Brazil’s Wage Gap Charts

Wage rates for all employed in manufacturing

2018 Report
Wage gap charts for Brazil vis-à-vis selected developed and “emerging” economies, with available wage and PPP data (1996-2016)

(see definitions and sources at the end of report)
Wage gap charts for Brazil vis-à-vis selected developed and “emerging” economies, with available wage and PPP data (1996-2016).

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The Argument for Wage Equalisation
Using Purchasing Power Parities (PPPs)

- **Classic Problem Scenario**
  
  - With market liberalisation, MNCs sell their products in both the host countries and in all other markets where they are active, including their home country, at the same or at a very similar sales price,
  
  - They achieve maximum profitability when the manufacturing process in their developing countries’ operations is at par in quality and production efficiency with the standards used in their home operations but their cost of labour is dramatically lower,
  
  - The MNCs’ markets and their manufacturing and marketing operations are *globalised* but their labour costs remain strategically very low in order to achieve maximum competitiveness and shareholder value at the expense of the South’s workers,
  
  - The resulting situation is one where MNCs get all the benefit. Sometimes the salaries that they pay are higher than the legal minimum wage in the host country. Yet, these wages still keep workers in dire poverty. A minimum wage does not make a living wage even in the most developed economies,
  
  - What has occurred, with market globalisation, is the dramatic widening of the gap between wages in the North and in the South,
  
  - While the standard of living of a worker in the North provides the basic means to make a living and afford a basic standard of comfort, a worker working for the same company, doing the exact same job with the same level of quality and efficiency, lives in a shanty town in a cardboard house with no sewage, water and legal electricity,
  
  - In this way, the huge differential in labour costs is added to the profit margin, keeping the part (the surplus value) that should have provided the worker with an equivalent standard of living to that enjoyed by the same workers in the North. This surplus value from the labour factor is the part rightfully belonging to workers, and that they should have received from inception, as their fair share of the income resulting from the economic activity.
The Argument

- In true democracy the purpose of all governments is to procure the welfare of every rank of society, especially of the dispossessed, with the only end of all having access to a dignified life in an ethos where the end of democratic societies is the social good and not the market. The market is just one vehicle to generate material wellbeing,

- In this ethos, and with markets globalised, workers performing the same or an equivalent job for the same business entity, in the generation of products and services that this entity markets at global prices in the global market, must enjoy an equivalent remuneration,

- This equivalent remuneration is considered a living wage, which is a human right,

- A living wage provides workers in the South with the same ability to fulfil their needs, in terms of food, housing, clothing, healthcare, education, transportation, savings and even leisure, as that enjoyed by equivalent workers in the North, which we define in terms of the purchasing power parities (PPP) as defined by the World Bank and the OECD,

- The definition of a living wage of The Jus Semper Global Alliance is as follows: *A living wage is that which, using the same logic of ILO’s Convention 100, awards “equal pay for work of equal value” between North and South in PPPs terms,*

- The premise is that workers must earn equal pay for equal work in terms of material quality of life for obvious reasons of social justice, but also, and equally important, for reasons of long-term global economic, environmental and social sustainability.
The Argument for Wage Equalisation
Using Purchasing Power Parities (PPPs)

The Argument

The argument of an equivalent living wage is anchored on two criteria:

- Article 23 of the UN Universal Declaration of Human Rights on the following points:
  a. Everyone, without any discrimination, has the right to equal pay for equal work,
  b. Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.
- ILO’s Convention 100 of “equal pay for work of equal value’, which is applied for gender equality, but applied in this case to North-South equality, using PPPs as the mechanism,

The proposal is to make workers in the South earn living wages at par with those of the First World in terms of PPPs in the course of a generation (thirty years),

There will not be any real progress in the true sustainability of people and planet –reversing environmental degradation and significantly reducing poverty– if there is no sustained growth, in that period, in the South’s quality of life, through the gradual closing of the North –South wage gap; attacking, in this way, one of the main causes of poverty, and pursuing concurrently sustainable development –rationally reducing consumption in the North and rationally increasing it to dignified levels in the South, thus reducing our ecological footprint on the planet,

Just as the International Labour Organisation’s Decent Work Agenda states, the decent work concept has led to an international consensus that productive employment and decent work are key elements to achieving poverty reduction,

The material quality of life in Jus Semper’s The Living Wages North and South Initiative (TLWNSI) is defined in terms of purchasing power, so that equal pay occurs when purchasing power is equal,

Purchasing power is determined using purchasing power parities (PPPs),

Purchasing power parities (PPPs) are the rates of currency conversion that eliminate the differences in price levels between countries.
The Argument for Wage Equalisation
Using Purchasing Power Parities (PPPs)

- Concept of Living Wage Using PPPs
  - The concept of a living wage using PPPs is straightforward. To determine real wages in terms of the purchasing power of any country in question, the PPPs of this country are applied to nominal wages. These are the real wages for each country,

  - Purchasing power parities reflect the amount in dollars required in a given country to have the same purchasing power that $1 US has in the United States; e.g.: if the PPP index in one country is 69, then $0.69 are required in that country to buy the same that $1 buys in the US; thus, the cost of living is lower. If the PPP were to be higher than 100, say 120, then $1.20 is required in that country to buy the same that $1 buys in the US; the cost of living is, thus, higher,

  - To calculate a living wage, the real wage of a specific category of US workers is used as the benchmark, and the PPPs of a country in question are then applied to the US wage,

  - This provides the equivalent living wage that a worker in the country in question should be earning in order to be at par in terms of purchasing power to the material quality of life enjoyed by the equivalent US worker. This is the equalised wage in terms of purchasing power,

  - In this way, the comparison between the actual real wage of the country in question exposes the gap, in real terms, between the current real wage of the worker of the country in question and the living wage it should be earning, in order to be equally compensated in terms of PPPs,

  - In practice, since the PPPs vary annually, due to the dynamics of economic forces, the pace of the gradual equalisation of wages, through small real-wage increases, needs to be reviewed annually.

  - It must be pointed out that this rationale does not even take into consideration that the neoliberal paradigm of staunch support for supply-side economics has consistently depressed for three decades the purchasing power of real wages in the US, the benchmark country for wage equalisation. This has been attempted to be resolved by women joining the work force and, fictitiously, through over indebtedness, which eventually has brought us down to the great implosion of capitalism in 2008. In this way, this equalisation analysis is made in the context of a course set forth during three decades of global depression of real wages in favour of international financial capital.
The Argument for Wage Equalisation
Using Purchasing Power Parities (PPPs)

A Classic Example in 2016

- Equivalent manufacturing workers in Mexico and Brazil earn only 18% and 33%, respectively, of what they should be making in order to be compensated at par with their US counterparts in terms of purchasing power,
- US Workers earn $39,03/hour whilst Mexican and Brazilian workers earn only $3,91/hour and $7,98/hour, respectively,
- Since costs of living in PPP terms in Mexico and Brazil are $0,54 and $0,63, respectively, for each $1 US dollar, equivalent Mexican and Brazilian manufacturing workers should be earning instead $21,15/hour and $24,53/hour, respectively, in order to enjoy equal purchasing power compensation,
- The difference is the wage rate gap that employers perversely keep to increase profits,
- Canada, in contrast, has a much smaller gap with its US counterparts, since its nominal wage rate ($30,08) is 77% of the equivalent wage rate ($39,91) needed to be at par, with a PPP of $1,02 per each $1 US dollar.

### Nominal, Real and Equalisation Wage Rate for All Employed in Manufacturing by Using Purchase Power Parities (PPPs) Benchmark

<table>
<thead>
<tr>
<th>Nominal</th>
<th>PPP</th>
<th>PPP</th>
<th>Equalised</th>
<th>Equalisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly</td>
<td></td>
<td></td>
<td>Nominal Hourly</td>
<td></td>
</tr>
<tr>
<td>Wage Rate</td>
<td>2016</td>
<td>Real Wage Rate</td>
<td>Wage Rate</td>
<td>Index</td>
</tr>
<tr>
<td>United States</td>
<td>$39,03</td>
<td>100</td>
<td>$39,03</td>
<td>$39,03</td>
</tr>
<tr>
<td>Canada</td>
<td>$30,08</td>
<td>102</td>
<td>$29,41</td>
<td>$39,91</td>
</tr>
<tr>
<td>Mexico</td>
<td>$3,91</td>
<td>54</td>
<td>$7,22</td>
<td>$21,15</td>
</tr>
<tr>
<td>Brazil</td>
<td>$7,98</td>
<td>63</td>
<td>$12,70</td>
<td>$24,53</td>
</tr>
</tbody>
</table>

Sources:
Data base of World Bank's World Development Indicators, 1975-2016, (private consumption PPP indicator)
The Argument for Wage Equalisation
Using Purchasing Power Parities (PPPs)

- A Classic Example in 2016

- From a graphic perspective, the first pie chart shows the US real wage rate for all employed in the manufacturing sector, which is always the benchmark. In the case of Brasil, the pie chart exhibits the nominal wage rate earned, the nominal wage rate equalised with the US wage rate—always in purchasing power parity terms, and the difference retained inappropriately (deliberately).

- The nominal equalised wage rate of $24,53 is what all employed in Brazil’s manufacturing sector should earn to be equally remunerated (in purchasing power terms) for performing an equivalent task (because Brazil’s PPP cost of living is 63% the cost in the US). Yet, workers only earn $7,98 instead of $24,53, thus the employer deliberately retains $16,55, which constitutes the greater part of the surplus value that legitimately belongs to Brazilian workers, according to TLWNSI’s concept.

- In this way, the second pie chart shows how the employer retains inappropriately 67% of labour’s surplus value, or labour share of income, by only allocating to the worker 33% of what he/she is entitled to.
Wage rate gap comparisons for selected economies

- Nominal wage rates in dollars continued to decrease in 2016 at the same rate as in 2014, averaging a drop of 12.5%, vis-à-vis 12.6% in 2014. This is due to a great extent to the devaluation of these currencies against the dollar. Furthermore, most wage rates in local currencies increased at a lower rate than the 5.4% increase of the US hourly wage rate. As a result, most equalisation indices continued dropping. Only Italy and South Korea sustained their 2014 indices and Singapore was the only one of the twelve economies selected that was able to increase its index in 2016. Since 2012 only three economies did not increase their equalisation gaps. Germany kept the same index and Italy and Singapore improved their equalisation. Of the twelve selected economies, four are worse off than in 1996, Brazil did not change and seven are better off than in 1996. Overall, East Asia economies have fared far better than the rest.

- Among East Asian countries, Singapore has been improving steadily since 2010, increasing its living wage equalisation with the US from 66 to 81 in 2016. South Korea has not been able to recover its highest index (71) in 2014, but at least remained at the same level as in 2014 (68). Japan has not been able to sustain the closing of its wage gap, since its equalisation index dropped two points to 69, from its highest index ever achieved in 2014.

- Outside of East Asia, only Italy, Spain, France and Australia recorded a higher equalisation index in 2016 than twenty years earlier. However, among these countries, only Italy managed to increase its index since 2012, albeit its index remained the same between 2014 and 2016. Canada, Brazil, Mexico, France, United Kingdom, Spain and Australia recorded lower equalisation indices both in 2014 and 2016 than in 2012. Australia is just one point above its equalisation index in 1996 (82 vs. 81). However, Australia dropped the most points in equalisation since 2014, from 90 to 82.

- Brazil has increased its wage gap since 2014 due to the devaluation of its currency since 2010 under a sustained recession. Brazil’s government under Dilma Rousseff continued complying with its minimum wage appreciation law, which increased its nominal value 72.5% between 2010 and 2016 vis-à-vis a 49.7% increase of its consumer price index. However, after she was impeached, the new neoliberal government of Michelle Temer passed a law that puts a freeze on public spending effectively ending compliance with the minimum wage appreciation law. Consequently, in 2017 and 2018 the minimum wage was increased at a slightly lower rate than the NCPI.

- Mexico’s track record since 1996 (and since 1985 if we look back at production-line hourly wages) exposes a deliberate State policy of maintaining real wages at the level of modern-slave-work wages. The government’s survey data was improved in 2016 to include all manufacturing units. This has caused indices to drop 25% on average. Consequently the wage gap is actually much greater than what was being reported and it is now as low as in China, with the difference that China has been increasing real wages steadily. With Mexico there has been virtually no change in equalisation terms for the entire twenty-year period. This makes Mexico, barring the Philippines, the country with the worst living-wage equalisation position of the 34 countries in the three regions of our living-wage gap assessments.

### 2016 gaps between nominal and equalised wage rates with US wage rates using PPPs for private consumption

(Total hourly manufacturing compensation costs in US dollars – US is benchmark)

<table>
<thead>
<tr>
<th>Country</th>
<th>Benchmark</th>
<th>Nominal Wage Rate</th>
<th>Equalised Wage Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>39.03</td>
<td>39.03</td>
<td>39.03</td>
</tr>
<tr>
<td>Germany</td>
<td>43.18</td>
<td>37.72</td>
<td>37.48</td>
</tr>
<tr>
<td>France</td>
<td>35.88</td>
<td>34.90</td>
<td>34.90</td>
</tr>
<tr>
<td>Italy</td>
<td>38.19</td>
<td>32.49</td>
<td>32.49</td>
</tr>
<tr>
<td>Australia</td>
<td>38.19</td>
<td>34.90</td>
<td>34.90</td>
</tr>
<tr>
<td>Singapore</td>
<td>38.19</td>
<td>33.18</td>
<td>33.18</td>
</tr>
<tr>
<td>Canada</td>
<td>33.76</td>
<td>28.41</td>
<td>28.41</td>
</tr>
<tr>
<td>Spain</td>
<td>31.79</td>
<td>23.44</td>
<td>23.44</td>
</tr>
<tr>
<td>Japan</td>
<td>32%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>South Korea</td>
<td>33%</td>
<td>32%</td>
<td>32%</td>
</tr>
<tr>
<td>UK</td>
<td>33%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Brazil</td>
<td>67%</td>
<td>21.15</td>
<td>21.15</td>
</tr>
<tr>
<td>Mexico</td>
<td>82%</td>
<td>7.98</td>
<td>7.98</td>
</tr>
</tbody>
</table>

Gap between Nominal and Equalised wages rates in terms of purchasing power parities

1) If lighter bar is greater than darker bar= Nominal wage rate is superior to rate required to be at par with US.
2) If darker bar is greater than lighter bar= Nominal wage rate is less than wage rate required to be at par with US.
3) If both bars are in equilibrium= Nominal wage rate is equivalent to nominal wage rate in US in terms of purchasing power

The size of wage gap is expressed in percentages. If negative, there is a wage advantage instead of a wage gap for nominal wage
rate is superior to rate required to be at par with US. Comparisons are in terms of hourly compensation costs as explained in T5.)

Sources:
- Data of World Bank’s World Development Indicators, 1975-2016, (PPP indicator for private consumption)
- International Comparisons of Hourly Compensation Costs for all employed in Manufacturing,
Brazil has no longer sustained the closing of its Eq-Idx due to the deep recession that has ensued in the last years. Furthermore, Brazil's Temer government passed a new law (PEC 55) that freezes all public spending for 20 years, which implies that constitutionally-protected government expenditures in the areas of health, education and other social sectors would remain stunted until 2036. This has in practice ended Brazil's minimum wage appreciation policy.

- Brazil's wage policy was redefined with its 2010 legally-binding wage-appreciation plan to annually raise the real minimum wage above inflation. The plan was scheduled to continue until 2023 by following the simple formula of increasing the wage rate by adding the rate of GDP growth for the year two years prior to the inflation rate of the previous year. This plan is described in the following section (page 18), and until 2016 is used as a reference in the projection for the closing of the wage rate gap for all employed in manufacturing in the span of not more than thirty years, based on TLWNSI's living wage equalisation concept, given the strong affinity that both approaches share.

- 1996–the first year with comparable wage rate data available for all employed in the manufacturing sector–and 1998, were the best equalisation indices with the US for Brazil, with a 33 index (using private consumption PPPs) for both years. The equalisation indices subsequently dropped to as low as 28 between 2002 and 2004 as a result of Brazil’s economic recession at the turn of the century. As the economy recovered, equalisation indices also slowly recovered, and, after 2010, once the minimum wage recovery plan was implemented, the equalisation index in the manufacturing sector reached its best position in 2014 (35). However, a series of steep devaluations of almost 10% in 2013, 8% in 2014, a deep collapse of the Real of 29.3% in 2015 and another drop of 4.7% in 2016, produced a total decline of 44.1% of the Real value since 2012. In 2017 the Real revalued 9.4% but so far (September 2018) it has gone again steeply down by 24%. Despite the steep and progressive devaluations, inflation has not exploded as it did in previous crises in the last century, recording, according to DIESSE, a CPI of: 6.2% in 2012, 5.6% in 2013, 6.2% in 2014, 11.3% in 2015, 6.6% in 2016, 2.1% in 2017 and it is slated to reach 4.2% by the end of 2018.

- Brazil's minimum wage appreciation policy, which was applied every year, tends to directly impact the behaviour of wages in all sectors. Hence, manufacturing hourly wage rates in local currency increased above inflation, by 36.1% since 2011 up to 2015 versus 26.3% for inflation. However, manufacturing wages in local currency increased only 5.05% in 2016 versus 11.3% for inflation. Thus, manufacturing wages barely increased above inflation for the entire 2011 and 2016 period (43% versus 40.6%). Despite the recession, Brazil's manufacturing Eq-Idx was able to increase to 35 in 2014, its best recorded index ever. But as inflation began to climb in 2015 and even more so in 2016, local currency lost value with steep devaluations in 2015 and 2016. These factors and the fact that the US hourly wage rates in manufacturing increased 1,81% in 2015 and 3,5% in 2016, made Brazil's Eq-Idx, drop almost 6% in two years, to a 33 index, the same as twenty years before, in 1996. Despite the Real's devaluation, the steep inflationary increase of 2013 made the PPP go up slightly in 2016. This, combined with the increase of the US rate, made Brazil's equalisation lose ground (for further detail see table T5 on page 24). As explained above, inflation appears to be now under control and substantially lower than in previous currency declines.

- The biggest obstacles to sustaining the closure of the wage rate gap are the PPP cost of living and GDP growth. In 1996 the PPP cost of living for private consumption was $0,94 dollars or 94% the US cost of living. Then, at the deepest point of Brazil's recession, the PPP had dropped to $0,45 in 2002. Subsequently, Brazil's recovery made the cost of living extremely expensive again, to the point that by 2011 Brazil had become as expensive as the US, with a PPP cost of living of 99% or 99% the US cost of living. The combination of the Real's devaluation and a relatively tamed inflation ensued a steep drop of the PPPs by dropping to $0,83 in 2013, $0,80 in 2014, $0,61 in 2015 and slightly up again to 63 in 2016. The higher the PPP, the higher the equalisation wage rate required. If the PPP is 99% of the US rate, then the nominal Brazilian wage rate required in US dollars, to be fully equalised with the US wage rate, must be 99% of the US wage rate. If inflation is higher than in the US and the Real's value is sustained the PPP will grow and viceversa. Exchange rates have a direct bearing on the PPP. Equalisation depends on the combined behaviour of wage rates and PPPs. As previously explained, the PPP is the rate of currency conversion that equalises the purchasing power of currencies. Thus, it acts as the estimated effective exchange rate used to reflect the real cost of living in a given country. The factors directly affecting the PPP are the NCPI (inflation rate) and the exchange rate.

- Because of inflation, whilst the cumulative increase of hourly wages in nominal terms between 2009 and 2016 was 67,42% in local currency, in real terms it was only 8,02%. As for hourly wages in US dollars for the same period, the cumulative increase was of 4,1% in nominal terms and of 21,8% in real terms, primarily due to the steep drop of the PPP, from 80 to 63. Overall, for the entire 1996–2016 period, Brazil's hourly wage rate in dollar terms increased 12,9% in nominal terms and 69,1% in PPP terms. But the equalisation index is still the same after twenty years, because the US hourly rate increased 73,8% during the same period (for further detail see table T5 on page 24).

- For Brazil to consistently reduce its living wage gap to equalise real wages with those of its US counterparts for all employed in manufacturing, it must put inflation in check (below 5%) and continue to increase nominal wages above inflation rates. Concurrently, Brazil must recover its momentum and resume high economic growth rates of at least 4 to 5% of the annual GDP. Between 2002 and 2005 Brazil averaged a 3,05% GDP; for the 2006-10 period it averaged a 4,5% GDP growth, and between 2011 and 2013 it averaged a 2,9% growth. However, GDP dropped in 2014 to -0,1% and 2015 to 0,1% and in 2016 it reached its best position in 2014 (35). However, a series of steep devaluations of almost 10% in 2013, 8% in 2014, a deep collapse of the Real of 29.3% in 2015 and another drop of 4.7% in 2016, produced a total decline of 44.1% of the Real value since 2012. In 2017 the Real revalued 9.4% but so far (September 2018) it has gone again steeply down by 24%. Despite the steep and progressive devaluations, inflation has not exploded as it did in previous crises in the last century, recording, according to DIESSE, a CPI of: 6.2% in 2012, 5.6% in 2013, 6.2% in 2014, 11.3% in 2015, 6.6% in 2016, 2.1% in 2017 and it is slated to reach 4.2% by the end of 2018.

- Unfortunately, Temer's government was able to get Brazil's Congress to pass a new law (PEC 55) that freezes all public spending for 20 years, which implies that constitutionally-protected government expenditures in the areas of health, education and other social sectors would remain stunted until 2036. This has in practice ended Brazil's minimum wage appreciation policy.
The chart below provides a complete illustration of the behaviour of Brazil’s manufacturing wage rates vis-à-vis U.S wage rates since 1996. Between 1996 and 2002, the US hourly wage rate increased 22%, but Brazil’s nominal rate dropped by 56% whilst its equalised nominal rate only dropped by 48%. As a result, the Eq-Idx dropped from 33 to 28. Then, between 2002 and 2016, the US rate grew 42.7% and Brazil’s nominal rate increased 159%, with the equalised rate growing by 121%. Consequently, the Eq-Idx improved five points since 2002, but nothing since 1996. Brazil’s real wage rate increased 69.1% since 1996. This is less than the 73.8% that the US wage rate increased during the same time period. Yet, if inflation is kept in check to reduce the PPP cost of living and GDP grows above 4%, Brazil should have been able to resume and sustain the growth of its equalisation index (for further detail see table T5 on page 24). However, with the new PEC 55 law, this is no longer the possible for the foreseeable future.
Gap between hourly nominal and equalised wage rates in PPP terms for all employed in manufacturing with equivalent US real wage (current dollars)

Size of gap between nominal and equalised wage rates

Sources: WB, US BLS, TCB, OECD – © The Jus Semper Global Alliance
Gap between equalisation index and size of manufacturing hourly real wage rate gap in Brazil vis-à-vis US real wage rate

Sources: WB, US BLS, TCB, OECD – © The Jus Semper Global Alliance
From 2002 Brazil experienced a sharp increase in its cost of living due to a sustained growth of inflation, which began to drop in 2012. The NCPI averaged 6.8% between 2001 and 2016, whilst it averaged 2.1% in the US. Every increase in the PPP increases Brazil’s equalised nominal wage rate vis-à-vis the US. To sustain equalisation, Brazil’s PPP must decrease with lower inflation rates—or at least not grow at even higher rates—and real wage rate growth must be sustained.

Performance of equalisation indices of Brazil’s PPP manufacturing hourly real wage rate vis-à-vis US counterparts and behaviour of Brazil’s purchasing power parity indices (cost of living in PPP terms – US= 100)
When comparing Brazil’s manufacturing sector real wage rates with those of Mexico, the second largest economy in Iberian America, the former amounted to 1.74 times the value of the latter in 1996 to then drop 22% at the lowest point of its recession in 2002. Since then Brazil’s manufacturing wage rates have recovered and recorded almost the same ratio with Mexico than in 1996.

Behavior of comparative indices of Brazil’s manufacturing hourly real wage rate vis-à-vis the equivalent Mexican wage rate (Mexico = 100)

Sources: WB, US BLS, TCB, OECD – © The Jus Semper Global Alliance
When comparing the relationship between the PPP cost of living and the Eq-Idx achieved by Brazil and Mexico, Mexico, in stark contrast with Brazil, does not experience a steep surge of its PPPs, and yet Mexico exhibits almost a flat line in its Eq-Idx, which is due to a well documented deliberate policy of wage contention. Conversely, Brazil’s Eq-Idx is indeed affected by the steep increase in the PPP after 2002 and yet its equalisation index recovers and surpasses that of Mexico.

Performance of equalisation indices of PPP manufacturing hourly real wage rates of Brazil and Mexico with US counterparts and behaviour of purchasing power parity indices

(cost of living in PPP terms – US= 100)
Thirty-year projection of the closing of the real wage rate equalisation gap

- **Projection of real wage rate equalisation for all employed in the manufacturing sector between Brazil and the United States in the term of thirty years or less, based on TLWNSI's concept**

- **Background.** At the end of 2009, the Brazilian State makes the decision to redefine the future of its wage policy by clearly establishing a commitment not just with the return of wages to their 1996 level -when they recorded their best position vis-à-vis the US- but with their equalisation with the equivalent wages in the main economies of the system. Beginning in 2010 a plan for the annual increase of the minimum wage -described by the government as the “minimum wage appreciation policy”- is put in place (Media Provisória No 474, de 23 de dezembro de 2009: Dispõe sobre o salário mínimo a partir de 1o de janeiro de 2010 e estabelece diretrizes para a política de valorização do salário mínimo entre 2011 e 2023). As is the case in most countries, the minimum wage operates as the benchmark to assess the wage level of all jobs in the economy. Thus, every increase to the minimum wage induces an increase in all other wage racks. In this way, for 2010, the Brazilian government increased the minimum wage 5.87% above inflation. The increase amounts, in nominal terms, to an increase of 9.68% or R$510 Reais monthly. The measure constitutes a direct action of real wage recovery, regardless of business performance. Inevitably, this will transfer income from employers to workers, thus increasing labour's share of income within the economy. The measure transfers wealth from capital to labour, consequently moving forward towards a living wage ethos.

- Even of more importance, Brazil's government sent to Congress in 2010 a legislative project with three proposals to adjust the minimum wage, for the periods 2012 to 2015, 2016 to 2019 and 2020 to 2023. The plan clearly shows the intention of gradually closing the wage gap with the wages of the major economies up to 2023. The specific formula used by Brazil is the sum of the national consumer price index (NCPI) plus the variation of the GDP recorded for the year two years prior, if it is positive. For example, if a year's inflation is 5% and GDP grows 4%, the nominal increase will be 9% and the real growth 4%. The project was approved into law in 2011 (LEI 12.382/2011) with the same criteria. In this way, for 2011, the 2010 NCPI was computed to be 6.47%, and since there was an actual drop of -0.6% of GDP in 2009, the new minimum wage for 2011 approved was R$545 (rounded up from R$543), an increase of 6.86% (SUBCHIA DE ASSUNTOS PARLAMENTARES – EMI n° 27/ME/MTE/MPS – 7 de fevereiro de 2011). A negative GDP is not taken into account. The nominal increases for 2012, 2013, 2014, 2015 and 2016 were 14.13%, 9%, 6.78%, 8.84% and 11.68% respectively (to reach R$880) and increases in real terms for 2012, 2013, 2014, 2015 and 2016 were 7.59%, 2.64%, 1.16%, 2.46% and 0.36% respectively. The average annual nominal increase for 2010-2016 is then of 9.57%, with an average real increase of 2.94%. Taking into account that these nominal increases are much larger than average wage increases in the US (of 3% or less), living wage equalisation was bound to improve substantially as long as inflation was maintained below a ceiling of 5% in general. For the minimum wage, the combined nominal increase for the 2010-2016 period is now of 89.2%, while the NCPI's combined growth was of 56%. As for Brazilians employed in manufacturing, the combined nominal wage rate increase for the 2010-16 period is -4.1% in U.S dollars and 67.5% in local currency. By the same token, in real terms, the increase of the minimum wage for the 2010-2016 period is 22.2%, in local currency, whilst the increase of the manufacturing wage rate is 8.2% in real terms, an annual average of 3.17 and 1.17% respectively. In PPP terms, however, manufacturing wages increased 21.8%, equivalent to an annual average of 3.1% for the same period. Comparing apples with apples, manufacturing wages increased 36.9% of the increase of the minimum wage, in real terms in local currency. The annual increments of the minimum and manufacturing wages, and the combined increase in local currency in the period for 2010-2016 period, are illustrated in the charts on the following page.

- Things have changed for the worse with the new government of Michelle Temer, however, because the new law (PEC 55) effectively ended compliance with Brazil's minimum wage appreciation law. According to the latter, the GDP changes for 2015 and 2016 should have been used to determine the minimum wage increase for 2017 and 2018 respectively. Given that the GDP for 2015 was -3.8% and for 2016 was -3.6, only the NCPI should have been taken into account. Nonetheless, the Temer government increased the minimum wage slightly below inflation. The NCPI in 2016 was 6.58% and the minimum wage increase for 2017 was of only 6.48%, to 937 Reais. The NCPI in 2017 was 2.07% and the minimum wage increase for 2018 was of only 1.81%, to 954 Reais. Thus, the minimum wage has already lost 2.1% in real terms. Unless the PEC 55 law is abrogated by the new government to be elected at the end of 2018, all wages are bound to continue losing value and the workers' share of income will decrease once again.

- The core element in the reduction of poverty is, undoubtedly, the transformation of Brazilian wages from their current undignified condition into living wages, through the equalisation of all real wages in the entire economy with those of their counterparts in the most developed economies. The scope of the Brazilian plan of wage appreciation was set up to last at least until 2023. As we shall see ahead, our analysis indicates that it is implausible that Brazilian wages would have been equalised -in purchasing power parity terms- with those of their US counterparts -the international benchmark- in the term of fourteen years (2010 to 2023). Yet, it would be possible to place the wages of some major economic sectors -such as manufacturing- by 2023 in ranks not as distant as today to those of economies currently regarded as developed, such as South Korea and Spain. The plan up to 2023, if inflation is put under control, would have placed a great deal of labour compensations halfway into living wages. This would constitute a great breakthrough in the reduction of poverty, but the time span would be not even close enough to fully close the wage gaps between Brazil and the major economies. If and only if Brazil is able to resume economic growth at the rate of at least 4-5% per annum and keep inflation below 5% annually, it would need, at the very least, twenty-two more years (around 2045), for a total of twenty-nine years (2017-2045), as is indicated ahead. This of course is no longer the plan of the current government and it is impossible to foresee what will happen given the current political crisis that has ensued in Brazil. Nonetheless, we are projecting what would happen if the minimum wage appreciation law would still be in effect to show the nominal and real wage increases required to equalise manufacturing wages in the time span of less than thirty years.
Thirty-year projection of the closing of the real wage rate equalisation gap

Brazil: Percent increase of minimum and manufacturing wages in nominal and real terms

<table>
<thead>
<tr>
<th>Year</th>
<th>Minimum wage % increase in nominal terms</th>
<th>Minimum wage % increase in real terms</th>
<th>Manufacturing hourly wage % increase in nominal terms</th>
<th>Manufacturing hourly wage % increase in real terms</th>
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<td>2016</td>
<td>-5.60</td>
<td>0.36</td>
<td>1.81</td>
<td>11.68</td>
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Sources: WB, US BLS, TCB, OECD – © The Jus Semper Global Alliance
**Affinity with TLWNSI’s concept.** Brazil’s wage appreciation concept uses two criteria that are quite similar to TLWNSI’s criteria. In order to determine the increase to be applied to the minimum wage, this policy uses the sum of the inflation index, or (NCPI), of the immediately preceding year and the growth of GDP recorded for the year two years prior. TLWNSI’s conceptual framework also uses the sum of the inflationary index of the immediately preceding year plus several percentage points. The exact amount of additional points depends on the size of the gap and the term that each government imposes on itself to fulfill the goal of closing the wage gap. TLWNSI’s goal is the equalisation of wages—in purchasing power parity terms—of developing countries with their US counterparts in the term of not more than thirty years or a generation. TLWNSI’s research indicates that, to fulfill the goal—in the maximum term of thirty years— most economies need to increase wages annually an average of 5% (+/- 2%) above inflation. Thus, if inflation averages 5%, wages would increase nominally an average of 10% to reach TLWNSI’s goal. There is one weakness in the Brazilian criteria, nevertheless, which is that if there is no GDP growth, then there is no real wage growth. After two years of GDP “degrowth”, Brazil managed to barely increase its GDP by 1% in 2017 and it is slated to grow not more than 1,6% in 2018. Consequently, unless Brazil changes its criteria to increase the minimum wage in real terms to at least 3-5% above inflation, if there is no GDP growth, real wages in general and the equalisation of manufacturing wages in particular would remain stagnant if this law is reactivated.

**Projection layout.** Using as benchmarks all employed in manufacturing wage rates for Brazil and the US in 2016, following is a thirty-year projection for the equalisation of Brazilian real wages with those of their US counterparts. The projection makes the assumption that the Brazilian State keeps increasing minimum wages annually as if its minimum wage appreciation policy would still be in effect. It is assumed, with a great degree of confidence, that real wages for workers in all sectors of the economy increase at a similar pace to what the Brazilian State imbues on the minimum wage—based on the inflationary index and GDP growth. This is so given that the minimum wage operates as the benchmark for the wage increases applied—or not—to all other wage racks. If real minimum wage increases take place, employers would feel compelled to raise other wages at a similar pace to maintain their competitiveness in the labour market.

Despite the fact that Brazil’s wage appreciation policy in no longer in place, the purpose of this projection is to assess what would happen in the future to manufacturing wages if Brazil’s new government— to be elected at the end of 2018— raises the minimum wage in line with its former plan for minimum wage appreciation. In this way, the projection lets us observe with precision what is the wage rate equalisation index at the end of year 2023, as the Brazilian plan was set out to reach. Moreover, given that the equalisation gap will not be closed by 2023, it determines the number of additional years that would be required to reach wage equalisation with the United States in the manufacturing sector. The projection assumes that Brazil increases the minimum wage in real terms by 5% and 10% in nominal terms annually, regardless of its GDP performance.

The projection assumes that the start of the Brazilian plan takes place in 2017. Hence the benchmark used is the wage rate recorded for 2016 for all workers employed in the manufacturing sector. As in the case of all previous charts, the analysis uses as its source the nominal wage rate data reported previously by the US Department of Labour and currently by The Conference Board, using the same methodology and sources. Moreover, to calculate the cost of living and the size of the wage rate gap, the purchasing power parities that the World Bank estimates annually and applies to many economic indicators are applied herein as well. This analysis uses the PPP for private consumption for Brazil, generated by the World Bank’s economic indicators database.
Criteria applied in the projection:

- Average US inflation: 2.5%, (average of 2.06% between 2001 and 2017).
- Average Brazilian inflation: 5% for the entire 30 years of the projection, (average of 6.9% between 2001 and 2017).
- Brazil's average GDP growth: 5%, (average of 2.7% between 2001 and 2017).
- Average nominal increase of Brazilian wages in US dollars (NCPI + GDP) of 10% until closing the gap and of 5% thereafter until year 30. Using the minimum wages increased in 2017 (6.48%) and 2018 (1.81%) by the Temer government, manufacturing wages are conservatively increased 5.3% in 2017 and 1.7% in 2018, given that manufacturing wages have increased 20% less on average than the minimum wage between 2010 and 2016.
- The inflation rate of 2.1% for 2017 is already incorporated into the projection and a 5% inflation rate is assumed for 2018.
- Real value of wages in the US remains constant, increasing 2.5% annually their nominal value to neutralise inflation.
- The benchmarks –and starting point– used in this projection are the real PPP manufacturing wage rates for both economies for the year 2016 (Brazil: $12.70 and United States: $39.03) and nominal rates (Brazil: $7.98 and United States: $39.03). This thirty-year projection covers the 2017 to 2046 span of time.
- The projection is entirely estimated in US dollars. Inflation is accounted for through the World Bank's PPPs conversion factor for private consumption, and then projected to increase an annual average of 5% in US dollars. PPPs are the rates of currency conversion that eliminate the differences in price levels between countries.

Results of the thirty-year projection:

- This projection at no time pretends to forecast what would be the inflationary indices, exchange rates or the rates of wage rate increases that will occur in Brazil or the US in the future. For this projection, the average behaviour of these indicators has been established by making assumptions in a discretionary manner – based on the data recorded in the last few years– with the only purpose of projecting what would be the level of nominal wage rate increase, the equalisation indices and the time span for equalisation in the context of the minimum wage appreciation plan that the Brazilian government had in place.
- At the end of the fourteen-year term (2023) covered by the Brazilian plan (7 years beginning in 2017), the closing of the wage rate gap has not been met, albeit there has been meaningful progress, from a 33 to a 41 equalisation index.
- For Brazilian wages to be fully equalised with the wages of their counterparts in the United States, it is necessary to maintain the same pace of annual nominal wage increases of 10% for a total of 27 years (2017 and 2018 are increased only by 5.3% and 1.7% respectively) –for a real wage annual increment of 5%– with a nominal wage increase of 6.03% on year 29 and of 5% on year 30.
- In this way, wage equalisation with the US would take 29 years of real wage increments, at this pace, to be fulfilled. A slower pace would evidently require more than thirty years.
- For year 30 it is assumed the same average inflation rate of 5%, 2.5% above the US average inflation level. In this way, nominal wages both in Brazil and the US are only increased at the same pace of inflation (5% and 2.5% respectively), so as to maintain their real value and the parity already equalised with the wages of their US counterparts.
- Evidently, to achieve this goal, Brazil must keep inflation rates in check at an average of 5%, which is 1.9 points less than the average for the 2001-2017 period. The fundamental factor is to keep inflation low –and maintain a healthy GDP growth. As long as the NCPI is kept at not more than 5% and nominal wages are increased annually at an average of 10%, equalisation would progress, if future governments have the political will to increase the workers’s share of income by reactivating the aforementioned law.
- As the data from The Conference Board becomes available for subsequent years, we will assess how closely the minimum wage increases are reflected in manufacturing wages. For now, the average nominal increases to the manufacturing wage rates in local currency for 2010 thru 2016 was 7.7% for the seven-year period, 80% the average rate increase to the minimum wage for the same period (9.6%). Even if future governments do not reactivate the minimum wage appreciation policy, we will continue to project the closing of the wage gap of manufacturing wages in the span of thirty years.
Thirty-year projection of real wage equalisation in the manufacturing sector for all employed in Brazil’s manufacturing sector with their US counterparts, at an annual average nominal increase of 10% until reaching equalisation (5% in real terms).

Not a forecasting analysis. This projection at no time pretends to forecast what would be the inflationary indices, exchange rates or the wage rate increases that will occur in Brazil or the US in the future. For this projection, the average behaviour of these indicators has been established by making assumptions in a discretionary manner – based on the data recorded in the last few years – with the only purpose of projecting what would be the level of nominal wage increase, the equalisation indices and the time span for equalisation in the context of the minimum wage appreciation plan that the Brazilian government had in place.

Sources: WB, US BLS, TCB, OECD – © The Jus Semper Global Alliance
Parting from the implications carried by the —already abrogated— plan of Brazil’s government to increase minimum wages in a sustainable manner up to 2023 – and using as the benchmark Brazil’s workers in the manufacturing sector– it can be asserted that the policy to be applied would generate, in all certainty, rather meaningful social and economic benefits in all economic sectors if this policy were to be reactivated.

Although Brazil’s plan would have not closed whatsoever the living wage gap with the United States by 2023, it would have undoubtedly embodied a meaningful improvement that would have triggered different multiplying effects that would have generated the endogenous development of Brazil. This would have placed it closer to the socioeconomic indicators of developed than of developing countries. With Dilma Rousseff’s government ousted, the Temer government immediately changed the policy and applied increases to the minimum wage below inflation in 2017 and 2018. This may change if the new presidential election returns power to Brazil’s Workers Party. There is currently a major convoluted political crisis. Lula da Silva —the leading candidate in the election— has been put in prison, with a 12 year sentence— for alleged corruption charges that have not been proven yet— and barred from running in the election. The second in the race is Jair Bolsonaro —from the far right populist sector, who was stabbed in a recent rally and is convalescing from the injury. Consequently, given the deep political polarisation of Brazil’s society, it is impossible to foresee the outcome and how this will affect the minimum wage policy and manufacturing wages.

Temer’s government’s radical constitutional amendment that has frozen all public spending for 20 years, until 2036, would undoubtedly erode in a very meaningful way the real value of Brazil’s wages, unless the next government changes the current course.

If Brazil’s future governments apply a demand-side economic policy, this would generate multiplying effects that would consolidate social development, anchored on the generation of aggregate demand. This would increase not just wages, but formal employment, tax revenue, the sustainability of the social security system, economies of scale and the competitiveness of the Brazilian economy in the global context, among other things. To be sure, the greatest benefit would be the drastic decrease of poverty and an abatement of innumerable social problems engendered by poverty and exclusion. In this way, Brazil would move ahead and approach, meaningfully, the making of an ethos where a majority of Brazil’s society would have full access to the enjoyment of a broad array of human rights instrumental in the development of their capacities to carve a dignified life.

One of the greatest benefits of the appreciation of real wages of any country –in the context of a living wage ethos– is the direct impact on the eradication of the conditions of inequality and exclusion; conditions that have prevailed in Brazil in a rather brazen manner. Thus, if Brazil seriously commits to the long term materialisation of this central objective of social justice, it will accomplish the transformation of its society into one where equality and a high degree of wellbeing prevail –the sine qua non attributes of truly democratic societies.

Unfortunately, it is necessary to emphasise that these assumptions are made in the context of a market-dominated ethos, which, by definition, is unsustainable both in the core and the periphery of the system, for the additional consumption to be generated is unsustainable in the long term. Consequently, for a living wage ethos to emerge and become sustainable in the long term, eventually, consumer societies will have to transform themselves into societies with a new paradigm centred on the welfare of people and planet and not the market, with an ecological footprint that drastically reduces the consumption of resources. This will require not just a radical change in economic policy but a radical cultural change in all societies in a global context.

To be sure, there is no guarantee that the current minimum wage appreciation policy will be reactivated by the next Brazilian government if the winner is the Workers Party. However, the responsibility for making sure that this policy remains falls directly on society, which bears the full load for making Brazil’s future governments feel compelled to consolidate this objective. Hence, it is indispensable that Brazilians become fully aware about the need to permanently get involved in the public matter to make sure that future governments work for the benefit of society and not for the owners of the market and their very private interests, as the vast majority of governments enthusiastically pursue in most countries today. Brazilians must increase their involvement in the public matter to ensure that those they choose to govern work in pursuit of the welfare of people and planet and NOT the market. Otherwise, demand-side and other socially-oriented policies will cease to exist and inequality will go back to the levels prevalent last century. That would be a major mistake attributable mostly to the demos.
### The Jus Semper Global Alliance – Table T5: Living-Wage-Gap and Equalisation analysis (vis-à-vis the U.S.) for all employed in manufacturing in purchasing power parity terms for private consumption for selected economies 1996-2016

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### Mexico

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<td>0.08</td>
<td>0.09</td>
<td>0.10</td>
<td>0.11</td>
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<td>6.62</td>
<td>0.97</td>
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### Germany

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<td>Wage</td>
<td>1.72</td>
<td>0.84</td>
<td>0.82</td>
<td>0.91</td>
<td>0.82</td>
<td>0.86</td>
<td>0.85</td>
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### Italy

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<tr>
<td>Wage</td>
<td>17.12</td>
<td>1.66</td>
<td>0.87</td>
<td>0.9</td>
<td>0.99</td>
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<td>0.851</td>
<td>0.822</td>
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### United Kingdom

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<tbody>
<tr>
<td>Wage</td>
<td>0.06</td>
<td>0.06</td>
<td>0.05</td>
<td>0.06</td>
<td>0.07</td>
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<td>0.09</td>
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<td>0.11</td>
<td>0.12</td>
</tr>
<tr>
<td>Wage</td>
<td>0.65</td>
<td>0.64</td>
<td>0.65</td>
<td>0.63</td>
<td>0.64</td>
<td>0.68</td>
<td>0.75</td>
<td>0.73</td>
<td>0.79</td>
<td>0.80</td>
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The table shows the living-wage-gap and equalisation analysis (vis-à-vis the U.S.) for all employed in manufacturing in purchasing power parity terms for private consumption for selected economies 1996-2016. The data includes the wage equalisation index for each year from 1996 to 2016.
## The Jus Semper Global Alliance – Table T5: Living-Wage-Gap and Equalisation analysis (vis-à-vis the U.S.) for all employed in manufacturing in purchasing power parity terms for private consumption for selected economies 1996-2016

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<tbody>
<tr>
<td><strong>Spain</strong></td>
<td>$131,052 $0.784 $0.772 $0.788 $0.789 $0.790 $0.790 $0.777 $0.744 $0.736</td>
<td>$23,24 $18.06 $19.96 $28.71 $30.20 $38.12 $36.39 $35.69 $36.57 $31.79</td>
<td>126,68 $1,083 $1,057 $8040 $0.7960 $0.6791 $0.7541 $0.7770 $0.7347 $0.9040</td>
<td>$14,96 $17.10 $18.90 $20.19 $21.96 $23.73 $25.41 $26.86 $28.55 $28.78</td>
<td>$15,48 $12.38 $13.79 $19.79 $21.77 $27.60 $26.61 $26.85 $28.19 $23.44</td>
<td>$7,76 $5.68 $6.17 $8.92 $8.43 $10.52 $9.78 $8.84 $8.38 $8.35</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td>193,386 176,749 163,075 150,624 137,868 129,061 120,841 113,216 109,182 107,146</td>
<td>106,78 107.60 125.22 108.15 116.31 103.39 87.78 79.79 105.94 108.79</td>
<td>133,11 $15.27 $16.47 $18.14 $20.27 $22.01 $23.06 $24.84 $26.14 $26.87</td>
<td>$23.67 $25.03 $21.43 $25.26 $24.03 $27.48 $31.75 $35.25 $26.94 $26.46</td>
<td>$16.26 $15.88 $14.17 $15.55 $12.09 $13.44 $16.09 $15.41 $11.23 $11.98</td>
<td>0.59 0.61 0.60 0.62 0.67 0.67 0.66 0.70 0.71 0.69</td>
</tr>
<tr>
<td><strong>South Korea</strong></td>
<td>714,594 824,323 871,607 886,638 871,769 882,087 906,972 913,804 994,758 1,003,749</td>
<td>805.00 1130,90 1250,31 1154,25 954.32 1098.71 1155,74 1126,47 1052,96 1160,43</td>
<td>955.62 $9.62 $10.24 $12.63 $17.36 $16.80 $17.98 $20.44 $23.63 $22.98</td>
<td>$10.39 $8.57 $8.83 $10.05 $10.47 $9.52 $9.39 $8.52 $11.36 $10.78</td>
<td>0.48 0.53 0.54 0.56 0.62 0.64 0.66 0.71 0.68 0.68</td>
<td></td>
</tr>
<tr>
<td><strong>Singapore</strong></td>
<td>1,139,1 1,239,1 1,193,1 1,161,1 1,104,1 1,124,1 1,148,1 1,148,1 1,148,1 1,148,1</td>
<td>1,410,1 1,725,1 1,791,1 1,690,1 1,588,1 1,414,1 1,363,1 1,299,1 1,267,1 1,382</td>
<td>21,01 $17.92 $18.22 $20.13 $21.18 $26.05 $29.26 $34.28 $35.16 $33.18</td>
<td>12.75 $16.32 $18.22 $19.21 $19.80 $23.73 $22.91 $25.43 $28.26 $31.47</td>
<td>11.93 $11.72 $12.14 $13.20 $13.76 $17.73 $19.29 $24.42 $26.82 $27.15</td>
<td>9.08 $6.20 $6.80 $7.42 $7.19 $9.03 $8.80 $8.32 $6.43 $6.43</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td>1,376,1 1,384,1 1,423,1 1,444,1 1,498,1 1,531,1 1,552,1 1,535,1 1,530,1 1,604</td>
<td>1,277,5 1,719,7 1,84 1,3578 1,3271 1,1714 1,087 0.9653 1,1094 1,3452</td>
<td>24.19 $20.08 $21.16 $31.16 $43.89 $49.63 $56.76 $51.09 $46.53</td>
<td>18.18 $20.61 $22.50 $25.12 $25.83 $27.00 $27.70 $30.03 $33.36 $32.04</td>
<td>19.58 $16.75 $17.41 $26.72 $29.15 $35.28 $39.55 $47.74 $46.01 $38.19</td>
<td>4.61 $3.33 $3.75 $4.44 $5.24 $7.55 $10.07 $9.02 $5.08 $6.34</td>
</tr>
<tr>
<td><strong>Wage Equalisation index (4+2 or 3+1)</strong></td>
<td>0.67 0.69 0.69 0.69 0.72 0.72 0.73 0.75 0.77 0.74</td>
<td>0.59 0.61 0.60 0.62 0.67 0.67 0.66 0.70 0.71 0.69</td>
<td>0.48 0.53 0.54 0.56 0.62 0.64 0.66 0.71 0.68 0.68</td>
<td>0.57 0.65 0.67 0.66 0.65 0.72 0.66 0.71 0.76 0.81</td>
<td>0.01 0.03 0.02 0.06 0.05 0.02 0.00 0.04 0.09 0.02</td>
<td></td>
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</table>
Definitions:
- **PPPs** stands for Purchasing-Power Parities, which reflect the currency units in a given currency that are required to buy the same goods and services that can be purchased in the base country with one currency unit. This analysis uses the US and the US dollar as the benchmark and assumes that the US wage is a living wage.
- The hourly manufacturing wage rate is the "hourly compensation cost" as defined by the US 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.
- **PPP conversion factor, (private consumption)** in country currency express the number of country currency units required to buy the same goods and services a US dollar can buy in the US.
- **Exchange rate** is nominal exchange rate.
- **PPP conversion factor, private consumption in US dollars** expresses the US dollar units required in a given country to buy the same goods and services a US dollar can buy in the US. If the PPP is less than 1, a US dollar can buy more in the country in question because the cost of living is lower, and vice versa.
- The **PPP for private consumption, expressed in national currency**, reflects the exchange rate in comparison with the market exchange rate, which does not reflect the ratio of prices.
- **Equalised PPP nominal wage rate** is the hourly US dollar nominal rate required to equally compensate a worker in a country, in purchasing power terms, for equal work rendered, as the equivalent US worker is compensated. This analysis assumes the US wage to be a living-wage. A living wage is a human right in accordance with Article 23 of the UN Universal Declaration of Human Rights. ILO's Convention 100 of "equal pay for equal work", for men and women is hereby applied in a global context.
- **Actual PPP Real wage rate** is the hourly wage paid in a given country in purchasing power terms.
- **Actual Nominal wage rate** is the nominal hourly wage paid in a given country.
- Compensation deficit expresses the wage gap between the hourly nominal wage rate paid (4) and the equalised PPP hourly rate that should be paid for equal work (2).
- Compensation equalisation index expresses the ratio of actual nominal pay to equalised PPP hourly pay (4 between 2); or the ratio of actual real pay (3) to the hourly nominal pay benchmark (1) (3 between 1).
- Note: Variations in previous years are due to revisions made by the sources, including the World Bank's new 2011 PPP benchmarks, which replaced the previous 2005 benchmarks.
- Since 2010 the international comparison of hourly compensation costs (hourly wage rates) between the US and selected developed and "emerging" markets refers to all employed in the manufacturing sector and no longer will be available for production workers only. Production-line wage rates are on average 20% below wage rates for all employed in manufacturing, including production workers, for the 1996-2009 period, for all countries included in the assessment. For further reference see wage-gap assessment of trends and differences between production-line and all employed in manufacturing in compensation cost terms here: <http://www.jussemper.org/Resources/Labour%20Resources/Resources/PLWvsAEM_wage_rates96-09.pdf>
Note regarding the new 2011 PPC round:

The International Comparison Program (ICP) released new data showing that the world economy produced goods and services worth over $90 trillion in 2011, and that almost half of the world’s total output came from low and middle income countries.

Under the authority of the United Nations Statistical Commission, the 2011 round of ICP covered 199 economies - the most extensive effort to measure Purchasing Power Parities (PPPs) across countries ever. ICP 2011 estimates benefited from a number of methodological improvements over past efforts to calculate PPPs.

The ICP’s principal outputs are PPPs for 2011 and estimates of PPP-based gross domestic product (GDP) and its major components in aggregate and per capita terms. When converting national economic measures (e.g. GDP), into a common currency, PPPs are a more direct measure of what money can buy than exchange rates.

Limitations in the use of the data

PPPs are statistical estimates. Like all statistics they are subject to sampling errors, measurement errors, and errors of classification. Therefore, they should be treated as approximations to true values. Because of the complexity of the process used to collect the data and calculate the PPPs, it is not possible to directly estimate their margins of error. Therefore, small differences in the estimated values between economies should not be considered significant.