

Technical Note 1: Assessing economic factors in the domestic work sector

This technical note explains how to assess and take account of economic factors when setting a minimum wage for the domestic work sector.

Economic factors in other sectors may relate to productivity, the percentage of wage earners affected, and the minimum to average wage ratio, among other things. In the domestic work sector, household income can be used instead of productivity, as well as slight variants on the other economic indicators. This is in order to assess the ability of households to pay a given wage.

The steps presented here will enable the identification of the actual households that employ domestic workers, and the households' income levels. By following these steps, a minimum wage level can be identified that is affordable for the majority of households that employ domestic workers thereby limiting the adverse employment effects.

These steps should be taken after assessing the needs of workers and their families and should be read in conjunction with the chapter on domestic work and setting the minimum wage (chapters 5 and 8).

The outcome of the steps in this technical note will provide social partners with a range of potential minimum wages that align with the capacity of households to pay. This can then be combined with the assessment of the needs of workers and their families.

1. Data requirements

Determining the income of households that employ domestic workers requires data. When assessing economic factors, which include the capacity of households to pay, the data should consist of, at a minimum, information at the household level, including:

- the total number of household members
- the characteristics of its members (including age, employment status)
- the total household income
- whether the household employs a domestic worker.

If available, it would also be useful to know whether the domestic worker lived in or outside the employer's home, and the number of hours worked.

All this information most frequently comes from household budget, income, and/or expenditure surveys. Ideally, the data would be available for multiple years.

The availability of data is essential because minimum wage setting should be evidence-based. If these surveys are not available, other means could be used to collect data on the wages, hours and working conditions of domestic workers and of domestic workers' employers.

In Namibia, a special module on domestic work was added to the existing labour force survey. In Botswana, data were gathered through qualitative research, including a series of interviews with various stakeholders.

2. Data preparation

Once the data described above are obtained, these steps should be followed.

- (1) Compute a per capita household income, in order to control for household size. Larger households may have a larger income because more people are working. Box 1 provides a review of the methodology to compute a per capita household income. Ideally, disposable household income data, as opposed to total household income,¹ would be used, since a domestic worker's wage is usually paid from the former.
- (2) Rank the households by per capita household income in order to determine the household income distribution. This step ranks households from the lowest to the highest income.
- (3) Identify relevant questions in the surveys that enable the identification of households that employ domestic workers, and then identify these households in the data.
- (4) Compute the same exercise for all years for which the data are available.

Once these computations have been made, a series of analyses can be conducted to assess the capacity of households that employ domestic workers to pay a given wage. Some of these analyses are described below – but the list should not be considered exhaustive.

¹ According to the Canberra Group, an expert group mandated to provide conceptual and definitional guidance to national statistical offices, “total income” and “disposable income” are the main income aggregates produced (UNECE, 2011, p. 17). Disposable income is obtained by deducting from total income all current transfers paid, such as direct taxes, social insurance contributions or other transfers. Disposable income is usually the preferred measure in analysing income distribution, but it is less frequently available than total income.

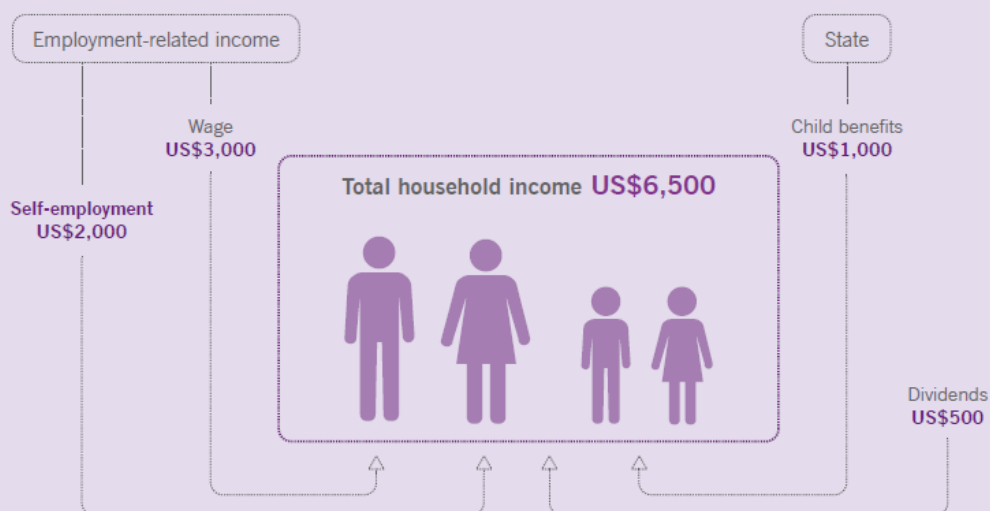
Box 1

Measuring per capita household income, from the *ILO Global Wage Report 2014/15*

Box A2 Measuring per capita household income

Household income can be measured as the sum of incomes from all different sources accruing to a given household over a certain period of time. The link between total household income and living standards depends on the number of persons who must live on this income: a total annual income of, say, US\$6,500 does not have the same meaning for a single-person household as it does for a household with two adults and three children. To account for family size, and reflect living standards, we could simply divide total household income by the number of household members. In the hypothetical case illustrated in figure A2, we would divide US\$6,500 by five, and obtain a per capita household income of US\$1,300.

Figure A2 Illustration of the components of household income



Such a simple method, however, does not take into account the fact that there exist economies of scale when people live together (e.g. only one dwelling instead of two), and that children need fewer calories than adults. To take these further considerations into account, and to obtain an adjusted measure of the “possibility of households to consume”, we follow Deaton and Zaidi’s formula and calculate per capita household income as: $E = (A + \alpha K)^\theta$ where A represents the number of adults, K is the number of dependent children, α represents the spending of a child relative to an adult, and θ captures the economies of scale in a given household (Deaton and Zaidi, 2002). We use the adjustment factors as specified in table A4, and illustrate the use of the formula with our hypothetical example. We see that the effective per capita household income would be set in a range from US\$2,493 to US\$2,728.

Table A4 Equivalent scale parameters guide

	α	θ	In our example:
Advanced economies	0.75	0.6	$PCHHI = 6\,500 \div (2 + 0.75 \times 3)^{0.6} = \text{US\$ } 2\,728$
Middle-income or emerging economies	0.50	0.8	$PCHHI = 6\,500 \div (2 + 0.50 \times 3)^{0.75} = \text{US\$ } 2\,540$
Low-income or developing economies	0.30	0.9	$PCHHI = 6\,500 \div (2 + 0.30 \times 3)^{0.90} = \text{US\$ } 2\,493$

Note: PCHHI refers to per capita household income.

3. Data analysis

By analysing the types of households that employ domestic workers we can attempt to predict the extent to which an increase in the minimum wage will affect the number of hours that domestic workers' work, their employment, or the employment of family members who are able to work because of the domestic worker's presence.

For example, if the data shows that wealthier families employ a disproportionate share of domestic workers, modest increases in the minimum wage are unlikely to have an impact on employment. This is because modest increases are unlikely to significantly change the overall percentage of household expenditure spent on a domestic worker's employment (see question 2 below for an example). If however, the majority of employers have incomes in the bottom half of the distribution, the implications could be different.

The analyses described here aim to identify the types of households that employ domestic workers in order to assess the economic factors that are specific to the domestic work sector and are required to set the minimum wage.

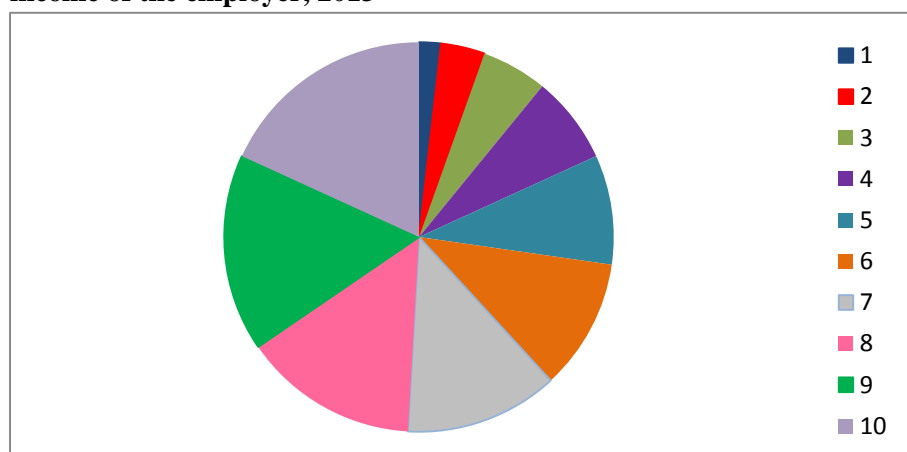
(1) Which type of households employ which domestic workers?

a. Do wealthier families primarily hire domestic workers? Do families with more limited means more frequently hire domestic workers?

In the three countries for which data are provided below, domestic workers are over-represented among the wealthiest households (this is not to say that in other countries poorer families may employ a significant share of domestic workers).

- In Costa Rica, in 2013, 24 per cent of households employed domestic workers. Among these households, more than half (59 per cent) were from the richest 30 per cent of households.
- In Namibia, in 2012, 9 per cent of all households employed domestic workers; among those households, more than half (65 per cent) were from the richest 25 per cent of households.
- In the Philippines, in 2009, 5.8 per cent of all households employed domestic workers. Among these households, 81 per cent belonged to the richest 20 per cent of households.

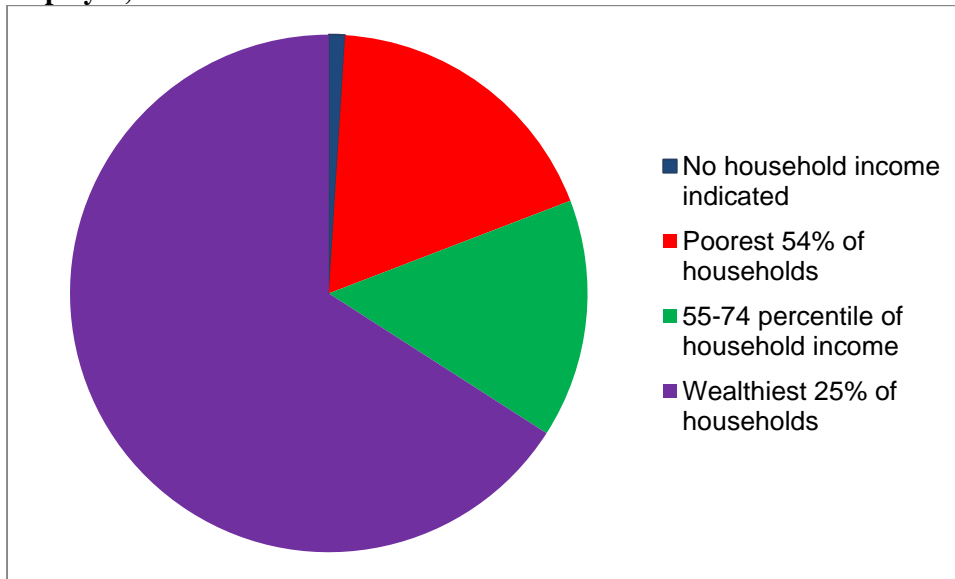
Figure 1 Domestic worker employment in Costa Rica, by decile of the disposable household income of the employer, 2013



Note: Deciles divide a group into ten parts. For example, in the figure, the first decile refers to the poorest 10 per cent of households, while the tenth decile refers to the wealthiest 10 per cent of households.

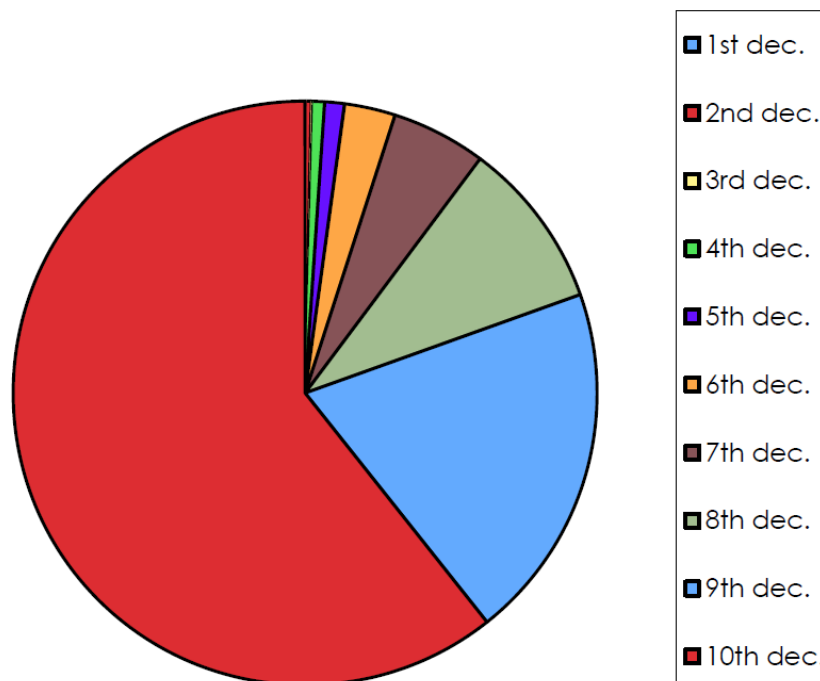
Source: ILO commissioned study. Triegos, J.D., 2015, "The application of minimum wages in the domestic work sector in Costa Rica".

Figure 2 Domestic worker employment in Namibia, by the disposable household income of the employer, 2012



Source: ILO commissioned study. Budlender, D., 2013, "Wages and conditions of work of domestic workers in Namibia".

Figure 3 Domestic worker employment in the Philippines, by the disposable household income of the employer, 2009



Source: [ILO, Domestic Workers in the Philippines: Profile and Working Conditions \(Geneva, ILO\)](#).

b. Does this differ by live-in or live-out status?

- i. Understanding differences in households that employ live-in and live-out domestic workers will improve the accuracy of the analysis of these households. If data is available on whether domestic workers concerned are either living in or out of the household, it will be possible to determine, for instance, whether live-in domestic workers primarily live in rural areas where housing options may be limited, or if live-in domestic workers are primarily concentrated in the homes of wealthier households (irrespective of the location).

For example, data from the Philippines shows that while 60 per cent of households with domestic workers (both live-in and live-out) were in the top 10 per cent of the wealthiest households, this was the case for 67 per cent of households with live-in domestic workers.

In other words, the wealthiest households are not only those most likely to have a domestic worker – they were also most likely to employ a *live-in* domestic worker. Live-in domestic work represents about 30 per cent of domestic work in the Philippines.

In the absence of a survey question that identifies whether a domestic worker lives in or out, a proxy to use is the number of hours worked. Since live-in domestic workers are those who work the most hours, it could be presumed by looking simply at hours worked that those who work the most are live-in workers.

An alternative would be to use survey questions related to payment in kind, if available. Those domestic workers who receive accommodation as part of their payment in kind can be considered to live in.

In Costa Rica, using the number of hours worked, this would suggest that live-in workers represent about 21 per cent of domestic workers. Using criteria based on in-kind payment, the percentage of live-in domestic workers ranges from about 5.2 per cent to 22 per cent, depending on the data source used.

c. Has this trend changed over time?

- i. Data over time is not always available. When it is, such data can be particularly useful to confirm whether a trend is consistent over time (rather than a singular, anomalous, event). If trends are consistent over time, this can lend further support to the results.

In the Philippines for example, the percentage of households that employed domestic workers increased between 2003 and 2009. Moreover, domestic workers continued to be primarily employed by the wealthiest households.

(2) What percentage of household expenditure or income is spent on employing domestic workers?

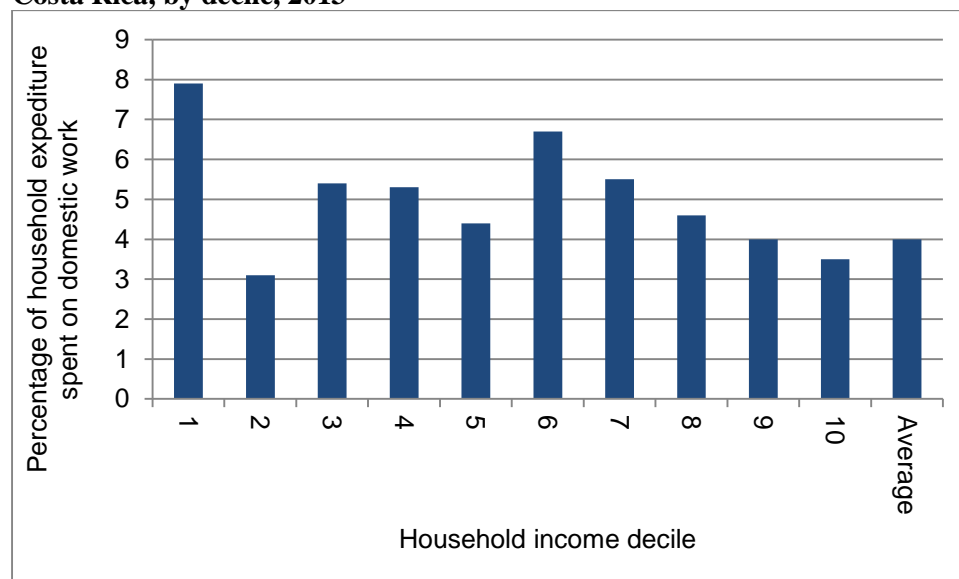
Once the profile of households that employ domestic workers has been assessed, it is possible to calculate the percentage of household income or expenditure spent on domestic work. This calculation

is somewhat akin to calculating the total wage bill of an enterprise – that is, the sum of the wages of all employees in a company. (See chapter 5)

If total expenditure increases too much, too rapidly, this may prompt negative employment effects or a decline in the number of hours worked. By contrast, modest increases in the minimum wage, which engender modest rises in household expenditures, could prove beneficial to workers without excessively burdening employers.

For example, Figures 4 and 5 show the percentage of household income spent on employing domestic workers in Costa Rica and the Philippines. While the percentage of household income spent on domestic work varies depending on the household’s income, on average, households spent about 4 per cent of their income on domestic work in both countries.

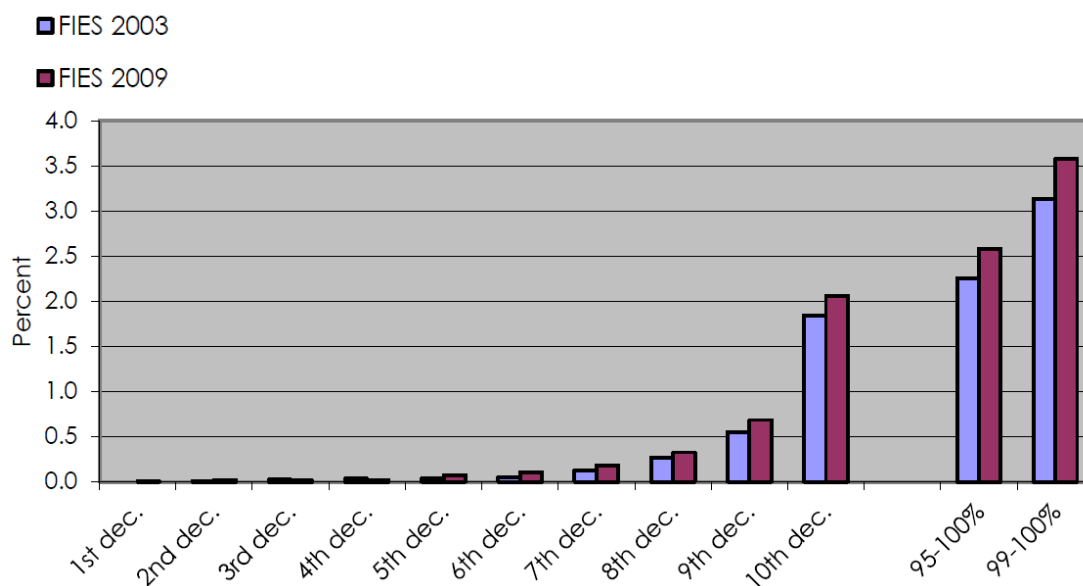
Figure 4 Percentage of household expenditure spent on paying for domestic work services in Costa Rica, by decile, 2013



Note: Deciles divide a group into 10 parts. For example, in the figure, the first decile refers to the poorest 10 per cent of households, while the tenth decile refers to the wealthiest 10 per cent of households.

Source: ILO commissioned study. Triegos, J.D., 2015, “The application of minimum wages in the domestic work sector in Costa Rica”.

Figure 5 Expenditure on domestic workers in the Philippines: share of household expenditure, by expenditure decile, 2003 and 2009



Note: FIES refers to the Family Income and Expenditure Survey.

Source: [ILO, Domestic Workers in the Philippines: Profile and Working Conditions \(Geneva, ILO\).](#)

(3) Simulating the impact

Depending on the data set available, it may be possible to simulate how an increase in domestic workers' minimum wage would affect household expenditure. An increase in the minimum wage could have several effects on household expenditure and they all depend on how households would react.

For example,

- a household could consider that the increase in the minimum wage is too great and so would dismiss the domestic worker (this would be an employment effect);
- the household could think the increase was significant, retain the domestic worker, but reduce the domestic worker's hours (an hours effect);
- a third option would be for the household to retain the domestic worker and the hours worked (so make no change to the employment or hours worked).

It is important to bear in mind that all of these effects will depend on (i) the size of the increase in the minimum wage and (ii) the size of the increase in the employer's household income, where the domestic worker is employed, since this generally increases over time.

First, if a minimum wage for domestic workers has never existed before, it is important to establish a baseline. In other words, before simulating the introduction of a minimum wage, the percentage of household income that households currently spend on domestic work will need to be assessed. (See Question 2.)

Once a baseline has been established, simulation effects can be carried out with the data for all households. For the purposes of illustration, we will use two examples of individual households.

Household A

The average median household income in the United States in 2014 was US\$53,657.² The minimum wage in the United States in 2014 was US\$7.25 per hour. Household A employs a domestic worker and pays the minimum wage. As in most households, Household A spends about 4 per cent of its income (US\$2,146) on domestic work per year. This amounts to about 5.7 hours of domestic work per week.

If the minimum wage increased to US\$10 per hour, the household budget for domestic work would have to increase from US\$2,146 to US\$2,960 per year, or about 5.5 per cent of total household income. If the minimum wage were to increase to US\$15 per hour, this would more than double the percentage of household income spent on domestic work, to about 8.2 per cent of total income.

This example shows that an increase in the minimum wage to US\$10 per hour might be manageable for this family (without changing hours or employment) since it would increase their expenditure by 1.5 per cent. But an increase in the minimum wage to US\$15 per hour could have a negative effect since it would double their expenditure on domestic work.

Table 2 Household expenditure on domestic work in Household A, in US dollars

Annual household income	Minimum wage	Hours worked per week (52 weeks in a year)	Annual expenditure on domestic work	Percentage of household income spent on domestic work
53 657				
Case 1	7.25	5.7	2 146	4.0
Case 2	10.00	5.7	2 960	5.5
Case 3	15.00	5.7	4 290	8.2

Household B

Household B is a higher-earning family. Applying the calculations to a higher-income family is particularly pertinent since the examples shown above demonstrate that wealthier families tend to employ a disproportionately higher share of domestic workers.

To illustrate, in 2014, the wealthiest 5 per cent of families had household incomes amounting to at least US\$206,568 in the United States. If Household B only wanted 5.7 hours of domestic work per week – like Household A – this would amount to only 1 per cent of their total household budget (see calculations for Household B, Table 3, below).

Moreover, in this second household, if the minimum wage were to increase to US\$10, it would only amount to 1.4 per cent of the total household budget. If the minimum wage were to increase to US\$15 per hour, this would amount to about 2.1 per cent of the household's total expenditure.

In this example, an increase in the minimum wage would double Household B's expenditure on domestic work (like Household A). However, unlike Household A, it would be unlikely that doubling the expenditure would change the employment or the hours worked. This is because Household B's expenditure on domestic work, as a share of total household income, is considerably lower (only 1 per cent at a US\$7.25 minimum wage, as compared with 4.0 per cent for Household A).

² [DeNavas-Walt, C.; Proctor, B. \(2015\). Income and Poverty in the United States: 2014, Current Population Reports. U.S. Census Bureau.](#)

Table 3 Household expenditure on domestic work in Household B, in US dollars

Annual household income 206 568	Minimum wage	Hours worked per week (52 weeks in a year)	Annual expenditure on domestic work	Percentage of household income spent on domestic work
Case 1	7.25	5.7	2 146	1.0
Case 2	10.00	5.7	2 960	1.4
Case 3	15.00	5.7	4 290	2.1

In reality, as the data from the selected countries showed, wealthier households tend to employ domestic workers for a number of hours equal to about 4 per cent of their household income.

Four per cent of Household B's income would amount to US\$8,263 per year. At the minimum wage (US\$7.25 per hour), this would pay for 1,140 hours of domestic work annually, or about 21.9 hours of domestic work per week; considerably more hours per week than the median family income (Household A) buys.

Table 4 Household expenditure on domestic work in Household B, assuming a greater number of hours worked by domestic workers, in US dollars

Annual household income 206 568	Minimum wage	Hours worked per week (52 weeks in a year)	Annual expenditure on domestic work	Percentage of household income spent on domestic work
Case 1	7.25	21.9	8 263	4.0
Case 2	10.00	21.9	11 397	5.5
Case 3	15.00	21.9	17 095	8.3

So this step – Step 3 – takes the analysis further by simulating the increase in household expenditure which would occur in light of an increase in the minimum wage (assuming no changes in employment or hours worked).

If Household A employs a domestic worker for 5.7 hours per week, and Household B for 21.9 hours per week, the results show that while an increase in the minimum wage to US\$10 might be sustainable for households (i.e. be unlikely to provoke changes in employment or hours worked), this would not be the case for an increase to US\$15 per hour.

However, the analysis should not stop here because this simple analysis assumes that household income does not increase over time, whereas in practice it usually does, especially for the wealthiest households who predominantly employ domestic workers. This scenario is described in the next section.

(4) Making adjustments

It is quite unrealistic to assume that household income remains constant. Generally, the wages and income of the wealthiest households have increased over time. In many countries inequality has indeed increased because of higher growth in the wages and income of wealthier families.

If wealthier families disproportionately hire domestic workers – as in Costa Rica, Namibia and the Philippines – this has important implications for setting and adjusting the minimum wage.

For example, the federal minimum wage in the United States has remained unchanged since 2009. As a result, the purchasing power of the minimum wage has *declined* by about 9 per cent (because of increases in prices). By contrast, since 2009, the purchasing power of the richest 5 per cent of households has *increased* by about 4 per cent.

Subsequently, as households employing domestic workers became wealthier, and the domestic worker’s wage remained the same (while value of that same wage decreased), the percentage of household income spent on employing a domestic worker also declined.

This can also be seen from Table 5, which takes as its basis the household income of the richest 5 per cent of families in the United States in 2012.

Assume that this household spends about 4 per cent of its income on domestic work and the domestic worker’s wage is US\$7.25 per hour. If household income grows by 9 per cent, and the domestic worker’s wage remains the same, the percentage of household income spent on domestic work declines from 4 per cent to 3.7 per cent. Hence, in order to retain the same percentage of household income allocated to domestic work (4 per cent), the domestic worker’s wage would have needed to increase to US\$7.68 per hour in 2014.

Table 5 Percentage of household income spent on domestic work

	2012	2014	Growth
Annual household income	189 512	206 568	9%
4 per cent of household income	7 581	8 030	9%
Annual cost of domestic work (20.1 hours per week for US\$7.25 per hour)	7 581	7 581	0%
Percentage of household income spent on domestic work	4%	3.7%	

4. Conclusions

The analyses presented above show how data can be used to assess the capacity of households to pay for domestic work. Of course, more complex methods exist and could be used to estimate the effect of minimum wages on hours worked and employment. Understanding the profile and income of households that employ domestic workers, the type of domestic workers they employ, and how or if these trends have changed over time can help to identify the characteristics of employers of domestic work.

Once the employers are identified in the data, it becomes possible to calculate the percentage of household income spent on domestic work and how this may vary for different types of employers.

Generally, household incomes increase over time and, in the absence of increases to the minimum wage, the percentage of household expenditure on domestic work therefore declines. For this reason, understanding trends in the household income of domestic workers’ employers – i.e. how fast they are increasing – can also inform discussions about how much it is possible to increase the minimum wage for domestic workers.