RICHARD DICKENS
University of Sussex, and the Low Pay Commission, UK, and IZA, Germany

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World of Labor
Evidence-based policy making

How are minimum wages set?

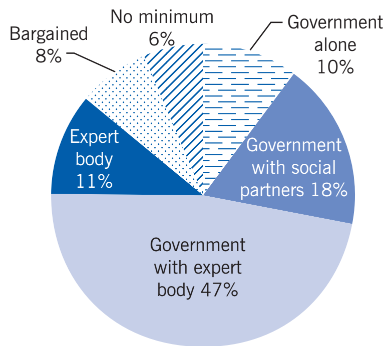
Countries set minimum wages in different ways, and some countries set different wages for different groups of workers

Keywords: minimum wages, wage setting, expert body

ELEVATOR PITCH

The minimum wage has never been as high on the political agenda as it is today, with politicians in Germany, the UK, the US, and other OECD countries calling for substantial increases in the rate. One reason for the rising interest is the growing consensus among economists and policymakers that minimum wages, set at the right level, may help low-paid workers without harming employment prospects. But how should countries set their minimum wage rate? The processes that countries use to set their minimum wage rate and structure differ greatly, as do the methods for adjusting it. The different approaches have merits and shortcomings.

The global prevalence of different minimum wage setting regimes



Source: Calculations based on data from [1].

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KEY FINDINGS

Pros

- Of the numerous methods to set minimum wages, many countries now rely on an expert body to advise governments on the appropriate rate.
- Minimum wage setting regimes involving an expert body independent from governments can help to build support among employer and employee groups.
- The “bite” of the minimum wage—the ratio of the minimum to the median wage—varies substantially across countries.
- Minimum wages that vary for different groups of workers (such as by age and sector) can target low wages and poverty better than a simpler rate structure can.

Cons

- Using a formula to set the minimum wage leaves little flexibility to respond to changing labor market conditions.
- When the minimum wage is set by the government rather than by a formula or with the advice of a third party, there is a risk of setting it on political rather than economic grounds.
- Minimum wage rates that vary for different groups of workers can be too complex to administer and may lead to non-compliance because of ignorance about the correct rate.
- Comparable evidence on the effectiveness of different approaches is almost impossible to obtain, and many influences other than the minimum wage are at play.

AUTHOR’S MAIN MESSAGE

The minimum wage has become an accepted way to tackle the extremes of low pay in many countries, but there is considerable variability in the way minimum wages are set around the world. Methods include formulas, government rate setting, union-bargained rates, and rates recommended by an expert body. Expert bodies whose recommendations are informed by a strong evidence base have the advantage that they can respond to changing economic conditions and build consensus among businesses and workers without political interference. The UK Low Pay Commission is an example of this approach, now emulated by many countries.

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MOTIVATION

More than 100 countries, including 22 EU member states, now have a national minimum wage [1]. Alongside this increase in prevalence has come a greater appetite among both the public and politicians for ever higher minimum wages. In the UK, a recent poll found 66% of respondents in favor of increasing the minimum wage, and in the US 62% favor raising the federal minimum to $10 an hour.

This public support has been recognized by politicians. President Obama has been pushing for a substantial increase in the US federal rate. The UK Chancellor of the Exchequer, George Osborne, has just introduced a higher minimum wage for workers over 25 and set a target of 60% of the median wage by 2020. Angela Merkel's coalition government introduced Germany's first national minimum wage in January 2015, at €8.50 an hour.

It seems that, at least for now, minimum wages are here to stay. Public support has likely been strengthened by concerns over stagnating living standards. And a consensus is emerging that minimum wages, set at the right level, do not harm employment prospects. A key question is how to achieve that right level?

DISCUSSION OF PROS AND CONS

Minimum wages have not always been so popular. Two decades ago, the common opinion was that minimum wages did more harm than good. The prevailing view among economists was that minimum wages interfered with the normal workings of the labor market and priced workers out of jobs: the standard competitive model found in any textbook predicts an unambiguous fall in employment arising from the minimum wage.

This view has been challenged by more sophisticated empirical analysis and by a proliferation of new theories proposing that minimum wages can have ambiguous effects on employment. Some new theories imply that the minimum wage, set at the right level, need not result in job loss and can even increase employment by boosting the attractiveness of low-wage jobs. The first convincing empirical evidence contradicting the prevailing view came from a study of fast food outlets in the US [2]. Since then a burgeoning literature has emerged across the US and Europe and continues to inform the debate. While the debate is still very much alive, the weight of evidence has shifted, and views among academics are now much more balanced [3].

Minimum wage systems around the world

Numerous methods are used to set minimum wages around the world. At one end of the spectrum, the government is in complete control of minimum wages, as in the US. At the other end, a system of collective bargaining determines the minimum, as in Austria and, until recently, in Germany. In between are a wide range of variants. Some countries use a formula for uprating the minimum, as in France, where it is closely linked to the rate of inflation. Many countries now rely on an expert body either to set the rate or to provide advice and recommend a rate to government. The UK Low Pay Commission (LPC) is a good example of the second approach, though its independence has recently been weakened with the introduction of a target rate for workers over the age of 25.

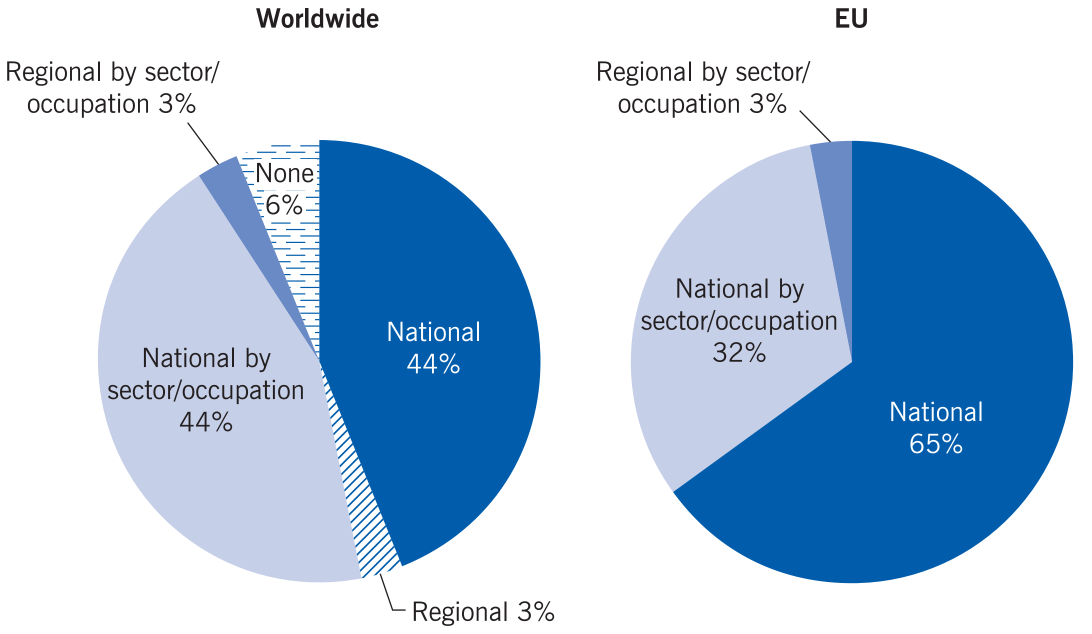
The regime used to set the minimum wage likely has real impacts on labor market outcomes. Different regimes are likely to have different concerns at heart when deciding the rate [4]. For example, under a system of collective bargaining, unions may serve the interests of members;

when governments set the minimum wage, they may be guided more by political concerns than by economic concerns. Different minimum wage setting regimes will also differ in the degree of flexibility in responding to economic shocks. During the recent recession, France was largely compelled to raise the minimum wage in real terms despite high and rising unemployment.

In addition to these differences in how rates are set, countries also differ in whether they use a single minimum wage or different rates for different workers. Many countries have lower rates for younger workers, though the discount varies considerably. Some countries set multiple rates, which differ by sectors, regions, and occupations (Figure 1).

When rates vary for different groups of workers, the minimum wage regime has more flexibility in responding to shocks. For example, the UK minimum wage for young workers was frozen during the recent crisis, and some preliminary evidence suggests that this measure helped to maintain youth employment through the downturn [5]. The downside of flexibility is the potential for added confusion among employers and employees over which rate applies, and thus a greater potential for non-compliance.

Figure 1. The level of aggregation for setting the minimum wage varies considerably



Note: The figure includes all members of the ILO.

Source: Calculations based on data from ILO. *Working Conditions Laws Report: A Global Review*. Geneva: ILO, 2013 [1].

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Minimum wage setting mechanisms

Regimes involving an expert body

Systems with an expert body involved in setting the minimum wage are now the most prevalent. In 47% of countries, the government sets the minimum wage on the advice and recommendation of an expert body; a further 11% of countries rely on an expert body alone. Practice varies across countries, but typically this expert body includes stakeholders from the employer and employee sides and sometimes independent members. The UK LPC has three employer representatives, three employee representatives, two independent members, and a chair. To inform its recommendations, the commission conducts empirical research, takes written and oral evidence from interested parties and organizations, and visits employees and employers in the low-paid sectors across the country. The composition of the expert body, by encouraging consensus, adds credibility to the proposed rate that emerges from the process, which can make it difficult for a government to go against any recommendation, at least on key decisions. The LPC also follows an annual cycle, which introduces regularity to the wage setting process.

Germany introduced its first national minimum wage, at €8.50 an hour, in January 2015. Initially set by the coalition government, it will be revised by a newly formed minimum wage commission that is to some extent modeled on the UK system but has only employer and employee representatives. While the commission takes advice from independent experts, contrary to the UK case, these experts do not have a formal position on the commission and do not vote on proposed changes to the minimum wage. In the case of an even split within the commission, the chair has the deciding vote.

In Ireland, until recently an industrial relations body, the Labour Court, had the power to recommend increases in the minimum wage after taking submissions from interested parties, with the final say resting with the minister for employment. If the union and employer representatives sitting on the Labour Court could agree on a rate, the minister had to consider it. The minimum wage in Ireland recently went through a rocky period as the economy fell into recession. The minimum was cut by €1 an hour as part of the terms of an international bailout in February 2011. However, the new government reversed this decision and reinstated the minimum wage of €8.65 an hour in July 2011, where it has remained unchanged for four years. To introduce more stability to the rate setting process, the Irish government recently set up a commission with a structure similar to that of the UK LPC, with employer and employee representatives and independents.

Government-set minimum wages

In some countries, the central government sets the national minimum wage. The most notable example of this approach is the US, where Congress votes on changes to the minimum wage. The US has tended to change the national minimum wage infrequently, with changes depending largely on the political balance of power at the federal level. The national minimum has been uprated only five times in the last 20 years. But US states and even cities have the power to set minimum wages that are higher than the national rate. There have been large variations in the minimum wage across states in the past decade as more local governments have broken away from the federal rate [6]. This increased use of local rates is arguably a symptom of the federal rate failing to remain relevant in many parts of the US.

Formulaic approaches

Other countries follow a rule or formula for fixing the minimum wage. In France, the interprofessional minimum wage (*salaire minimum interprofessionnel de croissance*) is tied to the consumer price index and uprated annually. In the aftermath of the economic crisis of 2008–2009, the French government established an advisory board of experts. Although bound by the formula, the board may recommend increases higher than those implied by the consumer price index, but it has never done so. Luxembourg also links the minimum wage to consumer prices, and the Netherlands links the minimum wage to average wage growth, although a system of bargaining allows for some flexibility.

Collective bargaining

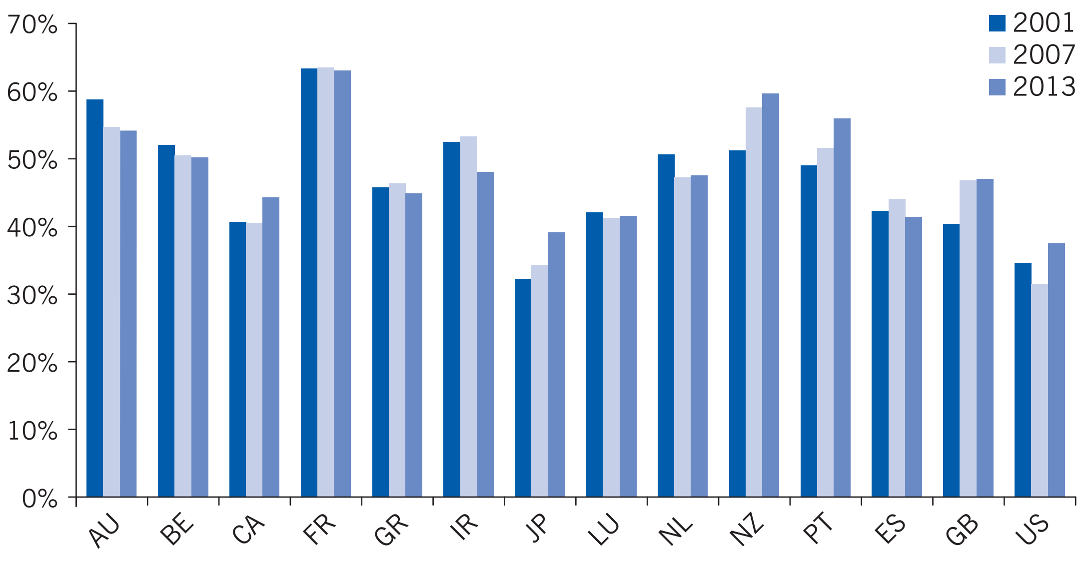
The influence of trade unions and other employee organizations varies considerably across countries. In some countries (largely in Europe), minimum wages emerge from bargaining between employers and employees. These minimums are often agreed at the sectoral level, which can result in multiple minimum wages. In countries with collectively agreed minimum wages, coverage can be high. Denmark, Finland, and Sweden, where more than 90% of workers are covered by one of the sectorally agreed minimum wages, are good examples of this approach.

The "bite" of the minimum wage

The "bite" of the minimum wage—the ratio of the minimum wage to the median wage—measures the relative importance of the minimum wage in each labor market. For most countries, the minimum wage is set at around half the median wage (Figure 2). But it varies considerably—from 37% in the US to more than 60% in France. The UK has gradually pushed up the relative value of the minimum wage over the past decade; at 46% of the median wage for full-time workers, the bite of the minimum wage reached its highest ever in 2013. In New Zealand, the minimum wage has also been pushed up and is now at almost 60% of the median wage. Even in countries where minimum wages have been reduced or frozen, as in Greece and Ireland, its relative value has not fallen greatly.

The national bite statistics shown in Figure 2 disguise variations within countries by region, industrial sector, and age groups—variations that can be larger than the variation across countries. In the US, the bite of the federal minimum wage is just 29% in Massachusetts, while it is 42% in Ohio [7]. In the UK, the bite is less than 40% in London and the south-east but more than 50% in parts of the Midlands. This has led many in regions where the bite is lower to call for increases in the rate [8]. Indeed, in the US, many states have increased their minimum-wage rates to boost the pay of low-paid workers in an environment where the

Figure 2. The "bite" of the minimum wage varies considerably across OECD countries



Note: The bite is the minimum wage relative to the median wage for full-time workers. The US figure refers to the federal rate.

Source: Calculations based on data from OECD. *Stat Extract*. Online at: http://stats.oecd.org/

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federal minimum is ineffective. Even in states that have a minimum wage that is considerably higher than the national rate, the bite is often well below that in lower-wage states where the federal rate applies [7].

Variations in legislated minimum wages across groups of workers

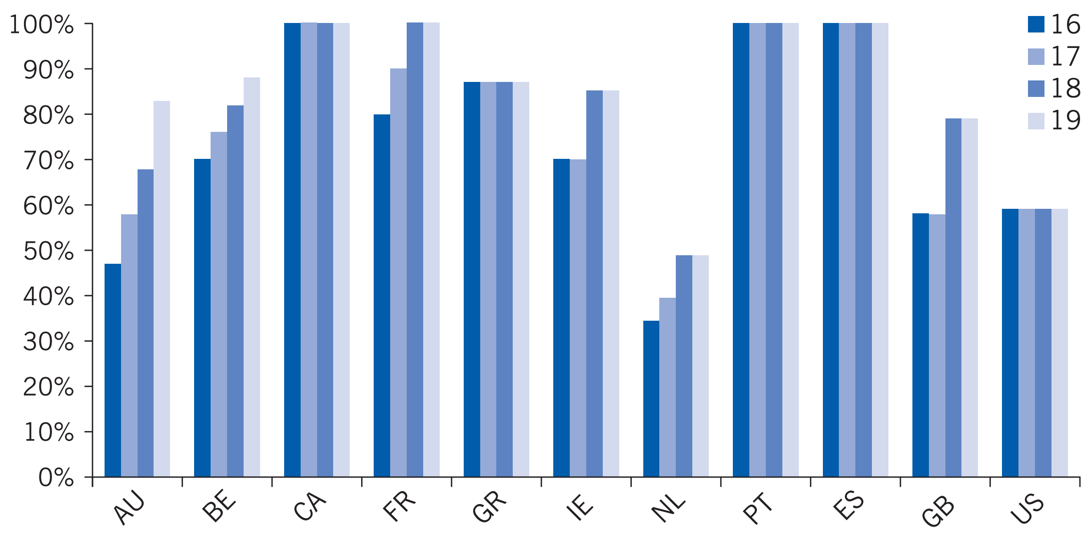
Many countries have lower minimum wage rates for younger workers on the premise that they are, on average, less productive than older workers and that spells of unemployment in the early years of work can have long-term scarring effects. Indeed, some countries exempt young workers from coverage.

The minimum-wage treatment of young workers differ considerably across countries (Figure 3). The Netherlands sets very low minimum wage rates for young workers: less than 50% of the adult rate for those aged 18 and 19. The full adult rate does not apply until age 23. In France, Portugal, and Spain, the minimum wage rates for young workers are relatively high, potentially a cause of high youth unemployment in those countries.

At almost 50% in Spain, 33% in Portugal, and 24% in France, youth unemployment rates in these countries are much higher than the EU average of 20% in 2015. Studies have found negative employment effects from minimum wages for young workers [9]. But obtaining direct evidence that higher youth minimum wage rates result in youth unemployment is difficult because opportunities for robust evaluation are few and far between. Simulation results predict that if France were to adopt the US federal minimum wage, youth unemployment would fall about nine percentage points to a level similar to that in the US [10]. While interesting, these results need to be treated with some caution because they are sensitive to the modeling assumptions.

Perhaps the best direct evidence on the effects of the minimum wage on youths comes from New Zealand, where eligibility for the adult minimum wage was lowered from 20 to 18 in

Figure 3. The youth minimum wage rate as a percentage of the adult rate varies across OECD countries



Note: The US figure refers to the federal rate. In France, young workers receive a lower minimum wage only for the first six months of employment and only until age 18; after that, the adult minimum wage rate applies.

Source: Calculations based on data from OECD. *Stat Extract*. Online at: http://stats.oecd.org/

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2001, resulting in a 69% increase in the minimum wage for 18- and 19-year-olds. But there were no robust changes to employment or work hours for this group [11].

Many countries take a cautious approach to youth minimum wages given the uncertainty about employment impacts and weaknesses in the minimum wage as an anti-poverty tool. The link between low wages and poverty is weaker for young workers than for older workers since many low-paid youth may be living at home in middle-income households. Another downside of tying the youth and adult rates together is that it can result in a lower adult rate than otherwise. Other countries, including Canada and France, are concerned with issues of fairness that arise when different minimum wage rates apply to young people.

Despite wide regional variation in wages in most countries, only four countries have nationally set minimum rates that vary by region: Canada, China, Indonesia, and Japan. Of course, there are regional variations in minimum wages within some countries as a result of rates set by local jurisdictions, such as those set by US states. The UK has recently heard calls to introduce a regional minimum wage, particularly for London. But the downside of such arrangements is a loss of simplicity in the rate and potential issues around the borders where minimum wage rates change. There are also concerns about cementing regional labor market differences, with the lower-pay regions being left behind [8].

Minimum wages can vary by sector of employment, often in conjunction with collective bargaining to determine them. In countries with a minimum wage system, about half set the minimum at the national level, and half at the sectoral (or occupational) level [1]. The use of sectoral rates is more prevalent in Africa and Latin America than in OECD countries. The advantage of a sectoral minimum is that it can raise the pay of more workers since it can better target low pay in each sector. But sectoral minimum wages can also result in a lack of coverage for large sections of the workforce [12]. In addition, sectoral or occupational rates can add complexity and result in myriad rates for each industry. The wide ranging use of sectoral rates in Latin America is thus often cited as a reason for high non-compliance there.

Merits of the different approaches

Most economists and policymakers have concluded that a minimum wage, set at the right level, can have positive effects on the labor market. In countries with strong in-work welfare systems, it can shift some of the costs of tackling low incomes from government to firms. It can also tackle fairness in the labor market, which helps explain why the minimum wage is so popular with the public.

Too little evidence to assess them

But which minimum-wage system best delivers these outcomes without unduly diminishing the employment prospects of affected workers? The key variables here are the minimum wage setting regime and the degree to which rates vary across subgroups of workers. There appears to be no direct empirical evidence on labor market outcomes of different minimum wage setting systems, likely because of the difficulty of comparing differences across countries where many other labor-market practices differ.

But there is some evidence on the effect of variation in rates by groups of workers. That evidence tends to show that where young workers are paid the same as adult workers, they can suffer higher unemployment, as in France and Spain. Variation in the minimum wage by age appears to be a promising way to use the minimum wage to tackle poverty while protecting more vulnerable workers. A higher minimum wage rate for older workers would be a better targeted poverty tool, since low-paid older workers are more likely to be living in poverty than low-paid younger workers. Some variation in rates is therefore desirable as it allows for a more flexible minimum-wage system that can better target low pay and poverty.

In addition, having a complex set of rates can reduce compliance because of increased confusion among employers and employees. There is some indication that the somewhat complex structure of the apprentice minimum wage in the UK, although still relatively simple, has resulted in a high level of non-compliance.

Another dimension of minimum wages that has some political and public support is variation across regions within countries. Witness the proliferation of rates across the US as states and cities break free from the federal minimum; calls for a higher minimum wage in London than in the rest of the UK; and proposals for regional variation in Germany. As regional flexibility gains support, there is also some support for an EU-wide minimum. But considering the wide variation in wage rates across European countries, this is probably some way off.

Expert bodies as the preferred minimum wage setting mechanism

Support seems to be growing in many countries for a system of setting the minimum wage in which an expert body advises the government, but the government makes the final decision, as in the case of the UK LPC. This arm's-length approach is increasingly being used in many areas of policy. Examples in the UK include the Monetary Policy Commission, the National Institute for Clinical Excellence, the Competition Commission, and various public sector pay review bodies. These expert panels depoliticize the process by providing evidence based on economic fundamentals in place of politically driven decisions.

An expert panel can also ensure buy-in from all stakeholders in setting policy. This is crucial for policies such as the minimum wage, where there can be clear differences in the benefits and costs to employers and employees—and thus opposing views on what the rate should be. This consensual approach to policy is likely to have been a key feature in the success and survival of the minimum wage in the UK since it was established in 1999. In general, the approach has worked well, and several other countries have copied the UK model to some degree.

How the expert panel is formed is also crucial. Different approaches have been adopted, with varying use of independent panel members, with or without voting rights. South Korea's minimum wage commission is composed of nine employers, nine employees, and nine independent members. The structure of the panel and the fact that discussions are made public have affected its ability to agree on rates.

The commission needs enough flexibility to respond to economic shocks so that the minimum wage does not hurt employment. That means that it must have the authority to act without political interference or hard constraints on what it can recommend. The French system which combines an expert commission with indexation leaves the expert body with its hands tied.

LIMITATIONS AND GAPS

The evidence for what type of minimum wage setting regime works best is very difficult to evaluate empirically. Regimes generally vary only across countries, so any empirical analysis is essentially a cross-country analysis. The disadvantage is that many other country-level influences are likely to be at play that are correlated with minimum-wage policy, such as policies toward in-work benefits and union bargaining. That makes it very difficult to distinguish the effect of the minimum-wage regime on outcomes for low-paid workers from the effects of all these other influences.

A similar concern applies when trying to understand the use of different rates for different groups of workers, though this evidence is a bit more robust given the natural experiments made possible by policy changes in the minimum wage rates that apply to different groups. An example is New Zealand, which lowered the age at which the adult rate applies from 20 to 18. Another is the sharp increase in the UK minimum wage for workers 25 and older.

SUMMARY AND POLICY ADVICE

Minimum wages have become an accepted part of the anti-poverty policy landscape in many countries and are now widely implemented to tackle the extremes of low pay. How minimum wages are set varies considerably, but the use of expert bodies to advise governments on rates is increasing. Similarly, the use of different rates for different groups of workers varies; some countries have very simple structures with just a few rates for different ages, and some have very complex structures with a multitude of rates.

What level of minimum wages works best depends on the context. Each minimum wage should be tailored to its specific labor market setting. Labor markets can vary substantially, with differences in the extent of low-paid workers, in the levels of formal and informal work, and in the ability to enforce labor regulations. Any minimum wage regime has to accommodate these different features in a sensible way.

The structure of minimum wage rates is also context-specific. However, there appear to be general merits in a relatively simple structure. Age variation can help to target low pay and poverty more precisely. But a complex set of rates can lead to confusion and lower compliance.

Finally, who should set the rate? The growing prominence of expert bodies that advise governments is an indicator of the success of this approach. An expert body that weighs the evidence before making recommendations can guide minimum wage policy through both good and bad economic times. One limitation of such an evidenced-based body is political: it is unlikely to make stepwise changes to the level of the minimum wage, as with the new higher rate set by the government in Germany and the higher adult rate recently introduced by the UK Chancellor of Exchequer. The impacts of these bold initiatives will not become apparent for some time, and it may be very hard to backtrack if things do not work out as planned.

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Competing interests

The IZA World of Labor project is committed to the *IZA Guiding Principles of Research Integrity*. The author declares to have observed these principles.

REFERENCES

Further reading

Neumark, D., and W. Wascher. *Minimum Wages*. Cambridge, MA: MIT Press, 2008.

Key references

[1] ILO. *Working Conditions Laws Report: A Global Review*. Geneva: ILO, 2013.

[2] Card, D., and A. Krueger. "Minimum wages and employment: A case study of the fast food industry in New Jersey and Pennsylvania." *American Economic Review* 84:4 (1994): 772–793.

[3] O'Neil, D. *Divided Opinion on the Fair Minimum Wage Act of 2013: Random or Systematic Differences*. IZA Discussion Paper No. 8601, October 2014.

[4] Boeri, T. *Setting the Minimum Wage*. IZA Discussion Paper No. 4335, July 2009.

[5] Conlon, G., R. Ladher, S. McIntosh, P. Patrignani, and V. Peycheva. *The Impact of the Minimum Wage on Young People: Final Report to the Low Pay Commission*. London: London Economics, 2015.

[6] Dube, A. *Minimum Wages and the Distribution of Family Incomes*. Working Paper, December 2013.

[7] Zipperer, B., and D. Evans. *Where Does Your State's Minimum Wage Rank Against the Median Wage?* Washington, DC: Washington Centre for Equitable Growth, 2014.

[8] Plunket, J., A. Hurrell, and C. D'Arcy. *More Than a Minimum: The Resolution Foundation Review of the Future of the National Minimum Wage*. London: Resolution Foundation, 2014.

[9] Dolton, P., and C. Bondibene. "An evaluation of the international experience of minimum wages in an economic downturn." *Economic Policy* 27:69 (2012): 99–142.

[10] Gorry, A. "Minimum wages and youth unemployment." *European Economic Review* 64:C (2013): 57–75.

[11] Hyslop, D., and S. Stillman. "Youth minimum wage reform and the labour market in New Zealand." *Labour Economics* 14:2 (2007): 201–230.

[12] Rani, U., P. Belser, and S. Ranjbar. "Role of minimum wages in rebalancing the economy." *World of Work Report* 1:1 (2013): 45–74.

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