage by occupation in manufacturing, nationwide

### Workforce in Prague: Craftsmen, Median Wage and Employment, 2011-2016

In the 2011-2016 period, craftsmen experienced among the highest wage growth of any occupation, while the growth in the number of jobs grew significantly less than professionals or technicians. In 2016, the pace in wages for most craftsmen accelerated over the 2011-2016 trend, and employment essentially stayed flat. Wages for craftsmen are 6% higher than clerical workers and 4% higher than for machine operators.

		Wages		
Craftsmen		2016	yoy increase	increase since 2011
ILO code	Overall			
72	Metal, Machinery and Related Trades Workers	25,419	4.97%	14.71%
72335	Mechanic and repairers of industrial machinery and equipment	30,605	3.23%	20.13%
7311	Precision-instrument Makers and Repairers	26,499	4.25%	10.83%

		Employment		
Craftsmen		2016	yoy increase	increase since 2011
ILO code	Overall			
72	Metal, Machinery and Related Trades Workers	259	-0.96%	4.86%
72335	Mechanists and repairers of industrial machinery and equipment	14	2.22%	22.12%
7311	Precision-instrument Makers and Repairers	1	12.50%	-57.14%

#### Employment Detail

Employment of metal, machinery and related trade workers dropped in 2016 after rising slowly over the 2011-2016 period. Given the continued substantial wage increase, this seems more due to a drop in supply than in demand. New work for mechanists and repairers slowed after rising sharply between 2011-2015. Precision-instrument work jumped abruptly after a severe drop between 2011-2015.

#### Wage Detail

Despite a drop in employment— more likely due to lack of supply— wages continued to rise. In 2016, both metal, machinery and related trade workers and precision instrument workers saw a increase above the 2011-2015 trend, while the rise for mechanists slowed from the trend. Mechanists now earn 20% more than metal/machinery workers.



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**Workforce in Prague: Machine operators and assemblers, Median Wage and Employment, 2011-2016**

In the 2011-2016 period, machine operators and assemblers experienced among the highest wage growth of any occupation, and topped the wage growth for 2016. Assemblers had one of the top increases in jobs during 2011-2015, while machine operators lost jobs. In 2016, the wage growth for both accelerated, as did employment for assemblers. Machine operators employment nudged upward.

Wages				
Machine Operators and Assemblers		2016	yoy increase	increase since 2011
ILO code	Overall			
81	Stationary Plant and Machine Operators	23,979	5.11%	16.73%
81897	Industrial robot operators	26,295	-1.61%	13.30%
82	Assemblers	22,402	6.19%	22.58%
8344	Lifting Truck Operators	23,174	5.48%	12.73%
9329	Manufacturing Labourers Not Elsewhere Classified	18,407	8.89%	28.01%

Employment				
Machine Operators and Assemblers		2016	yoy increase	increase since 2011
ILO code	Overall			
81	Stationary Plant and Machine Operators	186	0.58%	-1.60%
81897	Industrial robot operators	4	5.88%	-2.70%
82	Assemblers	143	6.79%	22.04%
8344	Lifting Truck Operators	68	12.36%	53.26%
9329	Manufacturing Labourers Not Elsewhere Classified	59	0.34%	28.67%

**Employment Detail**

Employment of manufacturing laborers and lifting truck operators is growing faster than other occupations in the category. While lifting truck operators jobs rose slightly above the torrid trend in 2016, the growth in manufacturing labor jobs slowed almost to a halt. In 2016, jobs for industrial robot operators reversed a negative trend.

**Wage Detail**

Wage growth for assemblers and manufacturing laborers is higher than occupations in the category. Again, this indicates that supply is not meeting demand. Wages for industrial robot operators fell, despite the increase in demand, and the salary trend for these operators is behind that for plant operators and assemblers.