

Wage Gap Analysis of nominal compensation costs of Production-line workers versus the cost for all employed in Manufacturing including the former ones 1996-2009

The Bureau of Labour Statistics (BLS) of the U.S. Department of Labour issued annual reports of hourly compensation costs for production-line workers (PLWs) in manufacturing all the way back to 1975. However, beginning with the 2010 data, the annual report incorporates all employed in the manufacturing (AEM) sector, and the BLS will no longer publish reports for production workers only. For this reason, Jus Semper has prepared the comparative assessment of production workers' compensation costs vis-à-vis those of all employed in manufacturing (which includes production workers). This provides an estimate of the gap between compensation costs for AEM and PLWs for 28 countries. This allows analysts to assess the average gap for all countries combined as well as to identify the countries with gaps significantly greater or smaller than the mean for all countries. Unfortunately, annual comparisons cannot date back to 1975, for the data for AEM starts in 1996. It should be noted that the gaps in this case do not have a negative implication per se, for PLWs earn generally less than the average for all employed in manufacturing, which includes managerial and executive levels. Yet when the gap is greater than average it indicates that PLWs are compensated at substantially lower rates than they generally are on average in the 28 countries in this assessment.

On average the hourly compensation cost (wage rate) for PLWs amounts to 82,6% of the cost for AEM between 1996 and 2009 (or a gap of 17,4 percentage points). Given that the standard deviation (SD) from this mean is 8,26, Denmark is the only country surpassing the (SD) above, with an index of 115 for it has the smallest gap between hourly compensation costs for AEM and PLWs, with the latter amounting to 94,6% of the hourly cost of the former. In contrast, Singapore, Mexico and the Philippines have compensation gap averages, between 1996 and 2009, greatly below the SD, with average hourly compensation costs for PLWs that amount to 59,9%, 64,8% and 69,1% of the costs for all employed in manufacturing, respectively. As for trends in the compensation cost gap since 1996, the differences between PLWs costs and AEM costs are widening, for the former average cost amounted to 84,1% in 1996 and in 2009 it amounted to only 81,0%. Indeed, of the 28 countries in the table, 20 widened their gaps, with Singapore widening it the most since the PLWs' compensation cost was 70% of the AEM cost and by 2009 it was down to only 52,6%; a drop of 17,4 percentage points. Ireland, Sweden, Hungary and South Korea are the next countries with the greatest increases in their gaps between 1996 and 2010, with increases of 12,4, 11, 7,3 and 6,7 percentage points respectively. On the other hand, Mexico decreased the gap between PLWs and AEM's cost, during the same period, by 4,9 points, followed by Australia, France, Italy and Netherlands, with decreases of 4,0, 4,0, 2,9 and 2,6 percentage points respectively.

		1996	1998	2000	2002	2004	2006	2008	2009	2010		
United States	Actual nominal wage rate AEM US \$*	\$ 22,47	\$ 23,49	\$ 24,96	\$ 27,36	\$ 29,31	\$ 30,48	\$ 32,78	\$ 34,19	\$ 34,81		
	Actual nominal wage rate PLW US \$	17,82	18,59	19,73	21,42	22,92	23,94	25,64	26,19	-		
	PLW rate as % of AEM rate	0,7931	0,7914	0,7905	0,7829	0,7820	0,7854	0,7822	0,7660		% Average	78,4%
											PLW to AE index	95,0%
Canada	Actual nominal wage rate AEM US \$*	\$ 18,62	\$ 17,73	\$ 18,33	\$ 18,05	\$ 23,67	\$ 28,58	\$ 32,06	\$ 29,59	\$ 34,60		
	Actual nominal wage rate PLW US \$	\$ 17,35	\$ 16,22	\$ 16,78	\$ 16,59	\$ 21,93	\$ 26,12	\$ 29,78	\$ 26,40	-		
	PLW rate as % of AEM rate	0,9318	0,9148	0,9154	0,9191	0,9265	0,9139	0,9289	0,8922		% Average	91,8%
											PLW to AE index	111,1%
Brazil	Actual nominal wage rate AEM US \$*	\$ 7,11	\$ 6,75	\$ 4,35	\$ 3,08	\$ 3,82	\$ 5,99	\$ 8,44	\$ 8,13	\$ 10,08		
	Actual nominal wage rate PLW US \$	\$ 5,81	\$ 5,56	\$ 3,56	\$ 2,59	\$ 3,17	\$ 5,03	\$ 6,94	\$ 6,81	-		
	PLW rate as % of AEM rate	0,8172	0,8237	0,8184	0,8409	0,8298	0,8397	0,8223	0,8376		% Average	82,9%
											PLW to AE index	100,3%
Mexico	Actual nominal wage rate AEM US \$*	\$ 3,05	\$ 3,57	\$ 4,70	\$ 5,59	\$ 5,26	\$ 5,88	\$ 6,47	\$ 5,70	\$ 6,14		
	Actual nominal wage rate PLW US \$	\$ 1,89	\$ 2,26	\$ 3,02	\$ 3,58	\$ 3,40	\$ 3,90	\$ 4,34	\$ 3,81	-		
	PLW rate as % of AEM rate	0,6197	0,6331	0,6426	0,6404	0,6464	0,6633	0,6708	0,6684		% Average	64,8%
											PLW to AE index	78,5%
Austria	Actual nominal wage rate AEM US \$*	\$ 28,12	\$ 25,20	\$ 21,97	\$ 23,38	\$ 31,18	\$ 33,63	\$ 42,86	\$ 42,62	\$ 39,98		
	Actual nominal wage rate PLW US \$	\$ 25,59	\$ 22,85	\$ 20,00	\$ 21,53	\$ 29,00	\$ 31,09	\$ 39,45	\$ 39,14	-		
	PLW rate as % of AEM rate	0,9100	0,9067	0,9103	0,9209	0,9301	0,9245	0,9204	0,9183		% Average	91,8%
											PLW to AE index	111,1%

		1996	1998	2000	2002	2004	2006	2008	2009	2010		
Belgium	Actual nominal wage rate AEM US \$*	\$ 32,71	\$ 29,30	\$ 26,14	\$ 27,76	\$ 39,95	\$ 42,49	\$ 53,88	\$ 52,27	\$ 50,72		
	Actual nominal wage rate PLW US \$	\$ 27,91	\$ 25,04	\$ 22,32	\$ 23,86	\$ 34,05	\$ 35,23	\$ 44,03	\$ 42,80			
	PLW rate as % of AEM rate	0,8533	0,8546	0,8539	0,8595	0,8523	0,8291	0,8172	0,8188	% Average	84,2%	PLW to AE index
Czech Republic	Actual nominal wage rate AEM US \$*	\$ 3,38	\$ 3,55	\$ 3,40	\$ 4,61	\$ 6,57	\$ 8,16	\$ 12,23	\$ 11,42	\$ 11,61		
	Actual nominal wage rate PLW US \$	\$ 2,95	\$ 3,00	\$ 2,85	\$ 3,85	\$ 5,48	\$ 6,83	\$ 10,35	\$ 9,51			
	PLW rate as % of AEM rate	0,8728	0,8451	0,8382	0,8351	0,8341	0,8370	0,8463	0,8327	% Average	84,3%	PLW to AE index
Denmark	Actual nominal wage rate AEM US \$*	--	\$ 24,17	\$ 22,21	\$ 25,45	\$ 35,68	\$ 38,23	\$ 49,70	\$ 48,60	\$ 47,93		
	Actual nominal wage rate PLW US \$	--	\$ 23,50	\$ 21,45	\$ 24,45	\$ 33,53	\$ 36,08	\$ 45,51	\$ 44,99			
	PLW rate as % of AEM rate		0,9723	0,9658	0,9607	0,9397	0,9438	0,9157	0,9257	% Average	94,6%	PLW to AE index
Finland	Actual nominal wage rate AEM US \$*	\$ 25,01	\$ 21,80	\$ 19,87	\$ 22,62	\$ 32,47	\$ 35,23	\$ 43,85	\$ 43,47	\$ 41,10		
	Actual nominal wage rate PLW US \$	\$ 22,20	\$ 19,34	\$ 17,73	\$ 19,79	\$ 28,11	\$ 30,06	\$ 37,64	\$ 36,88			
	PLW rate as % of AEM rate	0,8876	0,8872	0,8923	0,8749	0,8657	0,8533	0,8584	0,8484	% Average	87,1%	PLW to AE index
France	Actual nominal wage rate AEM US \$*	\$ 27,82	\$ 24,97	\$ 21,37	\$ 23,13	\$ 32,14	\$ 33,85	\$ 41,76	\$ 40,37	\$ 39,12		
	Actual nominal wage rate PLW US \$	\$ 19,86	\$ 18,00	\$ 15,96	\$ 17,51	\$ 24,08	\$ 25,83	\$ 32,05	\$ 30,42			
	PLW rate as % of AEM rate	0,7139	0,7209	0,7468	0,7570	0,7492	0,7631	0,7675	0,7535	% Average	74,6%	PLW to AE index
Germany	Actual nominal wage rate AEM US \$*	\$ 33,22	\$ 28,92	\$ 25,41	\$ 27,63	\$ 37,72	\$ 39,37	\$ 47,53	\$ 45,77	\$ 43,83		
	Actual nominal wage rate PLW US \$	\$ 25,72	\$ 22,38	\$ 19,62	\$ 20,98	\$ 28,45	\$ 29,70	\$ 36,07	\$ 34,80			
	PLW rate as % of AEM rate	0,7742	0,7739	0,7721	0,7593	0,7542	0,7544	0,7589	0,7603	% Average	76,3%	PLW to AE index
Hungary	Actual nominal wage rate AEM US \$*	\$ 3,11	\$ 3,09	\$ 2,96	\$ 4,18	\$ 6,17	\$ 6,85	\$ 9,77	\$ 8,62	\$ 8,39		
	Actual nominal wage rate PLW US \$	\$ 2,55	\$ 2,50	\$ 2,36	\$ 3,34	\$ 4,80	\$ 5,26	\$ 7,52	\$ 6,44			
	PLW rate as % of AEM rate	0,8199	0,8091	0,7973	0,7990	0,7780	0,7679	0,7697	0,7471	% Average	78,6%	PLW to AE index
Ireland	Actual nominal wage rate AEM US \$*	\$ 16,87	\$ 16,66	\$ 15,76	\$ 18,88	\$ 27,18	\$ 30,41	\$ 40,53	\$ 40,06	\$ 38,30		
	Actual nominal wage rate PLW US \$	\$ 15,19	\$ 14,65	\$ 13,53	\$ 16,32	\$ 23,58	\$ 25,62	\$ 31,53	\$ 31,09			
	PLW rate as % of AEM rate	0,9004	0,8794	0,8585	0,8644	0,8675	0,8425	0,7779	0,7761	% Average	84,6%	PLW to AE index
Italy	Actual nominal wage rate AEM US \$*	\$ 21,00	\$ 19,20	\$ 16,64	\$ 18,61	\$ 27,11	\$ 28,52	\$ 35,11	\$ 34,32	\$ 33,59		
	Actual nominal wage rate PLW US \$	\$ 18,15	\$ 16,67	\$ 14,53	\$ 16,23	\$ 23,66	\$ 25,19	\$ 31,37	\$ 30,67			
	PLW rate as % of AEM rate	0,8643	0,8682	0,8732	0,8721	0,8727	0,8832	0,8935	0,8936	% Average	87,8%	PLW to AE index

		1996	1998	2000	2002	2004	2006	2008	2009	2010		
Netherlands	Actual nominal wage rate AEM US \$*	--	\$ 23,25	\$ 21,04	\$ 23,73	\$ 33,01	\$ 34,37	\$ 43,09	\$ 41,39	\$ 39,54		
	Actual nominal wage rate PLW US \$	--	\$ 21,29	\$ 18,67	\$ 21,61	\$ 30,58	\$ 32,12	\$ 40,08	\$ 38,99			
	PLW rate as % of AEM rate		0,9157	0,8874	0,9107	0,9264	0,9345	0,9301	0,9420		% Average	92,1%
											PLW to AE index	111,5%
Norway	Actual nominal wage rate AEM US \$*	--	\$ 26,08	\$ 24,50	\$ 30,28	\$ 39,34	\$ 44,37	\$ 56,82	\$ 52,90	\$ 57,13		
	Actual nominal wage rate PLW US \$	--	\$ 24,13	\$ 22,17	\$ 27,14	\$ 34,89	\$ 39,40	\$ 49,90	\$ 45,50			
	PLW rate as % of AEM rate		0,9252	0,9049	0,8963	0,8869	0,8880	0,8782	0,8601		% Average	89,1%
											PLW to AE index	107,9%
Poland	Actual nominal wage rate AEM US \$*	--	\$ 3,46	\$ 3,41	\$ 4,07	\$ 4,79	\$ 6,18	\$ 9,60	\$ 7,72	\$ 8,30		
	Actual nominal wage rate PLW US \$	--	\$ 2,91	\$ 2,75	\$ 3,20	\$ 3,76	\$ 4,85	\$ 7,69	\$ 6,14			
	PLW rate as % of AEM rate		0,8410	0,8065	0,7862	0,7850	0,7848	0,8010	0,7953		% Average	80,0%
											PLW to AE index	96,9%
Portugal	Actual nominal wage rate AEM US \$*	\$ 7,12	\$ 6,67	\$ 5,93	\$ 6,70	\$ 9,23	\$ 9,95	\$ 12,60	\$ 12,30	\$ 11,89		
	Actual nominal wage rate PLW US \$	\$ 6,02	\$ 5,64	\$ 5,01	\$ 5,48	\$ 7,43	\$ 7,83	\$ 9,83	\$ 9,60			
	PLW rate as % of AEM rate	0,8455	0,8456	0,8449	0,8179	0,8050	0,7869	0,7802	0,7805		% Average	81,3%
											PLW to AE index	98,5%
Spain	Actual nominal wage rate AEM US \$*	\$ 15,48	\$ 14,15	\$ 12,40	\$ 13,85	\$ 19,82	\$ 21,80	\$ 27,75	\$ 27,86	\$ 26,66		
	Actual nominal wage rate PLW US \$	\$ 13,21	\$ 11,87	\$ 10,57	\$ 11,80	\$ 16,90	\$ 18,56	\$ 23,60	\$ 23,70			
	PLW rate as % of AEM rate	0,8534	0,8389	0,8524	0,8520	0,8527	0,8514	0,8505	0,8507		% Average	85,0%
											PLW to AE index	103,0%
Sweden	Actual nominal wage rate AEM US \$*	\$ 27,15	\$ 25,20	\$ 23,40	\$ 24,58	\$ 34,72	\$ 36,55	\$ 44,45	\$ 40,92	\$ 43,49		
	Actual nominal wage rate PLW US \$	\$ 24,11	\$ 22,00	\$ 20,25	\$ 20,48	\$ 29,10	\$ 29,58	\$ 36,67	\$ 31,82			
	PLW rate as % of AEM rate	0,8880	0,8730	0,8654	0,8332	0,8381	0,8093	0,8250	0,7776		% Average	83,9%
											PLW to AE index	101,6%
Switzerland	Actual nominal wage rate AEM US \$*	\$ 35,52	\$ 30,98	\$ 26,92	\$ 31,10	\$ 39,41	\$ 40,91	\$ 49,23	\$ 50,54	\$ 51,10		
	Actual nominal wage rate PLW US \$	\$ 28,46	\$ 24,56	\$ 21,29	\$ 24,16	\$ 30,28	\$ 31,35	\$ 37,53	\$ 37,99			
	PLW rate as % of AEM rate	0,8012	0,7928	0,7909	0,7768	0,7683	0,7663	0,7623	0,7517		% Average	77,6%
											PLW to AE index	94,0%
United Kingdom	Actual nominal wage rate AEM US \$*	\$ 17,78	\$ 20,68	\$ 20,67	\$ 22,10	\$ 28,50	\$ 31,23	\$ 34,20	\$ 29,47	\$ 29,11		
	Actual nominal wage rate PLW US \$	\$ 13,94	\$ 16,18	\$ 16,60	\$ 17,28	\$ 23,98	\$ 25,59	\$ 27,81	\$ 23,35			
	PLW rate as % of AEM rate	0,7840	0,7824	0,8031	0,7819	0,8414	0,8194	0,8132	0,7923		% Average	80,2%
											PLW to AE index	97,1%
Japan	Actual nominal wage rate AEM US \$*	\$ 23,67	\$ 20,59	\$ 25,02	\$ 21,48	\$ 25,27	\$ 24,03	\$ 27,48	\$ 30,03	\$ 31,75		
	Actual nominal wage rate PLW US \$	\$ 20,31	\$ 17,63	\$ 21,69	\$ 18,42	\$ 21,65	\$ 19,99	\$ 23,15	\$ 25,36			
	PLW rate as % of AEM rate	0,8580	0,8562	0,8669	0,8575	0,8567	0,8319	0,8424	0,8445		% Average	85,2%
											PLW to AE index	103,1%

		1996	1998	2000	2002	2004	2006	2008	2009	2010		
South Korea	Actual nominal wage rate AEM US \$*	\$ 9,54	\$ 6,62	\$ 9,62	\$ 10,25	\$ 12,63	\$ 17,37	\$ 16,85	\$ 15,06	\$ 17,73		
	Actual nominal wage rate PLW US \$	\$ 8,49	\$ 5,88	\$ 8,54	\$ 9,05	\$ 11,11	\$ 15,32	\$ 14,20	\$ 12,39			
	PLW rate as % of AEM rate	0,8899	0,8882	0,8877	0,8829	0,8797	0,8820	0,8427	0,8227	0,0672	% Average	87,2%
											PLW to AE index	105,6%
Philippines	Actual nominal wage rate AEM US \$*	\$ 1,36	\$ 0,98	\$ 1,00	\$ 1,02	\$ 1,10	\$ 1,35	\$ 1,75	\$ 1,70	\$ 1,88		
	Actual nominal wage rate PLW US \$	\$ 0,96	\$ 0,68	\$ 0,69	\$ 0,69	\$ 0,75	\$ 0,94	\$ 1,21	\$ 1,17			
	PLW rate as % of AEM rate	0,7059	0,6939	0,6900	0,6765	0,6818	0,6963	0,6914	0,6882		% Average	69,1%
											PLW to AE index	83,6%
Singapore	Actual nominal wage rate AEM US \$*	\$ 11,93	\$ 11,47	\$ 11,71	\$ 12,14	\$ 13,20	\$ 13,77	\$ 18,87	\$ 17,54	\$ 19,10		
	Actual nominal wage rate PLW US \$	\$ 8,35	\$ 7,48	\$ 7,39	\$ 6,83	\$ 7,52	\$ 8,69	\$ 9,87	\$ 9,23			
	PLW rate as % of AEM rate	0,6999	0,6521	0,6311	0,5626	0,5697	0,6311	0,5231	0,5262		% Average	59,9%
											PLW to AE index	72,6%
Australia	Actual nominal wage rate AEM US \$*	\$ 19,17	\$ 17,15	\$ 16,45	\$ 17,42	\$ 26,75	\$ 29,17	\$ 35,91	\$ 33,42	\$ 39,67		
	Actual nominal wage rate PLW US \$	\$ 16,73	\$ 14,82	\$ 14,15	\$ 15,36	\$ 23,27	\$ 25,94	\$ 32,52	\$ 30,50			
	PLW rate as % of AEM rate	0,8727	0,8641	0,8602	0,8817	0,8699	0,8893	0,9056	0,9126		% Average	88,2%
											PLW to AE index	106,8%
New Zealand	Actual nominal wage rate AEM US \$*	\$ 12,11	\$ 10,03	\$ 9,00	\$ 9,77	\$ 14,78	\$ 15,75	\$ 19,15	\$ 17,47	\$ 20,42		
	Actual nominal wage rate PLW US \$	\$ 11,18	\$ 9,25	\$ 8,33	\$ 9,09	\$ 13,58	\$ 14,43	\$ 17,20	\$ 15,69			
	PLW rate as % of AEM rate	0,9232	0,9222	0,9256	0,9304	0,9188	0,9162	0,8982	0,8981		% Average	91,7%
											PLW to AE index	111,0%

Production-line workers' average compensation cost as % of All employed in Manufacturing average cost (including the former).

82,58%

***Definitions:**

– The actual nominal manufacturing wage rate is the "hourly compensation cost" as defined by the U.S. Department of Labour, Bureau of Labour Statistics: This includes (1) hourly direct pay and (2) employer social insurance expenditures and other labour taxes. Hourly direct pay includes all payments made directly to the worker, before payroll deductions of any kind, consisting of pay for time worked and other direct pay. Social insurance expenditures and other labour taxes refers to the value of social contributions incurred by employers in order to secure entitlement to social benefits for their employees.

Sources: The Jus Semper Global Alliance analysis using the sources below. (Sources with X indicate that some of their data is directly incorporated in the table):

- Database of World Bank's World Development Indicators, 1975-2011, (GNI & GNI PPP, Atlas method)
- X Hourly Compensation Costs for Production Workers in Manufacturing (34 Country Tables), updated on December 2012. U.S. Dept. of Labour, Bureau of Labour Statistics.
- Global Purchasing Power Parities and Real Expenditures. 2005 International Comparison Program. World Bank 2008.
- Purchasing Power parities – Measurement and Uses by Paul Schreyer and Francette Koechlin, OECD Statistical briefs, March 2002.