

# A Global Minimum Wage

## Policy Brief

Vanessa Ma

September 30, 2018

— the —  
**PaulDouglas**  
— institute —

[www.pauldouglasinstitute.org](http://www.pauldouglasinstitute.org)

Acknowledgements: We would like to thank Toby Chow and Jake Werner for their continued advising and contributions to this paper. Research commissioned by the People's Lobby. For questions or inquiries for other research, please contact us at [policy@pauldouglasinstitute.org](mailto:policy@pauldouglasinstitute.org).

## I. Overview

Minimum wage policies are in place in over 90% of countries in the world today<sup>1</sup>, and have played instrumental roles in ensuring the welfare of labourers that are essential to their respective societies. Though this statistic is uplifting, the effect of many of these policies has not been realized due to difficulties and loopholes in regulation. These regulatory gaps can work alongside globalization to create a “race to the bottom”, where multi-national corporations may shift operations to regions where labour is cheapest, increasing incentives for governments to create exemptions to wage laws to undercut other nations. To prevent these theoretical dynamics from negatively affecting workers globally, additional policy mechanisms should be considered to ensure free and open markets benefit all participants in the global economy.

Current minimum wage policies can be categorized by methodology. Most regions deploy some form of a negotiation-based wage floor, which is achieved usually through discussions between labour unions, government representatives, academics, and relevant corporate executives. Established wages can be on a sectoral, regional, or national scale. A small number of nations have also established formulaic minimum wages, where levels are calibrated by macroeconomic indicators or essential household expenses.

The advantages of minimum wage informed by formulae continues to be hotly debated, and have been increasingly realized over recent years. In broad terms, collective bargaining methods are more vulnerable to power dynamics between labourers and corporations. The discussion surrounding a formula that informs minimum wages, however, tends to veer towards what terms should be included, and their justification. We believe that a debate erring on the side of logical and technical aspects would yield more equitable results for both employers and employees alike affected by this proposal. Furthermore, such a debate generates a set of principles to guide wage fixing, which would form a more robust backbone in the face of inevitable future renegotiations and challenges.

Global governance, the regulation of local societies with sets of overarching guidelines, is an art. Wage fixing between nations to ensure the welfare of labourers serving intertwined societies is no different – any successful proposal must arbitrate between nation-specific idiosyncrasies that factor into policy-making, and holding all nations accountable to a fair set of principles. Moreover, it is important to note that any minimum wage policy primarily affects not only low-skilled labourers, but also low-earning employers who will face the greatest financial pressures relative to operational scale – the effect of such a policy on the make-up of the global economy is therefore of immense weight towards its success.

We propose adopting a living wage formula that will form a national wage floor, envisioning continued negotiations between regional governing bodies, labour unions, and employers to set further minimum wage levels above the floor.

---

<sup>1</sup> ILO, 2018.

## II. Minimum Wage Literature

This section surveys current literature on formulaic minimum wage fixing, specifically highlighting 2 viable theories. We first describe the most relevant academic literature, then examine several case studies of select countries and formulas globally, and conclude with a short description of private sector experimentation with a living wage.

### Academia

#### Palley Formula

$$pM$$

*p* – predetermined percentage

*M* – regional median wage

Thomas Palley proposed a global minimum wage mechanism in his book in 2011<sup>2</sup>, where nations would set a wage floor determined by a fixed percentage of the median wage of the country (Equation 1). He envisioned this to be a floor upon which a country's local governments and industry governance bodies would negotiate higher minimum wages.

The advantages of this method beyond its simplicity are two-fold. First, the national median wage takes into account local nuances influencing labour productivity, such as fluctuations in pricing, GDP, political turmoil, among other factors, and depends on available wage data. Use of such a metric ensures nations are fairly treated. Second, as is the goal of all formulaic wages, it reduces the stickiness of wages to fairly compensate the worker – if national productivity increases, the median wage will rise, bringing up the formulaic minimum wage.

While simple to implement, the flaws of this proposal are apparent and rooted in its simplicity. A nation's current wages determines the country's median wage, which for nations with high concentrations of low-skilled labour, is arbitrarily skewed lower as a result of the race to the bottom. Developing a solution using a metric challenged by the very problem it is trying to solve is counterproductive at best, and destructive at worst.

#### Richard and Martha Anker Living Wage Formula

The term “living wage” was coined following the upsurge of nations that have subscribed to the theory of fair compensation to workers, founded upon the notion that workers should be paid a decent wage that places them at least above poverty – to subsist, not merely to survive.

The Richard and Martha Anker Living Wage Methodology was developed to guide nations to estimate the actual wage level necessary for workers to afford a basic but decent living standard feasibly and with the least error.

$$W_t = F_t + H_t + E_t + A_t + \delta$$

*W<sub>t</sub>* = living wage in year *t*

*F<sub>t</sub>* = minimum cost of diet at World Health Organization (WHO) caloric standards

*H<sub>t</sub>* = minimum cost of local housing

*E<sub>t</sub>* = minimum essential household expenses such as clothing

*A<sub>t</sub>* = additional social costs, such as healthcare and education

*δ* = correction factor, acting as a margin

---

<sup>2</sup> Palley, 2012.

Arguably the most holistic income calculator among all the formulae considered in this paper, the biggest hurdle to widespread use of this method is the difficulty of acquiring data to measure each term, especially for nations that do not keep national records of prices and detailed censuses.

Furthermore, we sought to understand the few formulae that were currently deployed by nations to fix their own minimum wages.

## Case Studies

### France

France switched to a formulaic minimum wage beginning in 1950.

$$\Delta W_t = \Delta CPI_{t-1} + \frac{\Delta W_{t-1}^b}{2} + \delta$$

$\Delta CPI_{t-1}$  = Change in consumer price index in year (t – 1) from year (t – 2)

$\Delta W_{t-1}^b$

= Change in blue collar hourly wage in year (t – 1) from year (t – 2) informed by a quarterly survey carried out by the Ministry of Labour

$\delta$  = discretionary additional percentage (introduced after 2009)

The minimum wage level is adjusted under two scenarios, 1) when inflation (the price index) increases by more than 2% the last wage adjustment, and 2) whenever the expert commission determines that the discretionary term should be adjusted with reference to unexpected economic conditions, like an economic downturn.

This mechanism has played an important part in ensuring workers have a minimum “purchasing power guarantee ... and a participation in the economic development in the nation”, evidenced by the many sectors employing the federal minimum wage level.<sup>3</sup> In fact, while collective bargaining in sectors and regions was expected to set minimum wages higher than federal levels, the agreed wage in many cases has been lower than that of the federal level, and is thus not applied.<sup>4</sup>

While having had some success empirically, this method is far from perfect. Similar formulae dependent on macroeconomic indicators does not reflect the true “income” paid to a worker, enabling companies to cut costs and negatively affect workers through other means. In France, companies have cut back on social contributions to the worker as the minimum wage level, leading to 40% of minimum wage earners actually earning a lower income when all welfare payments are considered.

<sup>3</sup> CSERC, 1999.

<sup>4</sup> Ibid.

## Brazil

Brazil enacted a formulaic federal minimum wage in 2002. The level is adjusted by changes in consumer price index and nominal GDP per capita, and states within the nation have set wage floors above the federal level.

$$\Delta W_t = \Delta CPI_{t-1} + \Delta GDP_{t-2}$$

$W_t$  = minimum wage in year  $t$

$\Delta CPI_{t-1}$  = consumer price index change in year  $(t - 1)$  from year  $(t - 2)$

$\Delta GDP_{t-2}$  = nominal GDP per capita in year  $(t - 2)$  from year  $(t - 3)$

The wage is adjusted yearly, and the formula itself is revised every 4 years. The first term reflects accumulated inflation in the past year, while the second term links minimum wage to productivity from the latest statistics due to lags from GDP calculations.

Research has shown that a higher minimum wage as a result of this policy has led to lowering inter-firm wage inequalities.<sup>5</sup> Furthermore, Brazil's wage share of national income has continued to increase as the same metric has experienced a decline globally<sup>6</sup> as increasing proportions of national income is distributed to capital owners.

## Costa Rica

Costa Rica established their minimum wage formula in 2012 through joint deliberations between government and social partners.

$$\Delta W_t = \Delta CPI_t^e + \delta + p * \Delta GDP_c$$

$W_t$  = minimum wage in year  $t$

$\Delta CPI_t^e$  = expected change in consumer price index in year  $t$  from year  $(t - 1)$

$\delta$  = correction factor, determined ex – post

$p$  = percentage  $(20 - 40)$

$\Delta GDP_c$  = average GDP per capita growth of the previous five years, from year  $(t - 6)$  to year  $(t - 1)$

Caveats for this wage fixing formula include freezes and re-evaluations at the realization of major economic events including:

- Unemployment rate greater than 8%
- Recession, defined as negative economic growth for four successive quarters
- Volatile exchange rate, defined as more than 15% change between adjustments

## Indonesia

Indonesia established their minimum wage formula in 2015, which is largely similar to that of Costa Rica except that both inflation and productivity metrics are current year<sup>7</sup>. 8 provinces in the nation will follow a 5% annual increase for 4 years as their current minimum wage levels are below government-determined basic living wage levels.

---

<sup>5</sup> ILO, 2016.

<sup>6</sup> Bengtsson and Waldenstrom, 2016; Astorga, 2015.

<sup>7</sup> The Jakarta Post, 2015.

While this is a commendable effort to link wage levels to productivity and cost of living, the policy continues to enshrine the mistakes of previous wage fixing machinery, and aptly reflects the core issue behind the race to the bottom, where current minimum wage levels do not afford the basic essentials for low-skilled labourers.

## Malaysia

Malaysia established a set of regional minimum wages in 2013, the formula for which is as follows:

$$W_t = \left( \frac{\frac{PLI_t}{n} + M_t}{2} \right) \left( 1 + \frac{\Delta P_t}{100} + \frac{\Delta CPI_t}{100} + \frac{\Delta U_t}{100} \right)$$

$W_t$  = minimum wage in year  $t$

$PLI_t$  = poverty line income in year  $t$

$M_t$  = median wage in year  $t$

$\Delta P_t$  = productivity growth measured by  $x$  in year  $t$  from year  $(t - 1)$

$\Delta CPI_t$  = percentage change in consumer price index in year  $t$  from year  $(t - 1)$

$\Delta U_t$  = unemployment rate change in year  $t$  from year  $(t - 1)$

This policy was implemented with considerable struggle. 59% of the Malaysian workforce is employed by labour-intensive small and medium businesses, which a federal minimum wage level would most substantially affect and thus creating a significant burden on local businesses.<sup>8</sup>

Another shortcoming of this policy is that it does not automatically update. Though the wage was fixed using this formula, the level is held constant until negotiators reconvene<sup>9</sup>, citing companies' need for time to adjust to changes in operational expenses. From a methodological standpoint, Malaysia's minimum wage operates similar to a bargaining system.

Furthermore, there is a lack of transparency in the data informing the terms, most notably the poverty line income. This figure varies between the three main geographical regions of Malaysia, and has been criticized by local banks to be too low to ensure a decent standard of living.<sup>10</sup>

There are upsides to the situation, however. The wage to GDP ratio, the slice of the economic pie awarded to labourers, has risen to 34%<sup>11</sup> against a predominantly decreasing trend across the globe, reflecting that workers are being paid more fairly for their contribution to the Malaysian economy than elsewhere. Furthermore, the majority of businesses in Malaysia have responded to rising labour costs through raising prices, rather than higher staff turnover or reducing worker training, implying that higher labour costs does not reduce employment, but rather can increase productivity by encouraging companies to be more conscientious of their human capital.

<sup>8</sup> Fong Yuen, 2013.

<sup>9</sup> Surendra, 2017.

<sup>10</sup> Kana, 2018.

<sup>11</sup> Ng, 2017.

## United Kingdom

London is one of the first regions to establish not only a minimum wage, but a living wage, in 2003. It is currently set at 10.20GBP, much higher than the national hourly minimum wage at GBP8.25.

The wage is set by the Low Pay Commission (LPC), based on a poverty threshold calculated by the Greater London Authority (GLA). The threshold is revisited every x years, and encompasses the expenses of the following:

$$W_t = \frac{H_t + pM_t}{2} (1 + \delta)$$

$H_t$  = household budget from cost of living data in year  $t$

$p$  = predetermined percentage, currently at 60%

$M_t$  = Median wage in year  $t$

$\delta$  = buffer term, currently set at 15%

It is important to note that employers are not legally required to pay the living wage, merely encouraged to do so through a system of national certification. Employers that commit to paying a living wage are required to do so for all direct and indirect employees, the latter of which commonly include contracted workers such as cleaners, construction workers, security personnel. Living wage estimates are released annually, and employers have six months to update or otherwise raise current wages to match the new estimates, lest certification be revoked.

This case study is most unique in that it is spurred on by an elaborate, non-monetary positive incentives scheme. Living wage employers receive praise and marketing by the Living Wage Foundation, play an important role in recruiting potential living wage employers, and commission reports on increased firm productivity from paying higher wages. By according publicity benefits to qualified employers, the scheme is able to educate both target employers and the general consumer on the benefits of paying a living wage.

## Corporate-led cases

Individual corporations such as Marks & Spencer<sup>12</sup>, Unilever<sup>13</sup>, and others have worked with nonprofits and consultancies to determine formulaic living wages for their low-skilled labourers. In both commissioned reports, the worker's cost-of-living was a large factor in benchmarking hourly living wage. As perception of global corporations change overtime, public pressure may serve to create voluntary shifts to living wages for other major companies.

---

<sup>12</sup> ActionAid, 2011.

<sup>13</sup> Oxfam, 2013.

### III. Analyzing Efficacy

We conducted statistical analyses to understand the effectiveness of our proposed formulae against currently employed i) minimum wage formulas, and ii) collectively bargained wages. Furthermore, we wanted to understand the effects of prior methodologies on different types of economies, which led us to create national categories based on available data as follows:

**Group I:** France, Brazil, Malaysia, United Kingdom

Group I represents the current set of countries that employ a formulaic minimum wage level, where policies have been in place since before 2010, to allow for sufficient data points for analysis.

**Group II:** Australia, Belgium, Canada, Czech Republic, Germany, Greece, Hungary, Netherlands, Portugal, Slovak Republic, Spain, United States

Group II is made up of all Organisation for Economic Co-operation and Development (OECD) member nations classified by the United Nations as developed economies, except those in Group I.<sup>14</sup> They are used as a rough estimate of the response of developed economies to our proposed formula.

**Group III:** Chile, Colombia, Israel, Mexico, Turkey

Group III is made up of all OECD member nations that are classified as developing economies by the United Nations.<sup>15</sup> They are used as a rough estimate of the response of developing economies to our proposed formula.

Living wage estimates were obtained from WageIndicator.org<sup>16</sup>, utilizing calculations for typical family sizes to take into account local nuances. This proxy was deemed accurate as the methodology for calculation adheres closely to the Anker formula. Countries for which the organization was not able to calculate living wage estimates were excluded from this analysis.

#### Wage Levels

We retroactively compare current minimum wage levels to living wage estimates for each country. This first analysis allows us to understand the discrepancy between current wage levels and the levels as recommended by the Anker formula. A ratio of 1 indicates the current minimum wage is the same as the recommended living wage; greater than 1 implies the current wage is higher, and less than 1 implies the current wage is lower than the level recommended by the Anker formula.

---

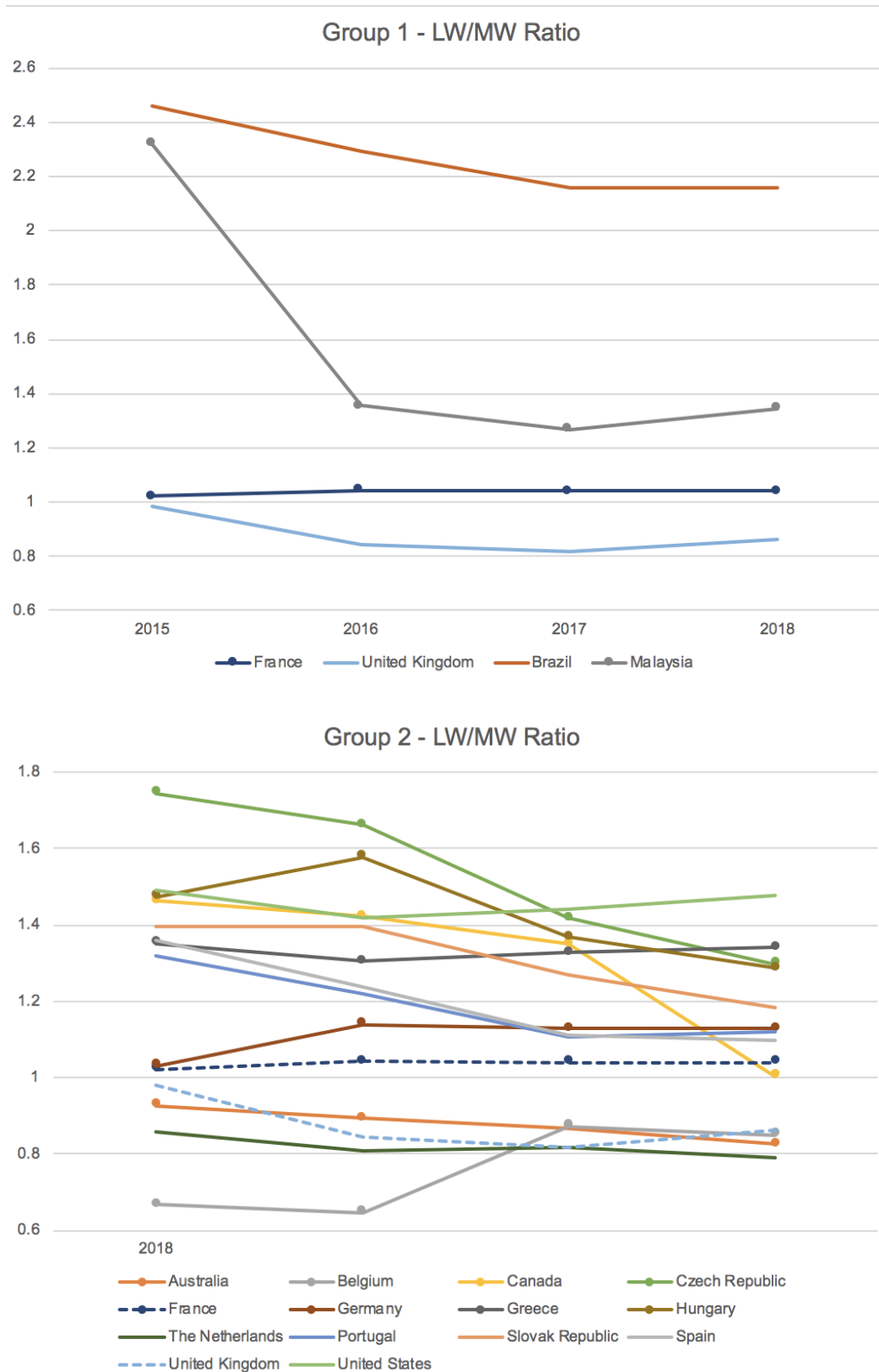
<sup>14</sup> UN (2014).

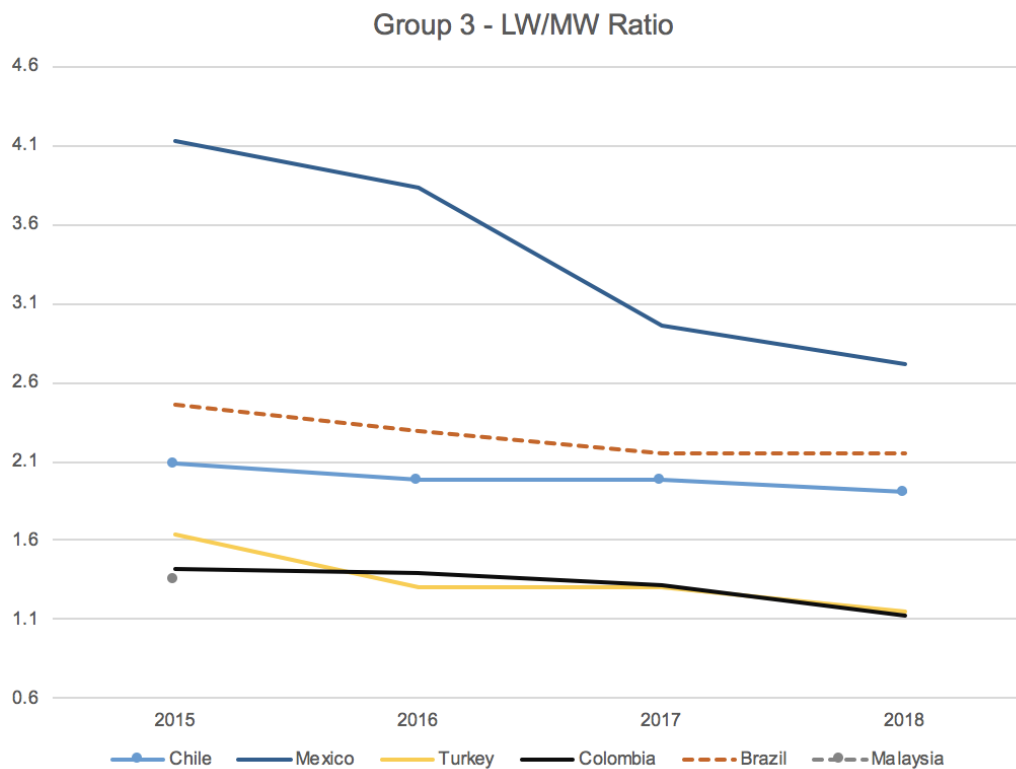
<sup>15</sup> Ibid.

<sup>16</sup> For relevant data and definitions, see Wageindicators' "[Wages in Context](#)."



Figure 1: Living Wage to Minimum Wage Ratio (L/M Ratio) from 2015-2018





**Figure 1:** Living Wage to Minimum Wage Ratio (L/m Ratio) from 2015-2018 for **A)** Group I nations; **B)** Group II nations, with developed economies in Group I differentiated by dashed lines; **C)** Group III nations, with developing economies in Group I differentiated by dashed lines.

The small number of developed economies with formulaic minimum wages reflect ratios close to or lower than 1, indicating minimum wage levels are near or even above the living wage recommendation for these particular countries. The majority of developed nations, however, set minimum wage levels slightly below a living wage. Exceptions to this include Australia, Belgium, and the Netherlands.

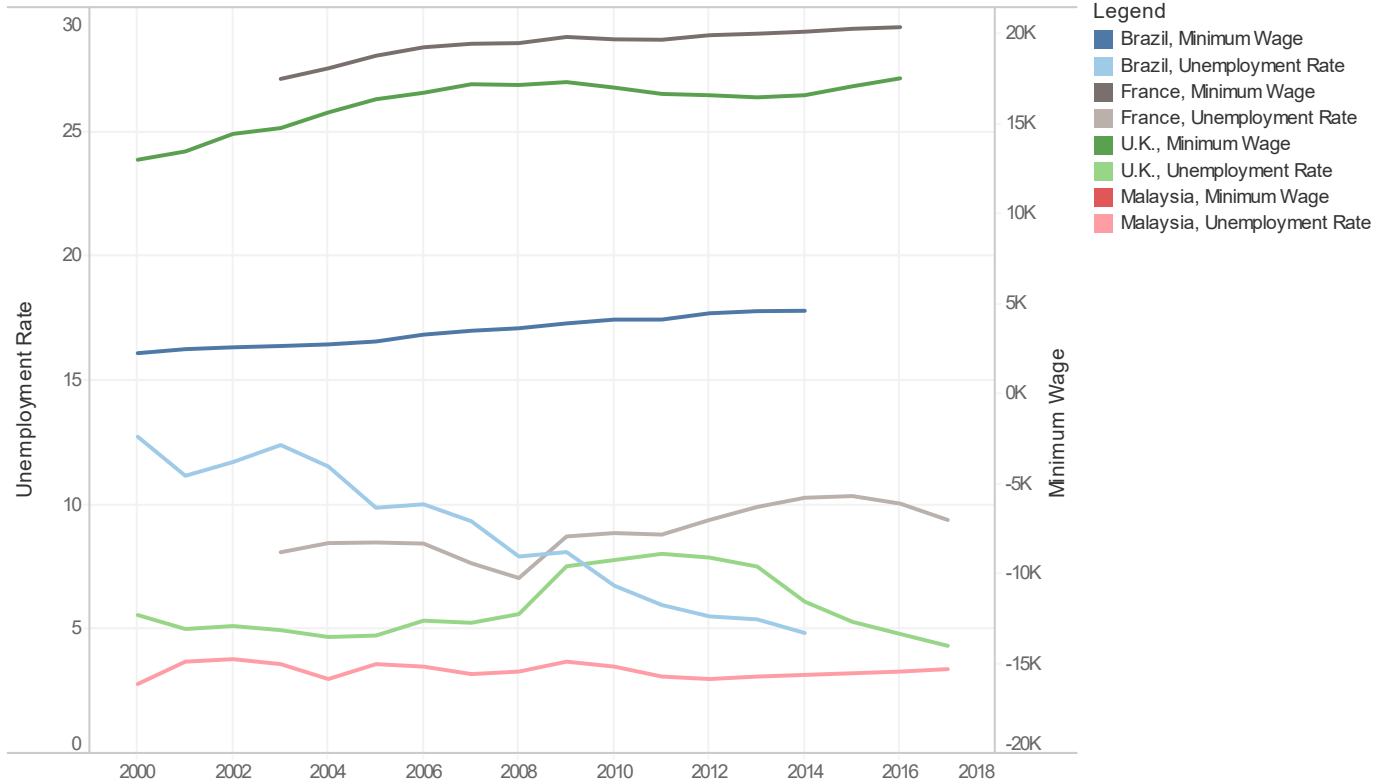
As predicted theoretically, developing economies average a much higher ratio, in some cases as high as 2.7 in 2018. This significant difference indicates a greater discrepancy between current minimum wages and living wage estimates, though this difference also appears to be decreasing over time. These findings provide evidence that despite a lower average cost of living in some developing countries and rising wages over time, current minimum wage policies are still unsustainably below the cost of living for many countries.

## Employment Levels

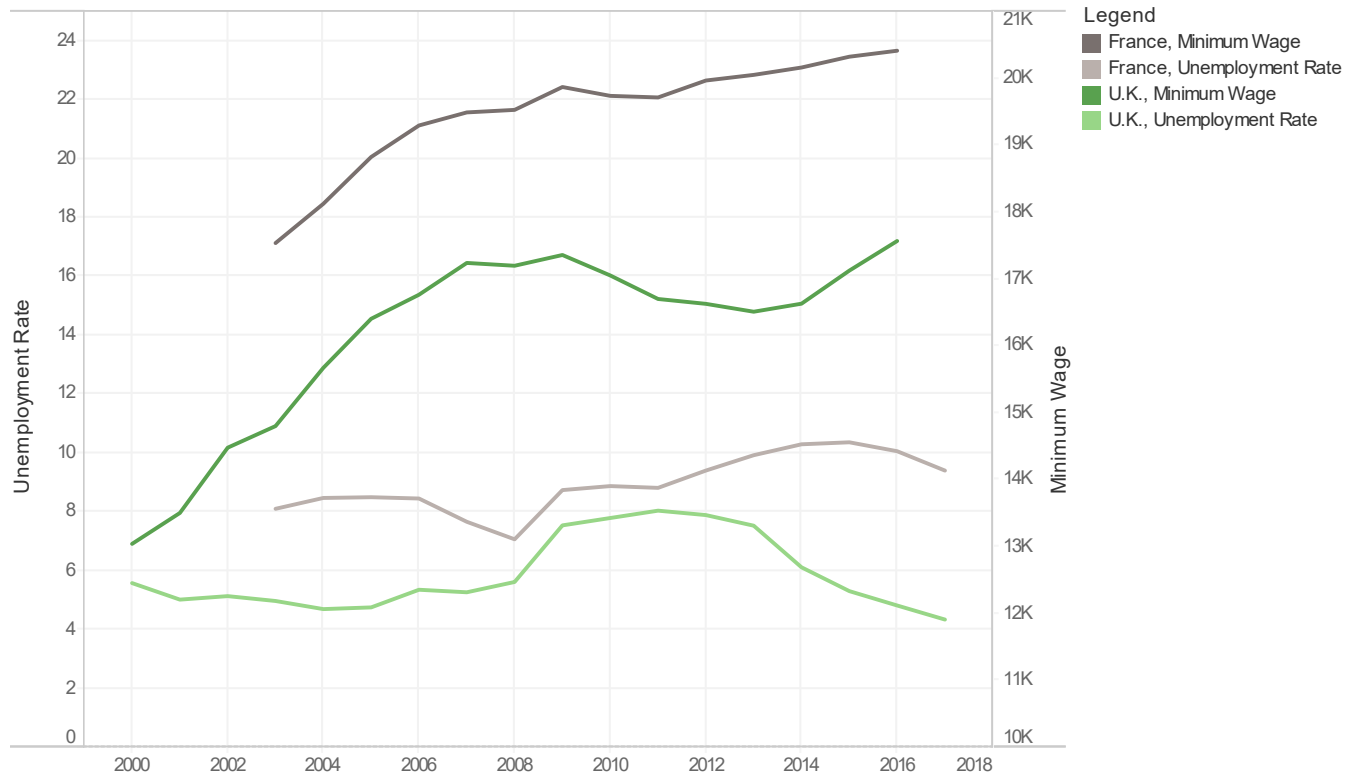
One of the main arguments against raising minimum wages is that employment will decrease to compensate for raised operational costs per worker. Ideally, minimum wage levels should be able to increase with less than directly proportionate decreases in employment level, which would create a win-win scenario for labourers, employers and the economy's general health. To test these effects empirically, we compare existing minimum wages and unemployment rates between 2000 and 2018. Figure 2 displays minimum wages levels alongside unemployment rates, color-coded by country.

**Figure 2: Minimum Wage Levels (top) and Unemployment Rates (bottom)**

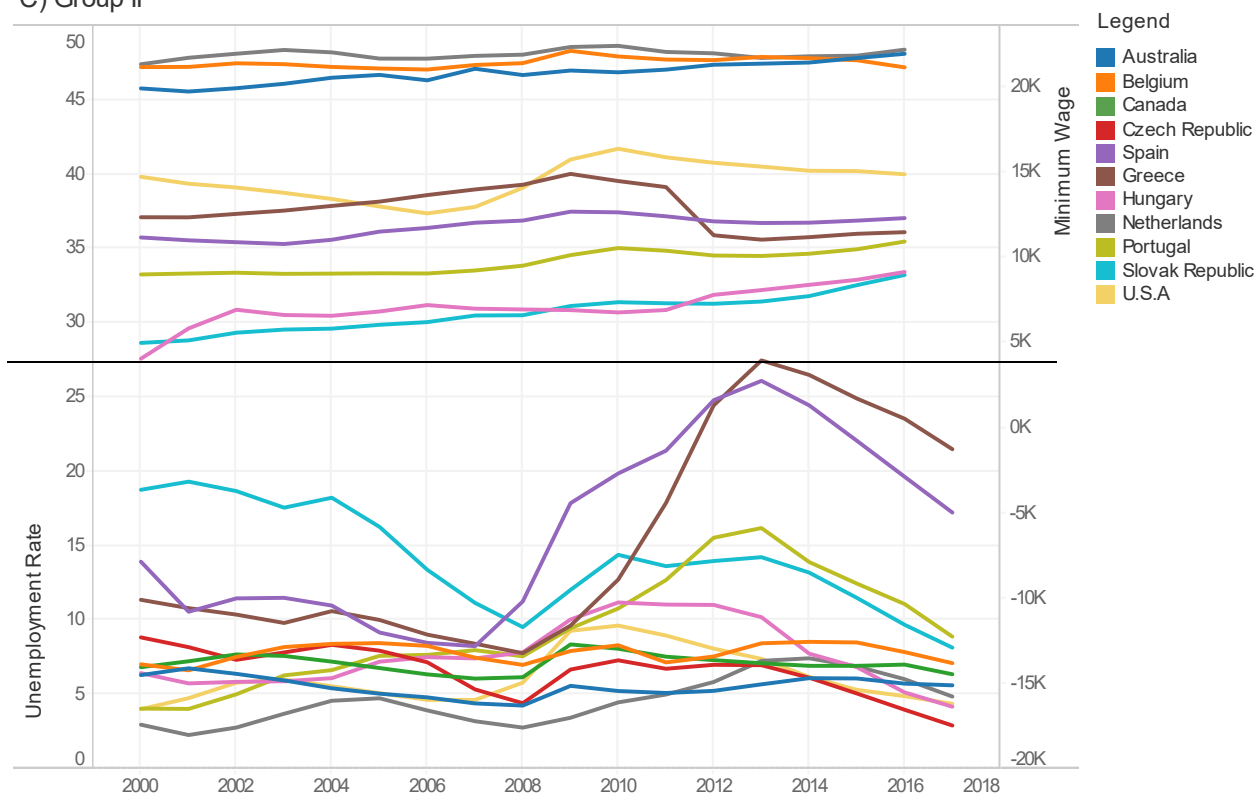
**A) Group I**



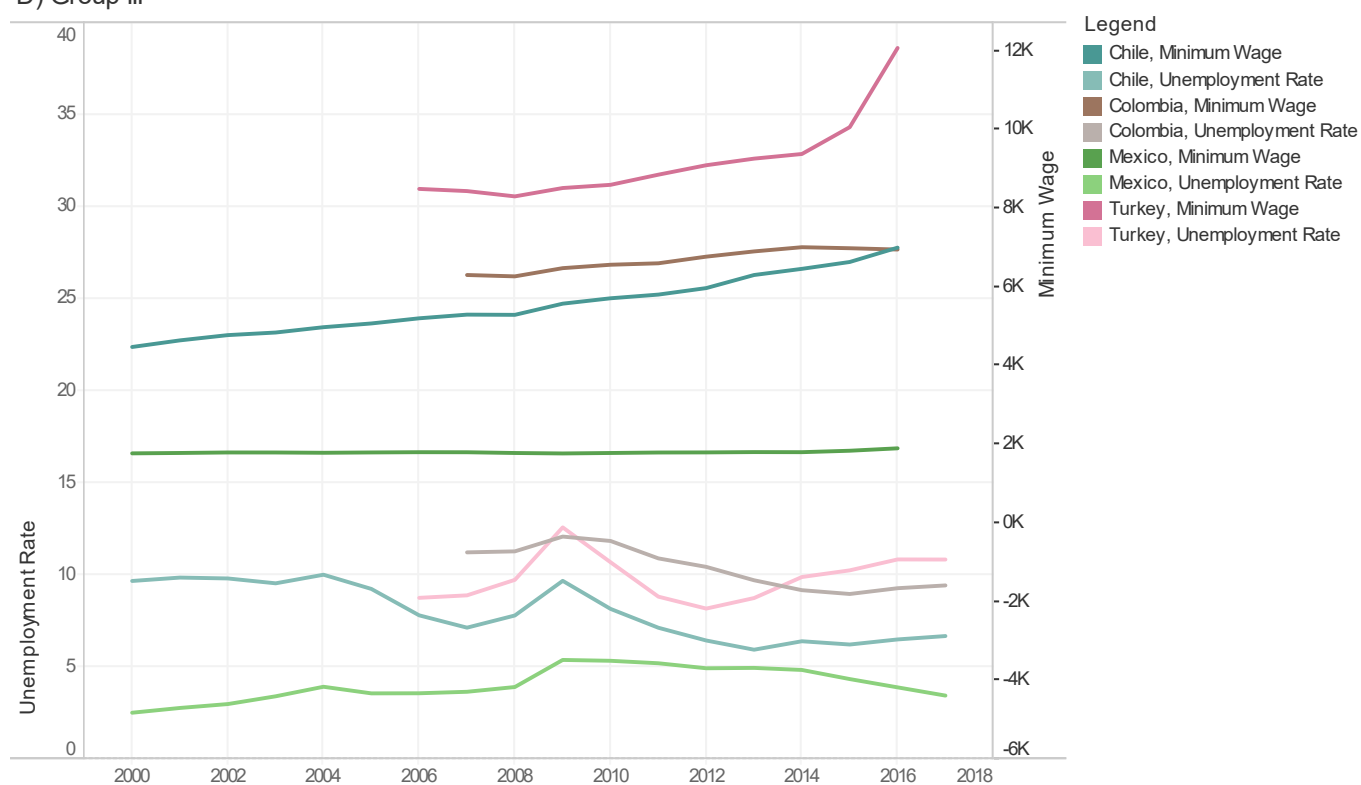
**B) Group I Subset**



### C) Group II



### D) Group III



**Figure 2:** Minimum wage levels (top) and unemployment rates (bottom) against time for **A)** Group I economies **B)** Group I developed economies **C)** Group II economies and **D)** Group III economies.

For the two developed economies that employ formula minimum wages, there is a very low positive correlation between minimum wage levels and unemployment rates (Figure 2B). Examining Group II economies (Figure 2C), developed economies exhibit a decreasing trend in unemployment rates in recent years, while minimum wages have continued to steadily increase. This particular finding throws caution to the economic doctrine that minimum wages decrease employment through artificially capping demand for labour.

This further implies that developed economies are able to absorb greater spending on wages, perhaps through raising prices or shifting spending from capital and land. This interpretation is further backed by literature showing that developed economies have been consistently struggling to hit inflation targets in recent years,<sup>17</sup> implying that they will be able to absorb any price pressure from increased wages.

By surveying Group III economies, however, it is apparent that increasing minimum wages have also been coupled with increasing unemployment rates on average (Figure 2D). While the same trend holds true for Malaysia, increasing minimum wages in Brazil have been coupled with decreasing unemployment rates (Figure 2A). This implies that developing economies' unemployment rates and low-skilled labour income may be more directly correlated than that of their developed counterparts. While this is expected, the single outlier indicates that these economies may still have some ability to absorb minimum wage increases dependent on policy design and incentives. Furthermore, should minimum wages be increased in all Group III countries simultaneously, these effects would likely be mitigated.

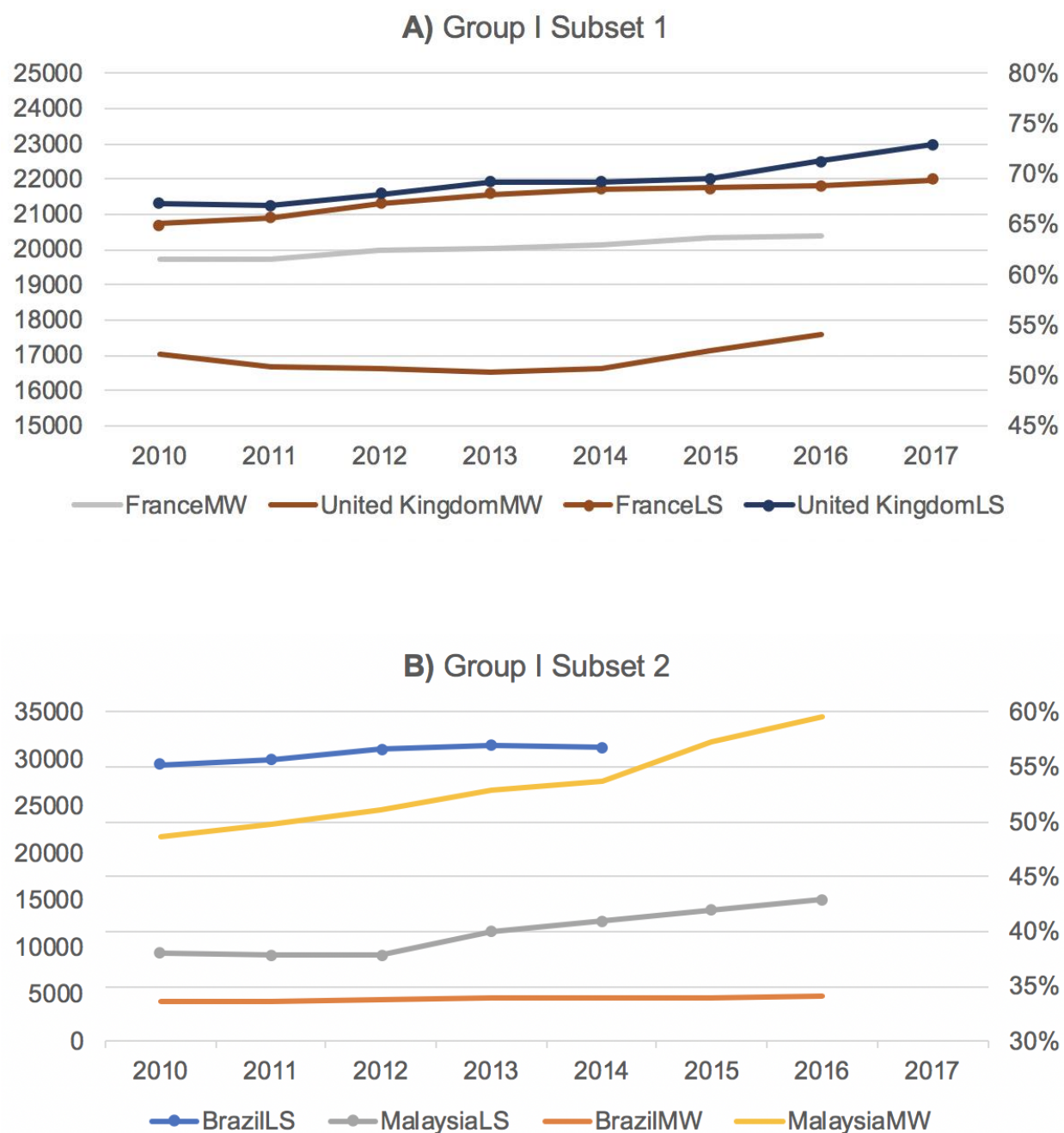
## Wage Share of National Income

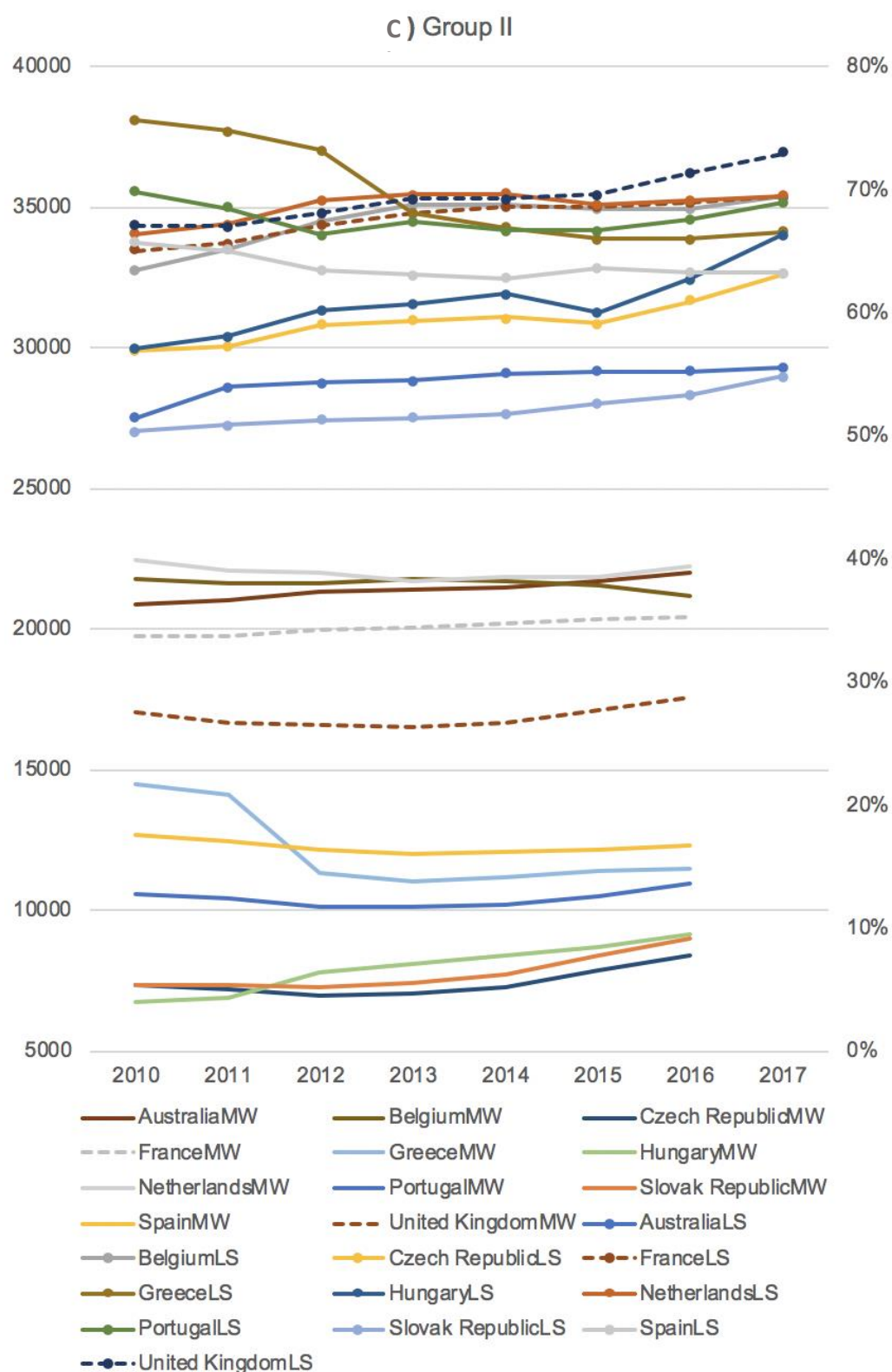
Labour share of income is an important metric towards understanding the equitability of national income distribution towards labourers. This proxy statistic measures total individual income compared to a given country's total economic output. Logically, a lower wage share implies higher proportion of economic benefits are shared among capital and land owners (i.e. corporations), implying a greater income inequality within the region.

---

<sup>17</sup> Curran and Randow (2018).

Figure 3: Labour Share of National Income (top) and Minimum Wage Levels (bottom)





**Figure 3:** Labour share of national income (top) and minimum wage levels (bottom) for **A)** Group I developed economies, **B)** Group I developing economies, **C)** Group II economies. Sufficient data was not available to aggregate Group III economies.

Among the 2 developed nations with formula minimum wages (United Kingdom and France), a general increasing trend in minimum wages is accompanied by a significant increase in the wage share of national income.

General rises in minimum wages are also accompanied with increased wage share of income in Group II and Group III countries. This implies a positive correlation between the two metrics, and that generally, firms in developed economies have the ability to redistribute earnings between factor inputs in favour of labourers when they are required to increase their wages.

Most meaningfully, our findings imply that a minimum wage is likely an effective means for creating real economic benefits for most workers across different types of economies.

## IV. Recommendations

From our literature review, it became apparent that a global minimum wage formula proposal must include parameters for the following:

1. **Productivity**, to fairly compensate labourers for their economic contribution<sup>18</sup>
2. **Regional prices of basic necessities**, to ensure labourers have the means to survive in their region and can maintain current levels of productivity without long-term sacrifices
3. **Economic levers**, market or non-market in nature, enabling adjustments based on current economic conditions (i.e. recession)
4. **Socio-political levers**, which may not be economic in nature, but enable adjustments based on geopolitical realities that significantly the national economy of a given country (i.e. conflict or sovereign debt crisis)

It is important to note that this proposal should not advocate for the tearing down of the current minimum wage regime. In fact, this proposal's efficacy should be evaluated on the following 2 points:

1. **Widespread acceptance** by nations, using this as a sanity check, or preliminary evaluation for minimum wage levels in addition to current negotiation and wage fixing methods
2. **Justifiable and reasonable** to employers and employees, finding a viable compromise between maintaining employment levels and long-term business operations

Our proposed formula is aimed towards establishing regional minimum wage floors considering regional idiosyncrasies, with the hope that local governments and unions will continue to take initiative to set minimum wage levels above the formula level.

### Proposed Formula

A survey of current literature leads us to propose the widespread adoption of the Richard and Martha Anker Living Wage methodology for its robustness and clarity, with some adjustments to the methodology informing each term. For convenience, the formula has been reproduced here:

$$W_t = F_t + H_t + E_t + A_t + \delta$$

---

<sup>18</sup> See Biesebroeck (2015) for a more detailed articulation.



To consider the effect of welfare payments and non-pecuniary contribution by employers and government, we propose an additional correction factor subtracting the average welfare benefits received by a household within a fiscal year, denoted by the addition of the omega term.

Thus, our final proposed formula is the following:

$$W_t = F_t + H_t + E_t + A_t + \delta - \omega$$

## Mechanism for Adjustment

The living wage floor should be automatically adjusted as the terms are recalculated using current figures in every fiscal year. Any less frequent, and the living wage may fail to ensure a stable purchasing power level for labourers; any more frequent, and it may incur significant administrative costs for employers as they juggle shifting operational expenditure composition.

However, extenuating economic and socio-political circumstances should be caveated out of the normal adjustment mechanism for flexibility in response to unexpected catastrophic events, especially those in the magnitude of trade wars, natural disasters, financial crises, to name a few.

Some guidance for events that fall within the purview of the above are as follows:

1. Hyperinflation, generally defined as a monthly inflation rate of greater than 50%
2. Recession, generally defined as 2 consecutive quarters of negative economic growth
3. Violent fluctuations in foreign exchange rates

## Step-wise Implementation

Noting that companies vary in their ability to compensate workers depending on their scale and maturity, we also propose a tiered enforcement system to ensure smooth acclimation to the policy. Under this system, employers would be classified under the following schedule:

1. **Required:** employers within this category are of established scale, are major employers of the region, and major players in their market. They will be required to pay labourers the living wage at the very least. Examples include multi-national corporations, domestic franchises, and civil service outfits.
2. **Regulated:** employers within this category are of established scale, but may have only recently attained maturity or operate immensely labour-intensive business models. They should be given a leniency window of a few years to adapt to the living wage requirement. Examples include local brand names, and medium-sized players in oligopolies.
3. **Exempt:** employers within this category are of small scale and earn fluctuating revenues. Typically, minimum wage policy would pose the greatest operational burden on these firms. These institutions should be exempt from paying living wage levels though encouraged to do so. Examples include startups, nonprofits and small players in otherwise large developed markets.

This classification should consider factors including but not limited to: number of employees, market share, scale of operations (both domestic and international), and wage share of revenues. For ease of implementation, living wage payment requirements should only be extended to directly employed workers. Indirectly employed workers will fall under the purview of their direct employer, which is likely a contracting firm. To encourage firms to check and balance each other, firms that are

able to guarantee that all employees, both direct and indirect, are paid at living wage or above, should be granted internationally endorsed certification as a living wage employer.

Living wage employers, especially those categorized as tier 2 or 3 employers in their region of operation, may be given further incentive in the form of monetary rewards and non-monetary competitive advantages through the International Labour Organization and other affiliated bodies. Examples include and are not limited to: grants, subsidies, invitations to international economic and trade conferences, negotiations with government and corporate leaders, domestic and international publicity through online and offline media for non-pecuniary advantages.

### **Ruling Body**

Ensuring that minimum wage policy is actively followed has been a historically difficult task. The advent of the internet has increased operational transparency as well as the speed of data collection by law enforcement and social justice organizations, easing accountability efforts, but only slightly.

We would propose that this policy be drafted by experts and officials at the International Labour Organization (ILO), who have the experience and connections to negotiate and defend the merits of such a proposal to national leaders and corporate decision-makers. Richard and Martha Anker, in fact, are ex-members of the ILO. Official recommendations for a global minimum wage, a principles document, and additional technical details may then serve as the basis for global leaders to incorporate these recommendations into binding agreements.

## **V. Conclusion & Further Research**

Devising a successful minimum wage policy is equal parts a fair wage fixing formula and implementation. Our recommendation therefore consists of two aspects targeting both key elements: firstly, a simple formula with mutually exclusive, collectively exhaustive terms summing a laborer's necessary living expenses and ensuring fair compensation for their contribution to the economy. Secondly, a positive incentive scheme for firms to implement the recommended living wage through a system of tiered requirements and international recognition, reducing the burden on local and international governing bodies to check corporate behavior.

While our analysis shows that economies are generally able to absorb the effects of higher minimum wages, further research will be necessary to understand the exact effect of this proposal on regional economies. Such effects include, and are not limited to: labour force transfers between informal and formal work, shifts in spending on welfare and unemployment benefits, alterations to hours worked, turnover, and the skill premium, and the effectiveness of implementation and accountability varying by sector or industry.

An additional limitation to both our analysis and future work will be the widespread availability of the necessary data to calculate the appropriate wage for each country. While the components of our formula are relatively simple, governments and non-governmental organizations should work jointly to ensure the necessary information, transparency, and accountability become global norms for these policies to be implemented successfully.

## VI. References

- ActionAid, 2011. “Eight Steps towards a Living Wage: A Costing Model...”  
[https://www.actionaid.org.uk/sites/default/files/doc\\_lib/actionaid\\_living\\_wage\\_model\\_-\\_final.pdf](https://www.actionaid.org.uk/sites/default/files/doc_lib/actionaid_living_wage_model_-_final.pdf)
- Anker, Richard; Anker, Martha. 2017. “Living Wages Around the World: Manual for Measurement.” Elgar Online. <https://www.elgaronline.com/view/9781786431455/chapter12.xhtml>
- Astorga, Pablo. 2015. “Functional Inequality in Latin America: News from the Twentieth Century.” *Discussion Papers in Economic and Social History*. No. 135. University of Oxford.  
<https://www.economics.ox.ac.uk/materials/papers/13923/number-135.pdf>
- Bengtsson, Erik; Waldenstrom, Daniel. 2016. “Capital shares and income inequality: Evidence from the long run.” *EHES Working Papers in Economic History*. No. 92.  
[http://www.ehes.org/EHES\\_92.pdf](http://www.ehes.org/EHES_92.pdf)
- Biesebroeck, Johannes Van. 2015. “How tight is the link between wages and productivity?” *Conditions of Work and Employment Series No. 54*, International Labour Office (ILO).  
[https://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---protrav/---travail/documents/publication/wcms\\_410267.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_410267.pdf)
- CSERC, 1999. “Le Smic. Salaire Minimum de Croissance.” *CERC Reports*.  
<http://www.cerc.gouv.fr/rapports/cserc/cserc6.pdf>
- Chen, Michelle. 2017. “Could a Global Living Wage Put an End to Corporations’ ‘Race to the Bottom’?” *The Nation*. <https://www.thenation.com/article/could-a-global-living-wage-put-an-end-to-corporations-race-to-the-bottom/>
- Curran, Enda; Randow, Jana. 2018. “Central Banks are Looking for New Ways to Meet Inflation Targets.” *Bloomberg*. <https://www.bloomberg.com/news/articles/2018-03-13/inflation-misses-across-the-world-fuel-debate-at-central-banks>
- Fong Yuen, Joyce Leu. 2013. “Minimum Wage Policy in Malaysia: Its Impact and the Readiness of Firms.” *World Applied Sciences Journal* 28 (Economic, Finance and Management Outlooks): 19-26, 2013. [https://www.idosi.org/wasj/wasj28\(efmo\)13/3.pdf](https://www.idosi.org/wasj/wasj28(efmo)13/3.pdf)
- Ganeshwaran, Kana. 2018. “Wages too low, says Bank Negara.” *The Star*.  
<https://www.thestar.com.my/business/business-news/2018/03/31/wages-too-low-says-bank-negara/>
- Hameed, Latifa bibi Musfar; Makki, Ahmad Safwan Md; Mustapha, Nurul Huda. 2015. “The Impact of Minimum Wage Implementation Towards Business Performances.” *IcoMM*.  
<http://www.kuis.edu.my/icomm/2nd/download/IC%20011.pdf>
- Heery et al, 2017: Edmund Heery, Deborah Hann, David Nash, (2017) "The Living Wage campaign in the UK", *Employee Relations*, Vol. 39 Issue: 6, pp.800-814, <https://doi.org/10.1108/ER-04-2017-0083>

ILO, 2018. “How many countries have a minimum wage?” *International Labor Organization*. [https://www.ilo.org/global/topics/wages/minimum-wages/definition/WCMS\\_439073/lang-en/index.htm](https://www.ilo.org/global/topics/wages/minimum-wages/definition/WCMS_439073/lang-en/index.htm)

ILO, 2016. “Global Wage Report 2016/17: Wage Inequality in the Workplace.” Geneva, 2016. [https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms\\_537846.pdf](https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_537846.pdf)

The Jakarta Post, 2015. “New minimum wage formula comes into effect.” <http://www.thejakartapost.com/news/2015/10/27/new-minimum-wage-formula-comes-effect.html>

Ng, Allen. 2017. “Increasing Labor Share of Income in Malaysia.” *Khazanah Research Institute*. [http://www.bnm.gov.my/documents/conference\\_vol/2017\\_Econ\\_Research\\_Workshop/Slide%202%20Labor%20Income%20Share.pdf](http://www.bnm.gov.my/documents/conference_vol/2017_Econ_Research_Workshop/Slide%202%20Labor%20Income%20Share.pdf)

Nurrachmi, Rininta; Mad-Ahin, Ashanee; Waeowanjit, Phimpaporn; Arif, Naz Abdul Kareemarif. 2012. “Article Review on World Bank Report, Optimal Design for a Minimum Wage Policy in Malaysia.” *MPRA Paper No. 44618*, 27. [https://mpra.ub.uni-muenchen.de/44618/1/MPRA\\_paper\\_44618.pdf](https://mpra.ub.uni-muenchen.de/44618/1/MPRA_paper_44618.pdf)

Oxfam, 2014. “Step Towards a Living Wage in Global Supply Chains.” *Oxfam Issue Briefing*. [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/ib-steps-towards-living-wage-global-supply-chains-101214-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/ib-steps-towards-living-wage-global-supply-chains-101214-en.pdf)

Oxfam, 2013. “Labour Rights in Unilever’s Supply Chain: From Compliance towards Good Practice.” <https://oxfamlibrary.openrepository.com/bitstream/handle/10546/267532/rr-unilever-supply-chain-labour-rights-vietnam-310113-en.pdf;jsessionid=E624811173044EFC2E26DC7007CD569A?sequence=1>

Palley, 2012. “From Financial Crisis to Stagnation: The Destruction of Shared Prosperity and the Role of Economics.” Cambridge University Press. (New York: 2012). <https://www.cambridge.org/core/books/from-financial-crisis-to-stagnation/156FD50786AFB45BDD49B9FD6CF7EEBF>

Surendra, Emmanuel. 2017. “Minimum Wage Conundrum: Should it be Raised to RM 1,500?” *iMoney: Budget 2018*. <https://www.imoney.my/articles/minimum-wage>

UN, 2014. “Country Classifications.” *World Economic Situation and Prospects 2014*. [http://www.un.org/en/development/desa/policy/wesp/wesp\\_current/2014wesp\\_country\\_classification.pdf](http://www.un.org/en/development/desa/policy/wesp/wesp_current/2014wesp_country_classification.pdf)

WageIndicator.org, 2018. “Wages in Context.” Accessed September 2018. <https://wageindicator.org/salary/wages-in-context>

Yamada, Ken. 2016. “Tracing the impact of large minimum wage changes on household welfare in Indonesia.” *European Economic Review*, Vol 87, 287-303. <https://www.sciencedirect.com/science/article/pii/S0014292116301015#s0010>

## MISSION STATEMENT

The Paul Douglas Institute is a student-run, public policy think tank based at the University of Chicago. Inspired by the life and work of professor and Senator Paul H. Douglas, we channel public policy interest on campus into solution-orientated research projects that allow students to make an impact on the legislative process. To this end, we use a multidisciplinary approach to produce rigorous, data-driven social science research that is innovative, practical, and free from political affiliation. We often work with legislators and civic organizations, and are fully open to commissions and partnerships.

— the —  
PaulDouglas  
— institute —

### **The Paul Douglas Institute**

5801 S Ellis Ave  
Chicago, IL 60637

[www.pauldouglasinstitute.org](http://www.pauldouglasinstitute.org)