

THE MINIMUM WAGE – THE QUESTION OF DIFFERENTIATION

Petr Makovský

Abstract

The minimum wage is widely used in developed countries all over the world. Although significant functions (social, economic) of all industries minimum wage, in many most developed countries they have involved this tool from the all industry standard constituted by government and its officials into industry based agreement rule negotiated both with employers and employees. This rule reflects unique conditions in particular company or industry. Need to say that in these countries there appear much better working conditions for employees and successful opportunity economic growth for entrepreneurs.

In this article we are going to examine the development in revenues of chosen groups of workers in last ten years in the Czech Republic. We will identify the (dis)advantages of industry based minimum wage and try to list the assumptions and conclusions of positive adoption of collective industry based minimum wage.

Key words: minimum wage, flexicurity, collective negotiation

JEL Code: J08, J21

Introduction

The institute of Minimum wage in the developed countries generally guarantees for properly done work fair wage, which enables achieving a required standard of living. Some authors see the minimum wage as a part of set of policies, due to which in the Europe there could appear a modern wealthy social-economic system - a modern European state. But there are the others that see the minimum wage as a tool of injustice, because more productive workers are subsidizing the less productive workers due their wage based on tasks and in case there is working person who cannot achieve hourly standard of production and therefore should be remunerated lower than the minimum wage, he gains a minimum wage value. There are **two main implications**.

At first profit optimizing firm must create egalitarian remuneration system for all employees, where after time there is under average working productivity **usually expected** and (or) **at second** to access and employ only more productive and skilled workers. The

second result implies that non-skilled and for example elderly workers or women after maternity leave **are not able to be simply employed**.

In this article we are going to analyze the wage distribution in the Czech Republic in order to prove that **there are different impacts of the minimum wage** into the different wages by industry. These are reasons for minimum wage by industry to be taken into account.

Generally we need to compare jobs with the similarities in psychological and physical demands (including demanded degree of education). In Denmark or Germany there is the industrial institute of the minimum wages constituted. The collective agreements between leaders of industry and trade unions **create the system** of remuneration in the current industry including the minimum wage, working period accounts, “short” employment and the others. It is interesting to observe that these results can guarantee their employees **better working conditions, better wages, well paid jobs, higher living standards and no working power profusion** than in the countries with all industry based minimum wage. In these countries there have been still developing a concept “**flexicurity**”. This concept integrates together flexibility of labor employment and security of employees.

Need to say that: *“The lowest limit of wages we can find in every country in the European Union. Twenty of all twenty seven states constitute the minimum wage level as a law. All the others gain this level as the solution of collective agreement between trade unions and employers.”* (Pavelka, 2008)

Of course there are some differences in systems in developed European Union used. Both all-industrial minimum wages and the industry based minimum wage are extremes. Both these concept can be useful equally for companies and employees with solving specific problems (with accent to “weak” pages).

1 The Czech Republic

The all-industry minimum wage institute was established in the Czech Republic late in comparison with the other European developed countries. It was after “velvet” revolution in the year of 1989. Although even before WWII there was the industrial minimum wage in the T&C industry for the military reasons, the all-industrial minimum wage establishing was very late in comparison with the other economies. There was with no objections high time to constitute the instrument in the Czech Republic for the employers **to recognize the social aspect of employment**. Now it’s time to finish the **second step**, the flexible employment of

working force in order to achieve the higher than average productivity and performance than in the other developed European states.

The other problem is **the standard living minimum** and its development and comparison with level of minimum wage. The proper, patient, qualified work must be paid higher than the standard living minimum.

2 The dataset of Czech Republic

Tab. 1: Chosen groups of employee analyzed

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group ¹
Seamstresses, embroiderers and workers in related fields	7436	1 560
Assemblers producing goods by combined materials	8287	2 639
Cleaners and helpers in offices, hotels and hospitals	9132	15 713
Workers cultivating and forest care	6141	1 266
(Stone)Masons, plasterers	7122	5 553
Machine operators producing rubber goods	8231	6 935

Source: <http://www.ispv.cz/cz/Vysledky-setreni/Archiv.aspx> (year2010)

As we see on the following **Tab. 1** seamstresses and embroiderers have the lowest income in long run in the T&C industry in the Czech Republic. In 2010 the average income in this industry is on the value of **13.343,-CZK**. That is very low in comparison with the whole Czech economy, where people usually achieve **23.932,-CZK**. This group is therefore on the 56 % of the average income. Authors assume that potential reader do understand the ordinary terms as median, average, first quartile (decile) and there is no need to define them explicitly.

Thanks to these values we can describe the variability of income distribution and compare themselves. Methodologically we are going to simply compare the value of first decile and the level of the minimum wage in the same year.

Naturally there must appear employees with lower income than the minimum wage, in case they are all remunerated by the same task performance. The company must pay them addition amount and these people do not even gain for firm money to be paid and therefore injustice appears, because there is no chance to evaluate their working performance as in ordinary conditions. We are going to simple show this situation on the “modified” **box-chart**.

¹ Calculated by the months of ordinary employing

Exactly for each year we will show the important values of current distribution of particular group employed.

Tab. 2: Groups analyzed 2010 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	1st Quartile	3rd Quartile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	1 560	12741	8943	10584	15010	18873	13343
Assemblers producing goods by combined materials	8287	2 639	16022	7685	11934	19423	27770	16669
Cleaners and helpers in offices, hotels and hospitals	9132	15 713	11111	8749	9654	13063	15564	11797
Workers cultivating and forest care	6141	1 266	13499	10362	11849	16218	18687	14282
(Stone)Masons, plasterers	7122	5 553	20551	15044	17420	24500	29112	21478
Machine operators producing rubber goods	8231	6 935	22571	15125	17805	26530	29953	22447

Tab. 3: Groups analyzed 2009 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	1st Quartile	3rd Quartile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	1433	12272	8943	10479	14236	16624	12617
Assemblers producing goods by combined materials	8287	2407	16168	7855	11786	21046	26048	16732
Cleaners and helpers in offices, hotels and hospitals	9132	16060	11243	8764	9727	13202	15820	11930
Workers cultivating and forest care	6141	1306	13415	10414	11642	16434	19461	14431
(Stone)Masons, plasterers	7122	6275	20658	14939	17383	25003	29784	21699
Machine operators producing rubber goods	8231	6557	21070	14833	16882	25127	28341	21319

Source: <http://www.ispv.cz/cz/Vysledky-setreni/Archiv.aspx> (year 2010; 2009)

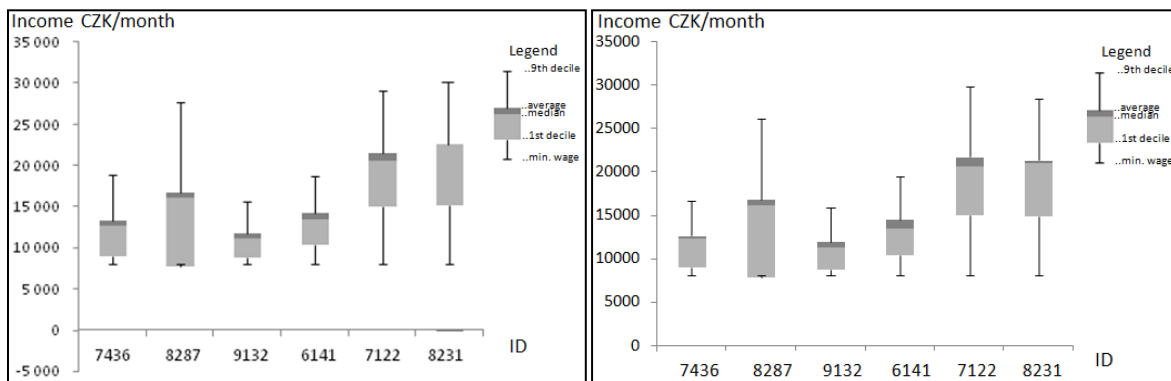
In **Fig 1** we graphically interpret the data from **Tab. 2** and **Tab. 3**. It is a box plot that is a little bit modified. On the horizontal axis there are particular income groups chosen (according to initial ID). The vertical axis there are monthly measured income for these groups, but not only the average income, but also the median, first decile, and the ninth decile. They are all in comparison with the value of the minimum wage in a particular year in order to show a length of distance between the first decile and the minimum wage value.

The negative error abscissa shows the value of the minimum wage in particular year, the lower part of grey zone informs about the first decile and the upper part of grey zone, which is the same as the lower part of black zone shows the median of distribution, then the average and the last one is the positive error abscissa – the ninth decile.

Due to these charts we are able to simply estimate if the minimum wage is **the critical factor** of the particular groups of employees or **the irrelevant factor**. This estimation can be gained according to the length of distance (if it is positive) between the first decile and the value of minimum wage. In many cases we must admit that the minimum wage value is higher than the value of first decile. Moreover we can estimate the amount of critically threatened people employed due to the minimum wage in the low income groups² and moreover to dynamically describe the development of these situation in last ten years (from 2000 to 2010).

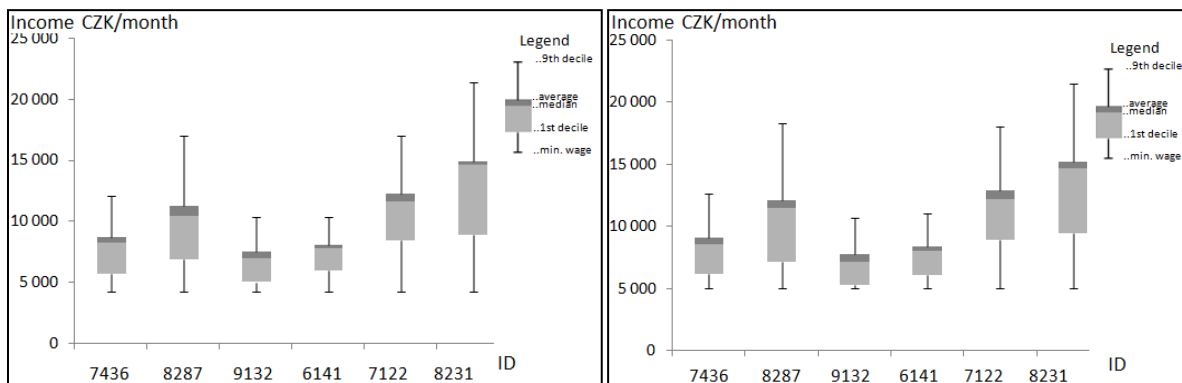
² only if we assume the income distribution as the log-normal distribution in general

Fig. 1: Income distribution (2010 and 2009)



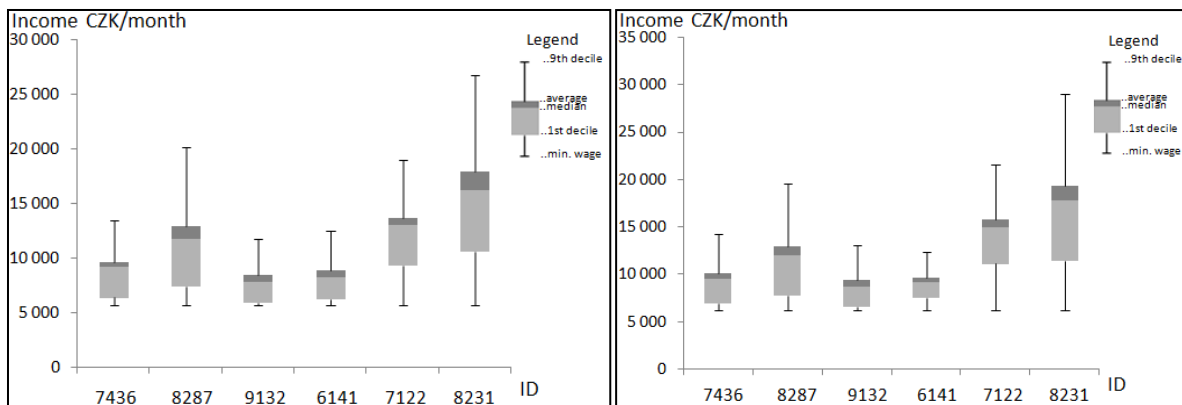
Source: author

Fig. 2: Income distribution (2000 and 2001)



Source: author

Fig. 3: Income distribution (2002 and 2003)



Source: author

Tab. 4: Groups analyzed 2000 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	2635	8234	5648	12069	8671
Assemblers producing goods by combined materials	8287	1279	10434	6846	16991	11261
Cleaners and helpers in offices, hotels and hospitals	9132	6686	6923	4982	10359	7478
Workers cultivating and forest care	6141	1588	7779	5915	10350	8020
(Stone)Masons, plasterers	7122	5799	11560	8406	17014	12203
Machine operators producing rubber goods	8231	4565	14598	8840	21336	14910

Tab. 5: Groups analyzed 2001 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	3192	8609	6166	12617	9092
Assemblers producing goods by combined materials	8287	1616	11466	7181	18331	12100
Cleaners and helpers in offices, hotels and hospitals	9132	8072	7185	5275	10662	7774
Workers cultivating and forest care	6141	1475	8060	6054	11022	8381
(Stone)Masons, plasterers	7122	6253	12205	8912	18051	12924
Machine operators producing rubber goods	8231	5654	14676	9471	21498	15236

Source: <http://www.ispv.cz/cz/Vysledky-setreni/Archiv.aspx> (year 2000; 2001)

Tab. 6: Groups analyzed 2002 (CZK/month)

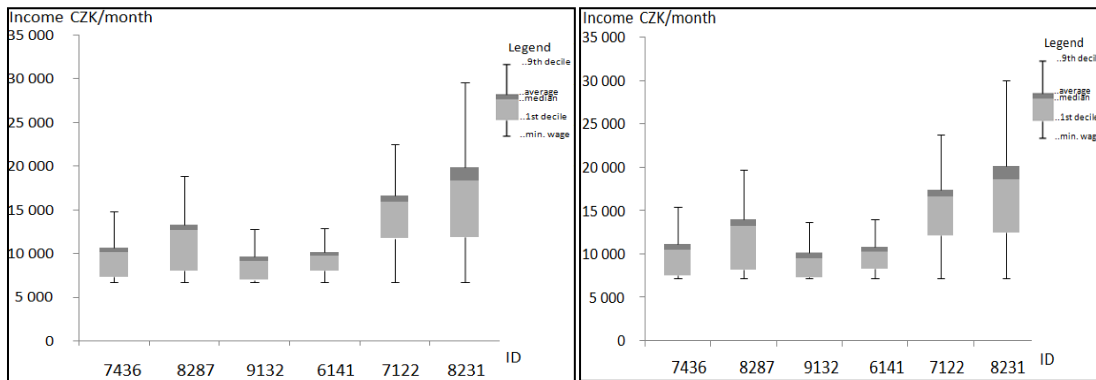
Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	2876	9178	6394	13504	9652
Assemblers producing goods by combined materials	8287	1819	11722	7369	20128	12903
Cleaners and helpers in offices, hotels and hospitals	9132	8047	7879	5909	11771	8505
Workers cultivating and forest care	6141	1091	8286	6257	12479	8902
(Stone)Masons, plasterers	7122	6301	13066	9345	19032	13711
Machine operators producing rubber goods	8231	4962	16227	10619	26780	17879

Tab. 7: Groups analyzed 2003 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	3054	9574	6964	14293	10159
Assemblers producing goods by combined materials	8287	1775	11968	7726	19548	12930
Cleaners and helpers in offices, hotels and hospitals	9132	10086	8760	6564	13011	9410
Workers cultivating and forest care	6141	1664	9226	7563	12364	9679
(Stone)Masons, plasterers	7122	6421	15012	11120	21620	15772
Machine operators producing rubber goods	8231	5250	17829	11442	28995	19380

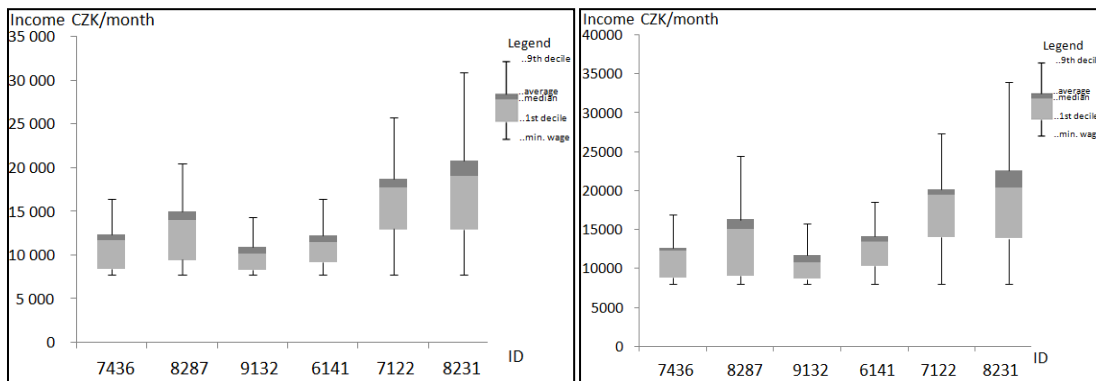
Source: <http://www.ispv.cz/cz/Vysledky-setreni/Archiv.aspx> (year 2002; 2003)

Fig. 4: Income distribution (2004 and 2005)



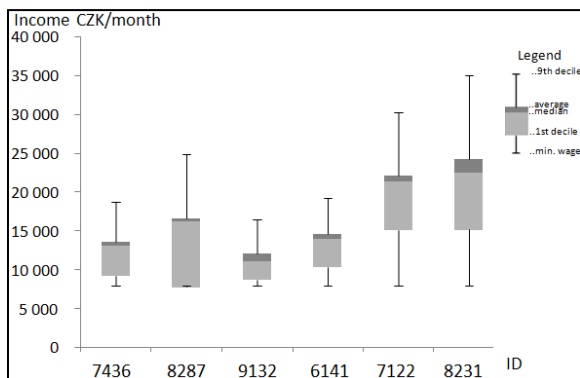
Source: Author

Fig. 5: Income distribution (2006 and 2007)



Source: Author

Fig. 6: Income distribution (2008)



Source: Author

Tab. 8: Groups analyzed 2004 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	2954	10086	7315	14814	10650
Assemblers producing goods by combined materials	8287	1681	12610	8025	18875	13229
Cleaners and helpers in offices, hotels and hospitals	9132	10858	9138	6943	12756	9600
Workers cultivating and forest care	6141	1746	9688	7991	12815	10113
(Stone)Masons, plasterers	7122	6849	15902	11697	22508	16627
Machine operators producing rubber goods	8231	5643	18348	11810	29561	19810

Tab. 9: Groups analyzed 2005 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	2578	10511	7504	15743	11132
Assemblers producing goods by combined materials	8287	2639	13235	8185	19743	14013
Cleaners and helpers in offices, hotels and hospitals	9132	15713	9523	7363	13638	10165
Workers cultivating and forest care	6141	1266	10239	8312	13986	10793
(Stone)Masons, plasterers	7122	5553	16641	12147	23741	17408
Machine operators producing rubber goods	8231	6935	18546	12425	29953	20158

Source: <http://www.ispv.cz/cz/Vysledky-setreni/Archiv.aspx> (year 2004; 2005)

Tab. 10: Groups analyzed 2006 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	1st Quartile	3rd Quartile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	2322	11688	8445	9842	14053	16368	12354
Assemblers producing goods by combined materials	8287	1879	14027	9453	11257	17469	20482	15002
Cleaners and helpers in offices, hotels and hospitals	9132	14828	10161	8330	9045	12007	14365	10964
Workers cultivating and forest care	6141	1664	11494	9144	10051	14009	16462	12295
(Stone)Masons, plasterers	7122	6318	17770	12960	15052	21462	25716	18699
Machine operators producing rubber goods	8231	7700	18986	12907	15106	26910	30834	20804

Tab. 11: Groups analyzed 2007 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	1st Quartile	3rd Quartile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	2150	12248	8832	10089	14263	16860	12622
Assemblers producing goods by combined materials	8287	2999	15008	9041	11351	19638	24448	16244
Cleaners and helpers in offices, hotels and hospitals	9132	16437	10755	8630	9474	12832	15780	11696
Workers cultivating and forest care	6141	1703	13373	10275	11517	16096	18555	14142
(Stone)Masons, plasterers	7122	6376	19436	14016	16341	23102	27347	20125
Machine operators producing rubber goods	8231	7514	20342	13822	16091	29589	33960	22593

Source: <http://www.ispv.cz/cz/Vysledky-setreni/Archiv.aspx> (year 2006; 2007)

Tab. 12: Groups analyzed 2008 (CZK/month)

Employees Groups by the statistics of KZAM-R	ID	Number of employees in each group	Median	1st Decile	1st Quartile	3rd Quartile	9th Decile	Average
Seamstresses, embroiderers and workers in related fields	7436	1906	13167	9290	10928	15796	18741	13663
Assemblers producing goods by combined materials	8287	2841	16308	7797	11953	20351	24890	16685
Cleaners and helpers in offices, hotels and hospitals	9132	16948	11128	8733	9643	13292	16475	12065
Workers cultivating and forest care	6141	1344	14006	10374	11785	16798	19287	14631
(Stone)Masons, plasterers	7122	6278	21376	15172	17833	25515	30293	22147
Machine operators producing rubber goods	8231	7834	22535	15186	17493	30980	35045	24205

Source: <http://www.ispv.cz/cz/Vysledky-setreni/Archiv.aspx> (year 2008)

Tab. 13: The value of minimum wage in particular year constituted (period; CZK/month; CZK/hour)

1991 únor	2 000	10,80
1992 leden	2 200	12,00
1996 leden	2 500	13,60
1998 leden	2 650	14,80
1999 leden	3 250	18,00
1999 červenec	3 600	20,00
2000 leden	4 000	22,30
2000 červenec	4 500	25,00
2001 leden	5 000	30,00
2002 leden	5 700	33,90
2003 leden	6 200	36,90
2004 leden	6 700	39,60
2005 leden	7 185	42,50
2006 leden	7 570	44,70
2006 červenec	7 955	48,10
2007 leden	8 000	48,10

Source: Ministry of labor force and social affairs in the Czech Republic

Conclusion:

In conclusion we will comment some basic results of this analysis. As we could see from previous charts and tables **there are differentiations in wage variability of comparable employees groups in the Czech Republic.** These groups themselves are very stable sorted according to the variability indicators (median, average, deciles) through the time horizon observed. Need to say that there may be employees groups working by task whose are remunerated with lower wage than the value of the minimum wage in particular year. **That is the reason for employer subsidy of this employee.** As we have shown in previous analysis the minimum wage itself can be seen as the critical business problem for companies in some industries. Any growth of the minimum wage **value can threaten more** and more (un)productive employees.

Moreover we have shown that some “fashion” jobs **are independent to the minimum wage.** These businessman and employees do not have to worry about the minimum wage development. In these working groups the minimum wage is **irrelevant factor** through the time horizon observed in the Czech Republic. The question is if the industrial based and negotiated value of minimum wage would be able to be more positive not even for employers but for employees. Above that we need **to better define the main task** of the minimum wage. Should be the wage itself seen as a cost of workforce or the value of working person in social economic state in the European Union in the 21st century!

Acknowledgement

This article was made thanks to support from IG307041; grant fee funded by Internal Grant Agency of Faculty of Bussines and Administration VŠE in Prague.

References:

Books:

- [1] Soukup, Jindrich a kol. *Makroekonomie – moderní přístup*. Praha: Management Press, 2010.
- [2] Hindls, Richard a kol. *Statistika pro ekonomy*. Praha: Professional Publishing, 2006.
- [3] Fotr, Jiří a kol. *Manažerské rozhodování – postupy, metody, nástroje*. Praha: Ekopress, 2006.
- [4] Kislingerová, Eva a kol. *Manažerské finance*. Praha: C.H. Beck, 2004.
- [5] Soukupová, Jana a kol. *Mikroekonomie*. Praha: Management Press, 2002.

Magazine & Newspaper Articles:

- [6] Makovský, Petr. “Middle European Economic Development at the beginning of third Millennium.“ *First Part of the Pre-Conference Proceedings of the Special Focus Symposium on 10th ICESKS: Information, Communication and Economic Sciences in the Knowledge Society* 11 Nov 2010: 141-152.
- [7] Pavelka, Tomáš. “Současná hospodářská krize a její vliv na zaměstnanost cizinců v ČR.“ *Mezinárodní statisticko-ekonomické dny na VŠE v Praze* 9 Sep 2010:
- [8] Barošová, Margita. “Mechanizmy úpravy minimální mzdy“ *Bulletin Rodina a práce* Jan 2005
- [9] PAVELKA, Tomáš. Srovnání minimální mzdy v jednotlivých státech EU. Praha 18.09.2008 19.09.2008. In: LÖSTER, Tomáš, PAVELKA, Tomáš, SOUKUP, Jindřich (ed.). *Mezinárodní statisticko-ekonomické dny na VŠE [CD-ROM]*. Praha : VŠE FIS; VŠE FPH, 2008. 8 s. ISBN 978-80-86175-62-1.

World Wide Web sources of informations

- [10] *Informační systém o průměrném výdělků* July 2011 <www.ispv.cz>
- [11] *Výzkumný ústav práce a sociálních věcí* July 2011 <www.vupsv.cz>
- [12] *Český statistický úřad* July 2011<www.czso.cz>
- [13] *Ministerstvo práce a sociálních věcí ČR* July 2011 <www.mpsv.cz/cs>
- [14] “Key themes in global industrial relations:Minimum wages and relocation of production” July 2011
<www.eurofound.europa.eu/pubdocs/2005/138/en/1/ef05138en.pdf>

Contact

Petr Makovský

University of economics in Prague; Department of Microeconomics

nám. W. Churchilla 4, Praha, Czech Republic

petr.makovsky@vse.cz